

**EVALUATION OF TOILET FACILITIES AT PUBLIC SCHOOLS IN THE MATLOSANA
LOCAL MUNICIPALITY'S AREA OF JURISDICTION**

MLUNGISI NICHOLAS MBELE

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Potchefstroom Campus

SUPERVISOR: Prof. E.J. NEALER

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DECLARATION

I Mbele Mlungisi Nicholas hereby declare that the “Evaluation of Toilet Facilities at Public Schools in the Matlosana Local Municipality’s Area of Jurisdiction” is the true reflection of a status quo referred to here by this study, the views and opinions expressed in this work are those of an author, the relevant literature used has been quoted and acknowledged as such in the list of references.

I further declare that this work of study cannot be duplicated and submitted to any tertiary institution for any qualification.

MBELE MLUNGISI NICHOLAS

MAY 2011

Proof of language editing

Professional Assignment Techniques (CC)

93 Republic Street

Baillie Park

Potchefstroom

2531

Tel/Fax: 0182906576

This is to certify that I have edited the mini-dissertation of Mr Mlungisi Nicholas Mbele in accordance with generally accepted standards for English.

Dr EG Bain

Date: 14 March 2011

eddie.e.bain@gmail.com

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ABSTRACT

Keywords:

Toilet facilities, provisioning and maintenance, public school, sanitation, health hazard.

Learners at the public schools of North West Province in the Dr Kenneth Kaunda Education region, within the Matlosana Local municipality's municipal area of jurisdiction, are exposed to unhygienic health hazard conditions due to insufficient toilet facilities used by a large number of learners and poor health conditions resulting out of it, which might cause and spread health related diseases to the users of these toilet facilities.

The primary objective of this research was to investigate the nature and extent of the provisioning and maintenance of toilet facilities in the public schools within the Matlosana Local Municipality's municipal area.

A questionnaire was designed and distributed to obtain information from 57 respondents who comprised of the 3 schools principals who constituted 5% of the research population, 18 educators who constituted 32% and 36 learners who constituted 63%, all totalling 100% of the research sample size, at Are-Fadimeheng; Dominion Reefs and Nkagisang public schools.

The findings revealed that the majority, which is 85% of the research population (learners and educators) as users of these facilities are affected and were generally unhappy about the prevailing conditions of the school toilet facilities. This they attribute to lack of proper budgeting as the main cause. The most aggravating factor is the absence of a janitor with plumbing skills to look after the schools' toilet facilities.

Findings highlighted that school learners and educators deserve as their human right to live under acceptable health conditions and clean environment. However it is the responsibility of the Government to expand the existing schools toilet structures which are in line with the National Building regulation ratio of 1:25 of users per toilet as recommended by Department of Water Affairs (DWA), to ensure health for all.

The results of this study can assist the government to embark on strategic intervention programmes that can improve conditions of public schools toilet facilities in the North West Province, South Africa to meet the Millenium Development Goals (MDG) target in addressing sanitation backlogs by half in 2015.

Conclusions for the study were drawn and recommendations were made for the improvement of conditions in the Public Schools Toilet facilities.

OPSOMMING

Sleutelwoorde:

Toiletfasiliteite; Voorsiening en onderhoud, openbare skole; sanitasie; gesondheidsgevaar.

Leerlinge in die openbare skole van die Noordwes provinsie wat in die Dr Kenneth Kaunda onderwysdistrik geleë is in die Matlosana plaaslike munisipaliteit word aan onhigiëniese toestande blootgestel. Hierdie gesondheidsgevaar is die gevolg van onvoldoende toiletgeriewe wat deur groot getalle leerlinge gebruik word en dit mag aanleiding gee tot die verspreiding van siektetoestande.

Die doel met hierdie navorsing is om die voorsiening en onderhoud van toiletgeriewe in openbare skole van die genoemde munisipaliteite te ondersoek. 'n Vraelys is geformuleer wat ontwerp en uitgestuur is aan 57 respondente. Van hierdie getal het 5% van die navorsingspopulasie bestaan uit 3 skoolhoofde, 32% uit 18 onderwysers en 63% uit 36 skoliere. Die lokus van die ondersoek het bestaan uit die openbare skole Are-Fadimeheng, Dominion Reefs en Nkagisang.

Die resultate toon dat die meerderheid leerlinge en onderwysers wat hierdie toiletgeriewe gebruik daardeur geaffekteer word en ontevrede is met die swak toestand waarin dit tans verkeer.

Die respondente skryf hierdie swak toestande toe aan gebrekkige instandhouding en die ongereelde skoonmaak daarvan. Onvoldoende begroting in die verband is die hooforsaak hiervan. Gebrekkige instandhouding is ook die gevolg van gebrekkige loodgietersbekwaamhede.

Samevattend het die navorser tot die gevolgtrekking gekom dat dit onderwysers en leerlinge se basiese mensereg is om onder aanvaarbare gesondheidstoestande by die skole te verkeer. Dit is die verantwoordelikheid van die Staat om fisiese geriewe soos toilette te voorsien om sodoende die gesondheid van skoolpersoneel en leerders te beskerm.

Die resultate van hierdie studie kan die regering bystaan ten opsigte van die daarstel van strategiese programme in die verbetering van openbare skooltoilette in die Noordwes Provinsie in Suid Afrika. Sodoende behoort die millenium ontwikkelingsteikens (MOT) nagestreef te word om die agterstande in sanitasie teen 2015 te halveer.

Aanbevelings vir die studie is gemaak om verbeterings aan te bring in die openbare skole se toiletgeriewe.

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CHAPTER 1

ORIENTATION AND PROBLEM STATEMENT

1.1 INTRODUCTION

This mini-dissertation attempts to highlight the nature and extent of sustainable maintenance policy on public school toilet facilities, number of toilets and the impact it has on the lives of learners in public schools of the Matlosana Local Municipality's area of jurisdiction in the North West Province. A "public school" means an independent school which enrolls learners in one or more grades between grades zero and grade twelve (RSA,1996a:4). This research pays particular attention to the following sampled public schools in the Dr Kenneth Kaunda Education Region of the North West Province:

- Are-Fadimeheng secondary public school;
- Dominion Reefs public school; and
- Nkagisang public school.

Attached in Annexure A is a district schools locality map showing the municipal area and the location of the schools included in the research.

This chapter of the mini-dissertation contains the orientation, problem statement, research objectives, leading theoretical arguments and the research methodology which have been applied. The problem statement presents an overview of research conducted with regard to Government's responsibility to provide potable water and basic sanitation in public schools to promote healthy living standards. The problem statement links up to research objectives and leading theoretical arguments. The research methodology follows with a detailed explanation of the empirical study and the data collection.

1.1.1 Orientation

The Constitution of the Republic of South Africa, places an obligation on various Government spheres and Departments, in terms of chapter 2 of the Constitution under the Bill of Rights section 24, to make communities safe and healthy places to live in. Local municipalities act as providers of basic services such as potable water supply, housing, roads and sanitation (RSA,1998). In the recent history of South Africa, the supply of potable water and basic sanitation to all its inhabitants had been high on the national agenda since April 1994. Public institutions on all three spheres of Government since then had to revisit and transform their executive authorities, acts, regulations and work procedures in such a manner that equal benefit regarding basic public service delivery for all the citizens of the country could be achieved (Nealer & Raga,2008:294-307).

One of the Government's central aims is to ensure the provision of basic sanitation facilities to every citizen through the introduction of multi-tiered water supply programmes ranging from full-pressure water systems, flushing toilets and dry toilets. According to the Department of Water Affairs (DWA), it indicates that "...water is life; sanitation is dignity, water as human right, is essential to sustain life, development and environment" (Baartjies,2008:21-23).

The absence of a clear National Government policy to address the existing crises of the insufficient provision and maintenance of toilet facilities at public schools in for example, the Matlosana Local Municipality's area of jurisdiction, such as Are-Fadimeheng, Dominion Reefs and Nkagisang, poses a critical health hazard to all learners who must receive basic sanitary services at these schools. Ward, Hall and Clachery (2001:60) state that the 1997 White Paper on Water Policy makes it clear that the objective is not just to promote equity in access to and benefit from the nation's water resources for all South Africans, but also to make sure that the potable water and sanitation needs and challenges of South Africa in the 21st century can be addressed more efficiently.

The Free Basic Water Policy (FBW) of 2001 therefore may have negative impacts on the provision of sanitation services and local authorities will have to consider these impacts on the local government sphere and, in particular, on public schools in this

sphere. If proper attention in terms of the provisioning and maintenance of toilets in public schools is not addressed, there can be serious problems of the out-break of diseases which might eventually lead to untimely deaths (Lagardien & Cousins 2005:23).

The Water Research Commission (2007:28) found that poor sanitation facilities in general pollute the environment and threaten drinking water facilities. It also threatens social and economic development as people have to stay home from school and work because of illness.

The educational public schools in the Matlosana Local Municipality's geographical area (this includes primary and secondary schools) are experiencing difficult times having to accommodate and cater for high learner ratios which range from between 800 to 1500 learners, with very limited toilet facilities available to them. The conditions which result out of the usage of toilets become so unbearable and appalling that they pose serious health hazards not only to learners who use them but to educators as well. To a large extent, the dysfunctional nature of toilet facilities (as they are not being taken care of and the behavioural attitude by learners to think that these facilities are not theirs) exacerbates the problems already experienced by schools. Learners in the age range of 5-14 years are particularly prone to infections of round worm and whip worm and there is evidence that this, along with guinea worm and other water related diseases, including diarrhoea, result in significant absences from school (World Health Organisation [WHO], 1995:6).

1.1.2 Problem Statement

With reference to the above-mentioned, it can now be stated that the intention of this research is to expose the hazardous conditions under which the learners in the Matlosana Local Municipality's geographical municipal area of jurisdiction find themselves, thereby assisting the Government to make some meaningful interventions by providing enough toilet facilities which can be properly maintained by the schools themselves. This research attempts to demonstrate that enough is not being done in

order to give full attention to the sufficient provisioning and sustained maintenance of toilet facilities in the township schools of the Matlosana municipal area of jurisdiction.

The following research questions were specifically addressed by this study:

- What is the legal role of government in providing and maintaining toilet facilities at public schools in South Africa?
- What is the nature and extent of the provisioning and maintenance of toilet facilities at public schools in the Matlosana Local municipality's municipal area of jurisdiction?
- How can the data collected be utilised to assist in improving the state of toilet facilities in public schools of the Matlosana Local municipality's municipal area of jurisdiction?
- What is the service delivery mechanism that can be implemented to improve the state of toilet facilities in the public schools of the Matlosana Local municipality's municipal area of jurisdiction?

1.2 RESEARCH OBJECTIVES

The research aims to develop an improved mechanism or system to monitor the provisioning and maintenance of toilet facilities at public schools in South Africa. To reach this aim, the following specific research objectives were set:

- Investigate and analyse the legal role of the Government in providing and maintaining toilet facilities at public schools in South Africa.
- Analyse the nature and extent of the provisioning and maintenance of toilet facilities at the public schools of the Matlosana Local municipality's municipal area of jurisdiction.
- Analyse and interpret the collected data to assist in improving the provisioning and maintenance of toilet facilities in the public schools of the Matlosana Local municipality's municipal area of jurisdiction.

- To provide a service delivery mechanism that can improve the conditions of toilets in the public schools within the Matlosana Local municipality's municipal area of jurisdiction.

1.3 LEADING THEORETICAL ARGUMENTS

The provisioning and maintenance of sanitation facilities is a basic human right of learners. Failure to maintain and sustain this essential service would eventually lead to the degradation of human dignity. Sanitation is a major development problem and one that integrates health, water, waste water and poverty alleviation. Poverty tends to result through the natural process in the body becoming humiliating and dehumanizing (Carden, Armitage, Winter, Sichone & Rivett, 2007:19).

Ward *et al* (2001:4) state that safe hygiene practices can help to break the cycle of infection, thus reducing the incidence of disease. The most badly affected communities, by lack of proper maintenance of toilet facilities, are the historically disadvantaged public schools.

According to the Institute of Municipal Engineers of Southern Africa (IMIESA) (2008:15), poor sanitation as well as a lack of potable water and personal hygiene can lead to:

- Cholera, which is spread through water or food contaminated by the human waste of the cholera victim;
- Typhus fever, which is transmitted by lice in human waste;
- Typhoid, which is spread by a salmonella bacillus found in human waste; and
- Trachoma, which has caused 6 million people in the world to be irreversibly blinded.

The school sanitation hygiene in rural and urban areas in developing countries are often appalling, creating health hazards, thus schools are not safe for children (WHO, 1995:6). Knowledge about hygiene behaviour that is based on putting up barriers against disease transmission and contamination will be the basis for local demand for improved

sanitation, construction of toilets, and maintaining facilities (Lagardien & Cousins,2001: 21).

1.4 RESEARCH METHODOLOGY

According to Struwig and Stead (2007:7), exploratory study is the fundamental phase of research. It gives guidance to the researcher to investigate a problem about which little is known. Its purpose is the development and clarification of ideas and formulation of questions and hypotheses for more precise investigation later. Therefore, exploratory study was applied in this research. Critical case sampling was also applied in this study. In this instance a small number of the research population which represented the large group was selected because of its homogeneity. In order to ensure the validity and reliability of the data collected, this research venture employed quantitative and qualitative research methods.

1.4.1 Quantitative research method

Quantitative research is one of the most fundamental methods of research. It applies a questionnaire to solicit information from the research population. It focuses on an individual for the empirical inquiry. It also focuses on analysis of responses. Data collected can be expressed in numbers (Brynard & Hanekom,2005:38). As an individual is a source of data collection, a questionnaire was designed by the researcher and distributed to the respondents for the purposes of data collection. Coupled with this research method are the advantages by which the respondents have enough time to think about the answers to questions in the questionnaire. A large number of respondents over a large geographical area can be reached. Disadvantages associated with this research method are such that the researcher is not at hand to explain uncertainties which may result in biased or distorted answers by the participant (Brynard & Hanekom,2005:38).

1.4.2 Qualitative research method

The qualitative research method is used by social scientists. A qualitative researcher finds interest in understanding the issues being researched from the perspective of the research participant. The researcher tries to see through the eyes of the participants. Anecdotal reports largely reflect the participants' views with the researcher providing little commentary on or in-depth analysis of these views (Struwig & Stead, 2007:12).

According to Norman, Denzin, Yvonna and Lincoln (1998:3), qualitative research is the study of things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them.

1.5 DATA COLLECTION

The following research instruments were used for investigation purposes:

1.5.1 Empirical study

In this research there are two types of research methodologies, namely: qualitative method by means of a questionnaire, and quantitative by means of a case study. Hagan (2002:240) defines the case study method as in-depth, qualitative studies of one or a few illustrative cases, whilst Creswell (2007:73) defines case study research as a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information. A case study investigates a person, institution, or society more broadly (Perecman & Curran, 2006:170).

A questionnaire was also applied by this research. Questionnaires are research tools through which people are asked to respond to the same set of questions in a predetermined order (Gray, 2005:187). A self-administered questionnaire was designed and submitted to 3 schools' principals, 18 educators, and 36 learners for completion. Instructions were clearly explained to respondents as to how to complete the questionnaire. The collected data was synchronised and analysed by the researcher to

come up with variables which could be utilised regarding the provisioning and maintenance of improved toilet facilities. Personal site inspections and interaction (through the distribution of questionnaires) with participants in the data collection phase was conducted by the researcher; and semi-structured interviews by means of the questionnaire were conducted with school principals, educators and learners.

1.5.2 Sampling

Bless and Higson-Smith (1997:84) define sampling as a study of relationships between a population and the samples drawn from it.

1.5.2.1 Sample size

The sample size of this research constitutes selected respondents such as learners, educators and principals of sampled schools.

1.5.2.2 Participants

In each case of the toilet facilities of the sampled schools, the environment had its unique characteristics. Therefore, participants were drawn from various grades in schools. The following table in the next page illustrates the number of data collection respondents from the various identified schools which was arranged as follows:

Table 1: Participants drawn from various schools

Identified school	Participants	Number	Male	Female	Locality
Are-Fadimeheng	Principal	1	1	0	Urban
	Educators	6	3	3	
	Learners	12	6	6	
Dominion Reefs	Principal	1	1	0	Peri-Urban
	Educators	6	3	3	
	Learners	12	6	6	
Nkagisang	Principal	1	0	1	Peri-Urban
	Educators	6	3	3	
	Learners	12	6	6	

(See Annexure A, for a geographical map indicating the locality of the sampled schools)

1.5.3 Data analysis

Data triangulation was established through the study of the relevant literature and structured questionnaire by the researcher. The pie and the bar charts are used in chapter 4 in order to present the research findings in a more graphical manner.

1.6 LITERATURE REVIEW

In order to obtain information from the real world, a structured questionnaire was used. The following data bases were also consulted to gather sufficient theoretical data for the purpose of the completion of this research:

- Internet: SABINET search engine;
- Journals;
- Articles;
- Books;
- Government policies and legislation; and
- Measuring wheel.

The research paid attention to three focus groups, that is:

- School principals;
- School educators; and
- School learners.

1.7 ETHICS

A letter of consent was made available to all participants in the data collection phase to ensure an ethical research code. The researcher further assured all participants' confidentiality about the research process. Every necessary process with regard to participation in the research from beginning to the end was thoroughly explained to the respondents by the researcher.

1.8 SIGNIFICANCE OF STUDY

The general object and contribution of this research is to expose the poor conditions of public schools' toilets in the Matlosana Local Municipality's municipal area of jurisdiction thereby assisting the Government to make strategic interventions to curb the spread of

diseases to learners and ensure more healthy living standards in public schools through the provisioning and sustained maintenance of toilet facilities.

1.9 LIMITATIONS AND DELIMITATIONS

For the purposes of accuracy and objectivity of this research, it must be noted that in terms of the literature review some research sources of reference were classified as generally relevant as they shed information on household sanitation, whilst on the other hand some of the sources were centrally relevant as they shed information on toilet facilities at schools and the maintenance thereof. Furthermore, it must be noted that, although the selected respondents' views were used to arrive at research findings, the respondents' views do not necessarily represent the views of the entire school population. The geographical building plans of schools were difficult to obtain from the sampled schools. It therefore obliged the researcher to personally pay the schools a visit to draw up a plan of the location of toilets at the sampled schools. The measuring wheel was used to determine the distances indicated on the schools' building plans.

1.10 CHAPTER LAYOUT

CHAPTER 1

ORIENTATION AND PROBLEM STATEMENT

This introductory chapter of the mini-dissertation explores the background to the locus and focus of the research, the problem statement, research objectives and the research methodology applied and also outlines in detail the general picture about the provisioning and maintenance of toilet facilities at public schools in the Matlosana Local Municipality's area of jurisdiction.

CHAPTER 2

THE GOVERNMENT'S LEGAL ROLE IN THE PROVISIONING AND MAINTENANCE OF TOILET FACILITIES IN PUBLIC SCHOOLS OF SOUTH AFRICA

This chapter gives an overview of the existing legislative literature and efforts undertaken by the South African Government to address sustainable provisioning and maintenance of toilet facilities at public schools in South Africa.

CHAPTER 3

NATURE AND EXTENT OF PROVISIONING AND MAINTENANCE OF TOILET FACILITIES IN PUBLIC SCHOOLS OF THE MATLOSANA LOCAL MUNICIPALITY'S AREA OF JURISDICTION

In this chapter attention is paid on the nature and extent of the identified sampled schools' toilet facilities with reference to the provisioning and maintenance of it. The following public schools were used as examples for the case study purposes:

Case study 1 – Are-Fadimeheng Secondary School

Case study 2 – Dominion Reefs Public School

Case study 3 – Nkagisang Public School

CHAPTER 4

EVALUATION OF SANITATION FACILITIES IN TOWNSHIP SCHOOLS OF THE MATLOSANA LOCAL MUNICIPALITY: EMPIRICAL FINDINGS

This chapter demonstrates the research methodology applied by the researcher and further elaborates in more detail on the analysis and interpretation of research findings by making use of pie and bar charts.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This chapter begins with a summarised outline of chapter layout; then gives a brief synopsis of the research objectives and the research findings of the research in which service delivery mechanisms are thoroughly addressed. It then concludes by making

recommendations aimed at producing improved conditions of public schools' toilet facilities and lastly gives a broad summary of the research.

1.11 SUMMARY

This chapter gave a broad overview on the locus and focus of this study, thereby paying particular attention to the selected sampled schools such as Are-Fadimeheng, Dominion Reefs, and Nkagisang public schools. It further highlighted the orientation, problem statement, the research questions and objectives, leading theoretical arguments and the research methodology which have been applied. The literature study, ethics of the research, significance, limitations and delimitations of this study were also observed. It concluded by giving a broad outline of chapters to follow.

The next chapter will reflect on the current legal framework regarding sanitation and the role the Government plays in addressing sanitation backlogs in South Africa.

CHAPTER 2

THE GOVERNMENT'S LEGAL ROLE IN THE PROVISIONING AND MAINTENANCE OF TOILET FACILITIES IN THE PUBLIC SCHOOLS OF SOUTH AFRICA

2.1 INTRODUCTION

The South African Government has made significant progress in the field of sanitation service provisioning since the introduction of the democratically elected government in 1994. An appropriate sanitation policy has been developed, adapted and refined in view of practical experience (DWAF, 2002:13).

It is the duty of the Government to provide its people with education and physical resources such as school buildings, particularly toilet facilities. In this case, toilets play a major role in the provision of education to learners. It is therefore critical to investigate the Government's legal framework in the provisioning of physical resources such as toilets at public schools. It plays a central role in terms of ensuring healthy living to all its citizens, thus the statement that every person shall have the right to an environment which is not detrimental to his or her health or well-being (RSA,1995:6).

This chapter seeks to discuss the Government's legal obligation that addresses provisioning and maintenance of ablution facilities in public schools of South Africa, as well as the health and safety issues that pertain to schools' toilet facilities. It will further reflect on the Government's sanitary picture regarding toilets in public schools at National, Provincial and Local government spheres.

2.2 THE GOVERNMENT'S LEGISLATIVE OBLIGATION

In accordance with the Water Services Act 108 of 1997 (RSA,1997:12) "everyone has a right of access to basic water supply and basic sanitation." This Act binds the Government to supply schools with basic sanitation. In order to make this imperative

practical, Government has developed various policies. Amongst these policies is the National Sanitation Policy of 1996.

Although the National Sanitation Policy (RSA,1996d:19) indicates that the sanitation system must be such that they provide an effective barrier against disease transmission, the National Sanitation Draft White Paper states that there are a number of dimensions to sanitation services which form the framework for a general Sanitation Policy (RSA, 1995:8). The following can be identified:

- The institutional and organizational frameworks required;
- The financial and economic approach; and
- The technical issues, particularly those related to environmental protection.

The critical challenge facing the South African Government is that, although it is a well acknowledged fact that Government has the responsibility of ensuring that everybody has access to clean drinkable water and adequate sanitation, the provision of only sanitation facilities such as toilets cannot be enough. Much more work has to be undertaken vigorously in order to maintain these toilet facilities (Education Portfolio Committee,2002).

Although the previous Department of Water Affairs and Forestry (DWAF) had a free basic sanitation policy to assist accessibility to a basic level of sanitation service (DWAF, 2003a:30), Government is unable to subsidise the operation and maintenance costs of sanitation systems resulting in the affordability of such costs being left to the Local Government sphere (RSA,1996d:19). The critical challenge facing the South African Government, particularly at local government sphere, is the role and responsibility of local government in terms of its functions to provide potable water and adequate sanitation to public schools. This issue on its own can have far-reaching consequences for schools which are not financially affluent, when they have to bear the brunt of ensuring provisioning and sustainable maintenance of these toilet facilities on a regular basis to ensure high quality standards of health (Education Portfolio Committee,2002).

According to DWAF (2002:9), the role of the then Department of Provincial and Local Government (DPLG), now known as Cooperative Governance of Traditional Affairs

(COGTA), is to implement, among others, the Municipal Systems Act 32 of 2000 and the Municipal Structures Act 117 of 1998. Matters relating to provincial and local government systems fall within this department's ambit. This includes promoting the development by the municipalities of their Integrated Development Plans (IDPs), ensuring that Provincial and Local Government have the capacity to fulfill their functions, particularly the provision of financial support to sanitation programmes, whilst on the other hand the Department of Health's role is to provide all South Africans with access to affordable, good quality health care (DWAF,2002:9). Stephenson and Barta (2005:4) indicate that municipal water supply and sanitation services are considered mutually inclusive and are being developed as far as possible according to a balanced development strategy since the introduction of the Water Services Act 108 of 1997.

The Strategic Framework for Water Services of 2003 is one token by government to demonstrate its commitment in addressing the backlog of sanitation to its entire citizenry (Education Portfolio Committee, 2002). There is an urgent need to address the issues of sanitation in a sustainable manner involving all stakeholders, especially local governments, communities and investors (WRC,2008a:13). This is important considering the fact that sanitation systems should be constantly upgraded (RSA,1996d:19).

Sanitation can be defined as a facility which is safe, reliable, and private, protected from the weather, ventilated, keeps smells to the minimum, is easy to keep clean and minimises the risks of the spread of sanitation related diseases by facilitating the appropriate control of disease carrying flies and pests and enable safe and appropriate treatment and/or removal of human waste and bleach or grey water in an environmentally sound manner (DWAF,2003a). As much as it is of paramount importance for the Government to commit itself to the provisioning of these basic services, it is as well equally important that the retention of such services cannot be provided unmonitored in a very sustainable manner to ensure the maintenance of healthy living conditions (Austin, Duncker & Matsebe,2006:3).

Although the National Sanitation Policy (RSA,1996d:19) prescribes that "...the sanitation systems must be designed and constructed [to] provide an effective barrier against disease transmission," the 2005 United Nations Children's fund report states that about 40% of the world's 400 million school age children are infected with intestinal worms,

and about one in 10 school age African girls do not attend school during menstruation or drop out at puberty because of the lack of clean and private sanitation facilities in schools (Electric,2009:28).

The Water Research Commission (2008a:13) points out that poor sanitation combined with lack of safe drinking water and inadequate hygiene contribute to the terrible global death toll. Those who survive, face diminished chances of living a healthy and productive existence. Children, especially girls, are forced to stay out of school because of deplorable unhygienic conditions of toilets during menstrual periods, while hygiene-related diseases keep adults from engaging in productive work. It is for these reasons that water supply and sanitation are inextricably linked to the broader development process making it the responsibility of the Government to provide all South Africans with access to adequate sanitation services (RSA,1995:4). However, it is disturbing to note that about 80% of schools in South Africa have more than 50 learners per toilet, aggravated by the fact that 56% of these schools cannot afford water bills (RSA,1996b: 18).

The Government has adopted the White Paper on Basic Household Sanitation in 2001 and the framework for a National Sanitation Strategy in 2003 in order to achieve its target of providing all South Africans with clean potable water and basic sanitation that comply with hygiene standards within five to seven years (WRC,2000:4). This commits the Government to wipe out the sanitation backlog of providing its citizenry with good and adequate sanitation by 2010, which is still a challenge to be attended to. The sanitation policy of the South African Government stresses that sanitation is not simply a matter of providing toilets, but rather an integrated approach that encompasses institutional and organizational frameworks as well as financial, technical, environmental, social and educational considerations (Austin & Van Vuuren,2001:29).

Clement and Marah (2007:13) further note that the White Paper on Basic Household (2001) manages the provision of a basic level of sanitation to areas with the greatest need. It focuses on the safe disposal of human waste in conjunction with appropriate health and hygiene practices. The key to this White Paper is that provisioning of sanitation services should be demand-driven and community based with a focus on community participation and household care. Although the Government makes it its

prime obligation to provide these indispensable basic services with the passing of legislation to address this salient backlog, much attention was not given to the sufficient provisioning and maintenance of toilet facilities with particular reference to public institutions such as schools (Education Portfolio Committee,2002).

On the whole, it appears that learners' access to basic sanitation facilities at schools has improved since 1996, but this is not enough considering that nearly 40% of schools still had inadequate sanitation in 2006 (Lake,2009:2). Lake (2009:2) further states that the Department of Education on learner-to-toilet ratios is currently using a minimum standard of 50:1. This falls well below the minimum standard, recommended by DWAF, of 25 learners to one toilet and/or urinal. About 62% of schools had no arrangements for sewage disposal. Nearly 80% had more than 50 learners per toilet (RSA,1996b:18). These figures also do not indicate whether facilities are clean, hygienic and in working order. It is important that sufficient funds are allocated to ensure that sanitation facilities are sufficiently provided and maintained, and that emergency and structural repairs are carried out timely.

The former Minister of the then Department of Water Affairs and Forestry, L. B. Hendricks, acknowledged that the lack of access to basic services, such as clean water and decent sanitation, remains a global concern and the provision of these services is an important part of reducing poverty (Hendricks,2008:41). The National Sanitation Draft White Paper, (RSA,1995:4) indicates that, although the executive institutions have been working in close co-operation in formulating sanitation policy and continue to work together in planning, implementing and monitoring subsequent programmes, National Government should also work closely with provinces to assist local authorities where necessary to ensure that adequate services such as toilets in schools are developed and to ensure that water quality is not compromised through inadequate or ineffective waste treatment. Large secondary school with minimum capacity of 601 learners and maximum capacity of 1000 learners with 5 classes per grade is an acceptable norm of the Department of Education. This must also apply with regard to the provisioning of critical space that is essential for the use of learners, like toilets (RSA,1996e:68).

Government policies state that basic sanitation is a human right and stress the importance of involving ordinary people in choosing, planning and improvements that

meet their needs and aspirations. It therefore calls upon the Government to ensure that there are legislation which will be coupled with the provisioning and sustainable maintenance of available sanitary facilities (RSA,1995:27). According to Austin *et al* (2006:35), sanitation is not only about a toilet, it is about general health hygiene. The effectiveness and sustainability of sanitation programmes depend on a healthy balance between the engineering components (the hardware) and the socio-economic and institutional issues (software). Participatory hygiene activities in which communities identify their own sanitation problems and their causes and plan to solve them are more effective in bringing about real behavioural change than externally dominated programmes. Hardware alone is not sufficient. The health gains of universal access to basic sanitation can only accrue if people use the available sanitary facilities properly and practice some key hygienic behaviour. This means that hygiene promotion and social marketing are always needed in tandem with hardware provision (WHO, 1995:19).

The Draft White Paper on Sanitation (RSA,1995:27) states that schools are a natural local point for sanitation and hygiene education, encouraging the adoption of good hygiene practice from an early age. For this reason it is important that theory and practice coincides: schools should have hygienic, attractive, appropriate toilets and washing facilities and the use of these facilities must be linked to lessons on personal hygiene and health. The special requirements of small children are often ignored in the design and construction of toilets. To counter this trend, it was proposed that South Africa must promote child friendly toilet facilities, with children's views on design being specifically sought and acted upon. All schools will be charged with ensuring that their toilets are maintained clean and child-friendly, for example by the employment of a specific janitor for this purpose. It then suffices to state that sanitation includes both the software (understanding why health problems exist and what steps people can be taken to address these problems) and hardware (toilets, sewers and hand-washing facilities), together they combine to break the cycle of diseases that spread when human excreta are not properly managed (Austin *et al*, 2006:32).

Social issues are often not considered or properly integrated into sanitation programmes. Communities and influential community members themselves should also become focused on sanitation, infrastructure and hygiene aspects. Awareness is also raised about the link between health sanitation and waste management, which leads to more sustainable health improvements. Skills and jobs developed in the context of sanitation improvement remain within the community and can be extended to other development initiatives. Community management projects have been shown to be more sustainable because projects reflect local priorities and preferences and in a greater sense of ownership (WHO,2006:17).

Still and Holden (1997:9) state that because health and hygiene practices are so important for achieving lasting health benefits, sanitation improvement programmes can never be confined to the provision of toilets by Government agencies.

Lagardien and Cousins (2001:19) state that sanitation improvement needs to be marketed as one integrated package rather than having separate health and hygiene promotion components. Government has also adopted this approach by developing a joint strategy between the Department of Health and DWA to align plans and accelerate delivery of sanitation and water delivery to schools (Kasrils,2001:2). Sanitation and water delivery to schools in high-risk cholera areas has been prioritised since 2001 (Kasrils,2001:2). Indeed, looking back, the sanitary revolution appears as one of the greatest successes of the industrializing countries of the late 19th and early 20th centuries. Without it, the multifold increase in productivity that accompanied industrialisation would have been less possible and far less meaningful.

Foxon, Backely, Brouckart, Dama, Mtembu, Rodda, Smith, Pillay, Arrjun, Lalbahadur and Bux (2006:1) state that the provision of water and sanitation services to previously under-developed communities is a South African development priority factor. No single technological solution is universally applicable to solve this backlog and a solution for a particular community requires that a range of technologies to be available for consideration.

In an attempt to maintain high quality hygiene standards it is of critical importance for the communities to take part in processes that would ensure the expected standards.

Lagardien and Cousins (2005:16) maintain that two distinct aspects may be separated into the following two functions with regard to community involvement:

- Representation of community concerns, interests and responsibilities as recipients and users of sanitation services; and
- Direct involvement in construction, operation and maintenance as employed or contracted functions in providing sanitation services.

Increasing community knowledge and understanding of sanitation and its linkages to health, created a demand for improved services and resulted in behaviour changes. Working in an integrated manner with local leaders and extension agents, and using schools as the local points for change, helped to increase access and stimulate demand (WHO, 2006:17). Modification in human behaviour and the way in which people interact with their environments, especially at the level of the household, have been shown to exert a greater influence on mobility and mortality than the simple provision of clean water or latrines (Duncker,2002:11). Citizens must be convinced of the need for sanitation improvements in such a manner that they will invest their own resources into those improvements and spontaneously encourage the practice of good hygiene (Naidoo, Mdala, Mphake and Chidley,2007:9). Kasrils (2001:2) also indicates that “...sanitation is not the responsibility of one institution, agency or individual only. Good health, hygiene, and maintenance of sanitation facilities start at home.”

Although toilets play an important part to achieve good sanitation, without proper public understanding about why sanitation matters and what is necessary to achieve good sanitation, toilets are not enough to break the cycle of diseases. Good sanitation is achieved when everyone in a community understands the health importance of safe excreta disposal and takes the necessary practical steps to promote good personal hygienic and public health (DWAF,2002:3).

Potgieter (2008:10) states that progress in sanitation provisioning and maintenance in South Africa has, however, been much slower. This reflects both the lower priority attributed by the citizens and the Government. The main consideration is whether the Government must be solely responsible for sanitation infrastructure. In addition to this, citizens should take ownership of keeping their sanitation facilities in a proper condition.

2.3 HEALTH AND SAFETY ISSUES

The lack of sanitation in many countries throughout the world constitutes a public health disaster. The absence of suitable sewage water collectors increases the risk of coming into contact with excreta which can be the vector for the development of many parasites dangerous to human health; nearly half of humanity (three billion persons) is condemned to live without effective sanitation systems and basic hygiene. If no action is taken, in twenty years time, this problem will affect more than 4,5 billion persons. Urgent action is needed to provide sanitation where population densities are high and revenues usually lowest (Lane,2004:20).

Inadequate sanitation frequently results in the loss of privacy and dignity and increases risks to personal safety when toilets are placed at a distance from the home. RSA (1996(b):24) states that for the girl child in particular, such constraints may adversely impact on attendance and consequently in schooling and learning outcomes. This is particularly true for women and the elderly. Poor sanitation and unusable facilities in many rural areas contribute to absenteeism and an uncongenial learning environment, and is rated as an important reason why many girls drop out at school (United Nations Children's Fund [UNICEF],2002).

Sufficient toilet facilities are required at public buildings such as schools. The large number of people using a concentrated facility can cause problems if there is inadequate on-site drainage and a lack of general maintenance, such as cleaning of the toilets and replacement of toilet paper. Most types of on-site sanitation systems can be used, provided that developers take note of the special requirements for toilet facilities. A rural school may not be able to afford the services of a janitor to look after routine maintenance (Council for Scientific and Industrial Research [CSIR],2001:13).

In order to make "Health for all" rather than "all for some" accessible, it would be most appropriate for the Government to ensure that scarce public funds are prioritised in order to assist those who are faced with the greater risk to health due to inadequate sanitation services. The limited national resources available to support the incremental improvement of sanitation services should be equitably distributed through the country, according to population level of development (CSIR,2001:2).

In recognition of the challenges facing the sanitation related health sector and the pivotal role a well planned health and hygiene education program plays in the achievement of the accelerated service delivery, the Mvula Trust for example, with funding from the Water Research Commission, has developed a community based health and hygiene model which addresses these challenges. It attempts to do this by inculcating the principles of local economic empowerment, community participation, peer education partnerships, skills transfers, cost effectiveness and the reviews of Participatory, Hygiene and Sanitation Transformation (PHAST) utilisation in all phases of a health and hygiene programmes that include training, promotion, monitoring, and evaluation (Ndlovu & Onabolu,2006:9-10).

Although efforts to address the backlog on sanitation have been underway, a water, sanitation and hygiene (WASH) awareness campaign has been launched in South Africa in collaboration with the United Nations Water Supply and Sanitation Collaborative Council. The aim of the WASH curriculum is to maximise education impact on hygienic sanitation practices. The above assertions point to the fact that a lot still needs to be done in order to get good sanitation services in place (Department of International Development [DFID],2008:8).

The following facts and figures from WASH demonstrate the critical need for integration of water sanitation and hygiene provision:

- Some 6000 children in the world die every day from diseases associated with lack of access to safe drinking water, inadequate sanitation and poor hygiene; and
- At any time, 1.5 billion people suffer from parasitic worm infections stemming from human excreta and solid wastes in the environment, in spite of the fact that intestinal worms can be controlled through sanitation hygiene and water. These parasites can lead to malnutrition anemia and retard growth depending on the severity of the infection. Provision of water supply alone without sanitation cannot address health related problems satisfactorily. Experts agree that not only must water sanitation and hygiene be integrated but also proper health and hygiene practices have a critical role to play in the reduction of diseases (Ndlovu & Onabolu,2006:6).

The safe disposal of human excreta alone does not necessarily mean the creation of a healthy environment since sanitation goes hand in hand with an effective health care programme (CSIR,2003:1). Indeed, as Kasrils (2001:2) concludes, "...the returns on investing in sanitation are high. It leads to higher worker productivity and lower absenteeism. It increases the learning abilities and attendance of school children. It heightens personal and national pride."

2.4 THE NATIONAL PERSPECTIVE ON THE PROVISIONING OF TOILET FACILITIES

Ronnie Kasrils, the then Minister of the Department of Water Affairs and Forestry, stated in 2001 that one of the great concerns in South Africa is the lack of adequate sanitation as it is estimated that 11,7% of all schools have no sanitation facilities at all (Kasrils, 2001:2). Furthermore, "...there is an estimated shortage of 217 339 toilets in schools that already have some, but inadequate toilet facilities" (Kasrils,2001:2).

There is thus both a national and international drive to provide sustainable water and sanitation services to millions of South Africans in the course of this decade. Part of Government's primary task is to meet the Millennium Development Goals which were adopted at the United Nations Millennium Summit in 2000. They have become the reference for measuring and tracking improvements in the human condition in developing countries. The goals are backed by a political mandate agreed to by leaders of the United Nations member states. They offer a comprehensive and multidimensional development framework and set clear quantifiable targets to be achieved by 2015 (Foxon *et al*, 2006:1).

Schools are in a dire need of basic sanitation. This is most acute in schools in poorer provinces of the country (DWAF, 2003 b). In the Eastern Cape Province, 1 488 schools have adequate access to sanitation, and 4 776 have inadequate access. In Limpopo Province only 774 schools have adequate sanitation, as against 3 482 that do not. By contrast, the situation in South Africa's two most richest and most urbanized provinces, Gauteng and the Western Cape, is reversed. In Gauteng 1 780 schools have decent sanitation, while 228 schools are found lacking. In the Western Cape 1 416 schools

have acceptable sanitation, and 142 schools are lacking good sanitation (DWAF,2003b).

Thus far, visible progress has been registered with regard to addressing the sanitation crises in the country. According to Lake (2009:2), recent official statistics suggest that access to flush toilets appears to have improved slightly from 1996 to 2006. In 1996, only 33% of schools had flush toilets. The National Educational Infrastructure Management System (NEIMS) reports that 40% of schools had flush toilets in 2006. These results suggest an improvement of less than 10 percentage points over a 10-year period, with the majority of schools still without flush toilet facilities. Conversely, the number of schools without access to sanitation appears to have decreased over the 10-year period. It is not possible to compare trends for acceptable and unacceptable sanitation, as data for Ventilated Improved Pits (VIP), Enviroloos and pit latrines are not disaggregated for 1996 and 2000 (Lake,2009:2).

2.5 THE PROVINCIAL AND LOCAL GOVERNMENT PERSPECTIVES

Austin *et al.* (2006:32) state that in South Africa, there is a lack of commitment to sanitation on Provincial, Regional and Local Government spheres due to the fact that there are too many other pressing problems to address as well as the lack of capacity and skills. Sanitation needs to become a focus point and needs to be mainstreamed in the business plans and activities of Provincial Government Departments, Regional Authorities and Local Authorities as public policy implementing agents.

According to RSA (1996b:38) the North West Department of Education 2004/2005 financial year prioritised on the intensive infrastructural development emphasising on the provisioning of sanitation facilities. The provincial picture in the North West Province is that the Provincial Government is in the process of providing 221 toilets to farm schools and water to 81 schools from the provincial budget. A further 686 toilets will be constructed as a result of the construction of 22 new schools from the Provincial Department of Education's infrastructure budget. The North West Education Development Trust is in addition also providing 481 ablution blocks as well as water

supply to 81 schools. From the capital grant, 278 toilets are being built (Education Portfolio Committee, 2002).

DWAF (2002:10) states that local authorities need to think carefully about the kind of water supplies they provide in a settlement because this has an impact on the kind of sanitation systems that will be viable. This clearly explains the situation and the hardships public schools in local urban and rural areas have to persevere.

2.6 CONCLUSION

The Government's response to the Millennium Development Goals (MDG) campaign to combat the backlog on sanitation has been viewed by many as a step towards a positive direction. As RSA (1995:4) indicates, the question of sanitation, perhaps more than most developmental issues, needs to be in the context of an integrated development strategy. The impact of inadequate sanitation services on a variety of sectors needs to be fully understood. These include the impact on the water resources of the country, particularly water quality, and the impact on the health and well-being of the population. It therefore suffices to state that the provisioning and availability of potable (drinking) water and sanitation to all South Africans is indispensable to the success of the Government's Reconstruction and Development Programme (RDP). In line with this statement, the policy of the Department of Water Affairs (DWA) is to ensure safe, basic water supply and sanitation services to all South Africans.

This chapter has discussed the duty of Government as the primary provider of essential basic services to its citizens; the legal framework with special reference to the provisioning of toilet facilities to public schools; health and safety aspects associated with toilet facilities; and the conditions of National, Provincial and Local Government toilet facilities. It was found that a minimum ratio requirement for a toilet facility in a public school should be twenty five learners per toilet (25:1) as per DWA recommendation, instead of the current ratio of fifty learners per toilet (50:1), which further exacerbates the prevailing appalling health conditions of public school toilet facilities in South Africa.

Chapter 3 of this study will highlight the nature and extent of toilet facilities which have been provided by Government at the three sampled schools within the municipal area of the Matlosana Local Municipality.

CHAPTER 3

NATURE AND EXTENT OF PROVISIONING AND MAINTENANCE OF TOILET FACILITIES IN PUBLIC SCHOOLS OF MATLOSANA LOCAL MUNICIPALITY'S AREA OF JURISDICTION

3.1 INTRODUCTION

Chapter three of this mini-dissertation explores the nature and extent of toilet facilities which are provided by the Government to its public schools in the Matlosana Local Municipality's responsibility area. It further, by means of the case study method, exposes the problems associated with toilet facilities in the three sampled schools which are: Are-Fadimeheng; Dominion Reefs and Nkagisang public schools.

In order for the South African Government to succeed in addressing the backlog on basic sanitation at public schools, and to achieve the expected health standards, sanitation crises in public schools must be prioritised as a matter of national importance. Provisioning of a toilet which cannot be maintained is tantamount to having no toilet at all. It does not completely address the provisioning of a safe and clean sanitation facility. The maintenance and cleaning of toilets cannot be underestimated or put aside. A particular point of reference in this regard is the nature and extent of toilet facilities provided for in the sampled schools of this research. This chapter explores in detail the impact of a lack of sufficient toilets facilities and the large number of learner ratios on the Government's intention of addressing sanitary crises in South Africa. Failing to provide water and sanitation, will cost developing countries \$84 billion US dollars per year in lost lives, low worker productivity, higher health care costs and lost education opportunities (Bethan,2006:22).

3.2 PROBLEMS ASSOCIATED WITH TOILET FACILITIES AT URBAN SCHOOLS

It is a commonly known fact that after the family, schools are the most important places of learning for children. Schools are stimulating learning environments for children and stimulate change. If sanitary facilities in schools are available, schools can act and

function as role models. Schools can also influence communities through outreach activities since students in schools are in touch with a large proportion of the households in the community (International Water and Sanitation Centre [IRC],2003:16).

In reality, schools are often more than just places for learning and behaviour change. If school's sanitation and hygiene facilities are absent, or are badly maintained and used, schools become places where diseases are transmitted. Schools can also pollute the natural environment in such a way that it causes health hazards for the surrounding community at large. It is therefore important that schools have proper potable water and sanitation facilities, (UNICEF,2002:17).

According to the IRC (2003:1), children deserve a safe school environment where they can learn and grow and the WASH (Water, Sanitation and Hygiene) in schools greatly contributes to this. However, over 50% of schools throughout the world still lack water and sanitation facilities and hygiene education is often non-existent. Potable water and sanitation are closely linked and it is often difficult to separate the two issues because simply providing potable water does not resolve the many health problems and health related issues that arise if sanitation is not available. Lacking political impetus policies often go unimplemented and sanitation seldom receives a dedicated budget. The result is a lack of funds for promoting sanitation and hygiene and for ensuring that new schools, clinics and other public buildings have adequate toilets. Even when toilets are in place, the budget and systems needed to maintain them are usually absent (DFID, 2008:16).

3.3 TYPES OF TOILET FACILITIES USED IN PUBLIC SCHOOLS OF SOUTH AFRICA

The standard of toilet facilities in the rural areas of South Africa is a major problem particularly in public schools. According to surveys conducted by the Provincial Departments of Education in 2004, at least six million learners nationally do not have ample toilets at their schools. Toilet facilities are in very a poor condition due to inadequate funding for maintenance over many years (Lane,2004:64).

DWAF (2002:9) explains the range of toilet technology types which are currently in use in South Africa. These include buckets, chemical toilets, simple pit toilets, ventilated improved pit toilets, dehydrating and composting toilets, aqua-privies, flush toilets with septic tanks, flush toilets with small bore solids, free-sewers and flush toilets with full water-borne and central treatment works. Coupled with ensuring accessibility of South African citizens to a healthy and clean environment, three different types of toilet facilities are provided at the three sampled schools. They vary from:

Flush toilets – this type of toilet structure is connected to an underground water-borne sewer system. This is an expensive option which requires ongoing maintenance of the toilet installation (CSIR,2003:8). Potgieter (2008:11) agrees with the CSIR that a water-borne sanitation system is a system which requires large capital investment, a high level of technical expertise for operations and maintenance and incurs substantial running costs. See Figure 1 on the next page for a sketch of an underground water-borne sewerage system flush toilet. According to Walker, Still, Ravenscroft, Hazelton, King, Erskine and Eardley, (2010:18) the general capital costs of the different technologies seen in the case studies, estimated rands in 2006, were as follows:

- VIP R2 737 - R3 465
- Ecological R4 108 - R7 620
- Water-borne R6 678 – R7 500 including sewer connection cost.

Figure 1 for water-borne sanitation provides an indication of the cost of developing water-borne domestic services but does not consider the bulk sewer cost or the cost of the user. For some communities they will incur the additional cost of paying for water (Walker *et al*, 2010:18). The following sketch of figure 1 on the next page represents the full water-borne flush toilet structure.

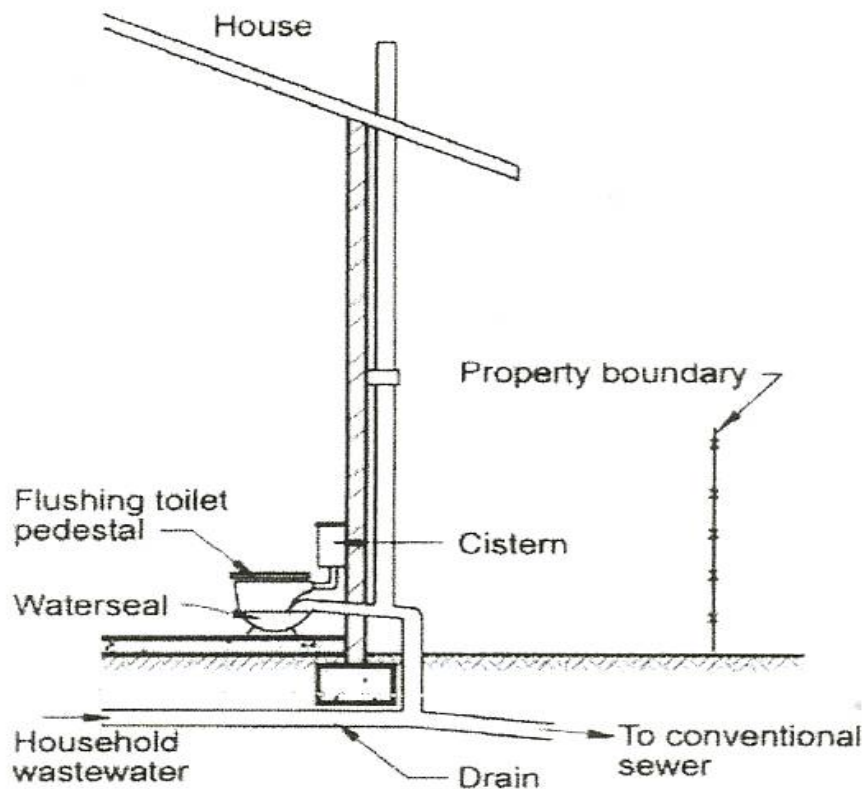


Figure 1: Full water-borne sewerage system

Source: CSIR (2003:8).

On the next page the septic tank flush toilet will be describe.

Figure 2 indicates the structure of a septic tank flush toilet. This is a water-borne sanitation system that removes faeces from the toilet using water. The waste is piped to a septic tank, or a conservancy tank. The septic tank provides for the storage of sludge, which must be sucked empty more often to keep it well functioning and the water is disposed of in a soak pit (Walker *et al*, 2010:5).

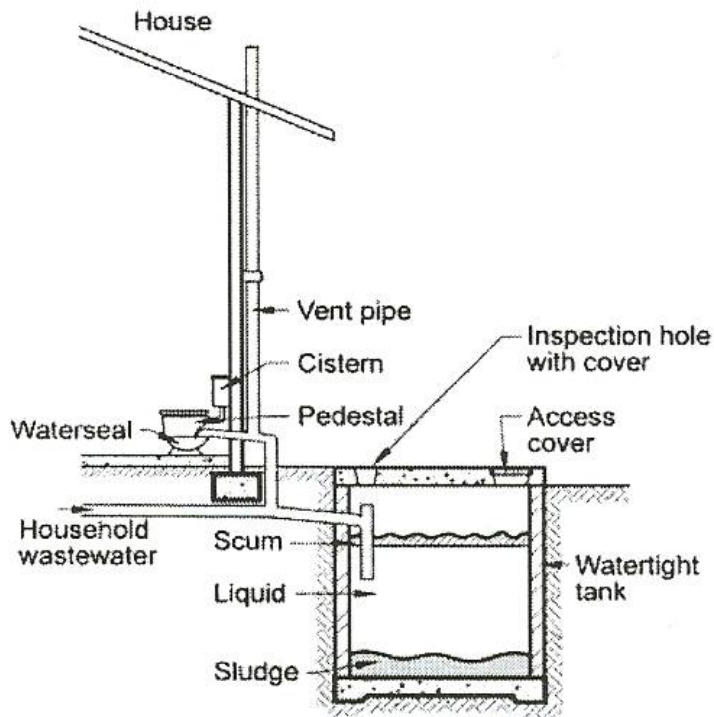


Figure 2: Flushing toilet with septic tank and soak away

Source: CSIR (2003:11).

The following sketch in Figure 3 on the next page represents the structure of a Ventilated Improved Pit (VIP) toilet. It is a partly or fully-lined pit covered by a concrete slab topped by an upper structure equipment with a safe pedestal, walls and roof. The VIP is characterised by a vent pipe and fitted with a fly screen (Foxon *et al*, 2006:10).

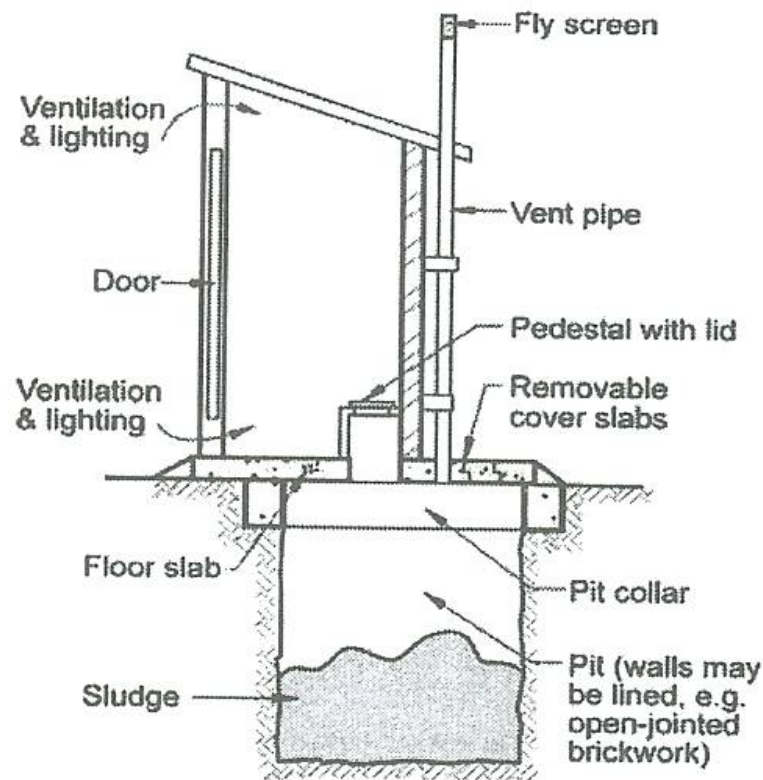


Figure 3: Ventilated Improved Pit (VIP) toilet

Source: CSIR (2003:6).

The VIP functions as movement of air across the top of the vent pipe creates suction that draws air into the pit via the pedestal and out via the vent pipe, releasing odours above the pit. Solar radiation enhances ventilation by heating air in the vent pipe, causing it to rise and replaced by cooler air from the pit. The fly screen on the top of the vent pipe prevents flies entering the pit and those that may have gained access via the pedestals from emerging pit, thereby limiting the spread of pathogens from toilets to

people and food via flies. Human excreta and anal cleansing material are dropped into the pit via the pedestal (Foxon *et al*, 2006: 10).

Potgieter (2008:11) perceives “VIP toilets as low tech, individualized, localized structures that are ideal for self-built approaches and not overly expensive”. The VIP latrine is the minimum and cheapest level of acceptable service; full water-borne sanitation is the most expensive.

According to Austin and Van Vuuren (2001:29), VIP toilets may not be suited to densely populated urban areas because of the increased risk of environmental pollution. Other systems should rather be employed, and they should preferably operate well without piped water.

According to Austin and Van Vuuren (2001:30), a full pit toilet is a problem. In many cases the owners will not be in a financial position to empty them, even if the toilets have been constructed with this in mind (for example; removable cover slabs). While there may be plenty of available space in rural areas to dig other pits, this will seldom be the case in densely populated urban areas. The costs of digging a new pit and moving or rebuilding the toilets have not even been taken into account. So for all practical purposes the initial investment is lost when the pit fills up.

Inadequately maintained sewer-reticulation systems in urban areas have caused adverse environmental impacts, most often as a result of leaking or blocked sewers, but sometimes also as a result of overloaded or inadequately operated or maintained treatment works and failed pumping stations (Austin & Van Vuuren,2001:30).

Any toilet system needs basic maintenance. Keeping it clean, understanding what repairs and replacements will be needed and understanding its weak points are all essential; for example pit latrines should not be used for household refuse as they then fill up quickly; flush toilets block easily if coarse or bulky cleaning materials are used and many users are not aware that a sewer pipe is much narrower than a manhole cover. Providing this information needs to be an integral part of any sanitation improvements programme (Wate,2002:11).

In poor areas of the historically disadvantaged, most of the operational difficulties are concentrated at the user end of the systems, where personal cleaning materials other than proper toilet tissue paper are used, and also because of a lack of education on the proper use of cistern flush toilets (Austin & Van Vuuren,2001:30).

Kommunikation (2003:1) states that the hardware components of water and sanitation facilities are necessary to produce a healthy environment in and around the school compound. The issue of lack of maintenance of water supply sanitation facilities and lack of finance for maintenance should also be noted. IRC (2003:1) further states that the promises of school health and hygiene education programmes have not always been fulfilled. In many countries, schools are not safe for children due to neglect of the operation and maintenance of facilities. In addition there has been a lack of hygiene education for the students. These schools often suffer from the following:

- Non-existent or insufficient drinking water supply, sanitation and hand washing facilities;
- Broken, dirty and unsafe drinking water supply;
- Toilets or latrines that are not adapted to the needs of children, in particular, girls;
- Children with poor hand washing habits and practices;
- Non-existent or irrelevant health and hygiene education; and
- Under these conditions schools become unsafe places where diseases are transmitted (IRC,2003:1).

Potgieter (2008:11) proposes the following aspects to be considered when delivering sanitation services:

- Health aspects: The sanitation system must be designed and constructed to provide an effective barrier against disease transmission.
- Social and educational aspects: The sanitation system must be acceptable to the users. User education must be an integral part of sanitation projects. Sanitation

systems must be affordable to poor communities to ensure that users remain in good health.

Naidoo *et al*, (2007:7) stress that inadequate water and sanitation facilities in informal settlements produce a multitude of negative impacts, most notably the impact on human health. According to the National Health and Hygiene Education Strategy of 2004, water and sanitation projects must be accompanied by health and hygiene education programmes. The evaluation of the effectiveness of these programmes is crucial for the success of the implementation of future programmes and the effective allocation of resources to such programmes (Naidoo *et al*, 2007:9).

3.4 RANGE AND NATURE OF TOILET FACILITIES PROVIDED AT SAMPLED SCHOOLS IN THE MATLOSANA LOCAL MUNICIPALITY'S AREA

This study explores the prevailing circumstances about the provisioning of toilet facilities at the three sampled schools, namely: Are-Fadimeheng Secondary Public School, Dominion Reefs Public School and Nkagisang Public School in the Matlosana Local Municipality's municipal area.

Table 2 gives an indication of the types of toilets used in the 3 schools:

Table 2: Type of toilet facilities

SCHOOL	TYPE OF TOILET	TOILET SYSTEM IN PLACE
1. Are-Fadimeheng Secondary Public School	Flush	Underground water-borne pipe
2. Dominion Reefs Public School	Flush	Septic tank
	VIP	Simple ventilated
3. Nkagisang Public School	Latrine	Simple ventilated
	VIP	

Source: (researcher's inspection on 28/08/2009)

Following is the detailed account of the three sampled schools case studies of Are-Fadimeheng, Dominion Reefs and Nkagisang public schools.

3.4.1 Are-Fadimeheng Secondary Public School – A case study

Are-Fadimeheng Secondary School is situated on the South-western side of the Matlosana Local Municipality's municipal boundary about 10 km from Klerksdorp. It accommodates in the range of one thousand two hundred and seventy five (1275) learners and forty five (45) staff members at the time of research. (See locality map of schools in Annexure A).

There are four blocks of toilets on the school premises for learners. (See schools premises plan for locality of toilets in Annexure D). These facilities are distributed equitably to accommodate learners from both general education and training (GET) and further education and training (FET) bands at the school. Each block has a connection for the collection of excreta and the urine. In the boys toilets there are $4 \times 3 = 12$ pan connections of which only five (5) pan connections were in working order during the researcher's inspection on 28/08/2009.

According to the school premises construction plan, there was also a hand washing basin which is no longer available because of vandalism. All 4 urinals for boys are not in working condition. The hand washing basin in the boys' toilet is not in a working state. In one functioning toilet, the pan leaks water unstoppably, and floods the toilets to make it difficult for users to access the toilet facilities. The stench that comes from the blocked pans and urinal is unbearable. This situation poses a serious health hazard to the school population (researcher's inspection on 28/08/2009).

In the girl learner's block of toilet facilities, out of $5 \times 4 = 20$ pan connections, there were only 10 toilets in working order at the time of the site inspection. Only three (3) hand wash basins in the girls' toilets were in working order (researcher's inspection on 28/08/2009).

In spite of the unacceptable toilet facility conditions, learners continue to use them when nature calls. Inside the toilet facilities, for both boy and girl learners, there are neither toilet paper nor soap for learners to wash hands after visiting the facilities.

In the staff members' toilets there are two (2) separate blocks, one (1) for females and another one (1) for males. In the females toilets there are three (3) functional pan connections and two hand wash basins. In the block for male staff there are two (2) functional pan connections, two hand wash basins and two ceramic urinals of which one is dysfunctional.

At the time of site inspection there was the problem of non-cleaning of the toilets. There are two general workers (janitor lady and gentleman) employed at the school. The lady must clean the staff toilets whilst the learners' toilets are being cleaned by the gentleman janitor. But unfortunately they do not clean them regularly (researcher's inspection on 28/08/2009). During the times when they are not being cleaned, unhygienic conditions begin to show. To a large extent the janitor lady does not feel comfortable with the cleaning of male staff toilets. She would even skip the days when she is supposed to clean them (researcher's inspection on 28/08/2009).

3.4.2 Dominion Reefs Public School - A case study

The Dominion Reefs Public School is situated on the South-eastern part of the Matlosana Local Municipality's boundaries; about 24 km from Klerksdorp (see Annexure A for a locality map). The school accommodates seven hundred and twenty four (724) learners and twenty three (23) staff members at the time of research. Most of its learners come from a poor family background and neighbouring farms. There are two types of toilet facilities at the school (septic tank flush and VIP). The old toilet structures are not functional; the system type installed in these toilet facilities is a septic tank which is neglected. There are two blocks of toilet facilities, one with four (4) pan connections and another with one, all of which are dysfunctional (researcher's inspection on 28/08/2009).

From the personal site inspection conducted by the researcher, it is clear that young pupils in the age range of 7 – 11 continue to use the vandalised dysfunctional toilet

facilities. At this school, some young learners go to the extent of defecating on the floors of the toilet facilities which makes it very difficult to gain access into it. There are no hand wash basins for learners nor any soap or toilet paper in the old dysfunctional toilet facilities.

The remaining facilities consist of 16 new toilets (VIPs), which are a donation from a private company. The 16 donated VIP toilet facilities are all in working order. Although there are no distinctive separate toilet facilities for boys and girls, learners use them indiscriminately. There is neither soap nor toilet paper in these as well. (See schools premises plan for locality of toilet facilities in Annexure D).

There are only two (2) pan connections for twenty three (23) staff members. The pan connections are not in a proper working condition and only one (1) is functional. There is a clear visible water leakage and staff members use buckets of water to flush the toilet. There is no hand wash basin facility in these toilet facilities (researcher's inspection on 28/08/2009).

3.4.3 Nkagisang Public School - A case study

The Nkagisang Public School is situated on the South-eastern part of the Matlosana Local Municipality's responsibility area. It is about 15 kilometers from Klerksdorp (see Annexure A for a locality map). It is a school situated on a former private property until it was purchased by Government for the communities in the neighbourhood. The school accommodates four hundred and seventy one (471) learners and fifteen (15) staff members at the time of research. The majority of the school population is learners who hail from impoverished family backgrounds, thus suggesting that most of the residents of this community are unemployed and they solely rely on what the Government can offer in order to sustain their day-to-day living needs. Potable water in this rural area is a very scarce resource. This situation indirectly affects the health and hygiene standards at the school (researcher's inspection on 28/08/2009).

There are ten blocks of old and dysfunctional toilet structures on the school premises. These toilet facilities are divided into five (5) toilet facilities for girl learners and five (5)

for boy learners. The school's lack of running water to sustain the functioning of toilet facilities led to their (toilet facilities) closure. The newly erected blocks are VIP toilet facilities which are divided into boys and girls learners blocks. In each block there are four (4) pan connections made of fibre glass with no hand wash basin facilities. (See the schools premises plan - Annexure D).

There are no soap and toilet paper provided for learners by the school. The janitor responsible for cleaning does not visit the premises regularly to clean and replace the broken toilet parts (researcher's inspection on 28/08/2009).

Under such prevailing circumstances female staff members share these facilities with learners, whilst on the other hand male staff members walk distances of between fifty to hundred meters to private houses in asking for help when nature calls.

3. 5 CONCLUSION

Chapter three of this mini-dissertation discussed the problems associated with the provisioning and maintenance of toilet facilities at peri-urban and urban public schools in South Africa, and the different types of toilet facilities available for use by learners. It specifically discussed the range and nature of toilet structures provided at the sampled schools and gave an elaborate details of the prevailing conditions in these three sampled schools, and lastly it reflected on the negative impact the lack of proper provisioning and maintenance and cleaning of it may have on the lives of learners in the Matlosana Local Municipality's area of jurisdiction.

The next chapter highlights the method of research applied in the empirical research, the data collected, analyses of it and the logical conclusions made from it.

CHAPTER 4

EVALUATION OF SANITATION FACILITIES IN TOWNSHIP SCHOOLS OF THE MATLOSANA LOCAL MUNICIPALITY: EMPIRICAL FINDINGS

4.1 INTRODUCTION

Chapter 4 presents the findings of the empirical research which has been conducted. In the chapter the data collected will also be presented and interpreted, whilst graphs are used to interpret the collected data from the respondents using the following sub-headings: personal details, respondents' age range, gender representation and data analysis.

Both qualitative and quantitative research methods were important to the research process as they assisted with the consolidation of various views from the various participants' responses. This chapter also gives a broad outline of the research sample size used by the researcher and presents a conclusion at the end.

4.2 DATA PRESENTATION

The data captured for presentation and analysis contains the number of the respondents as represented by percentages (%). The learner population per individual sampled school is reflected in this chapter. Only a small sample group was selected to represent the rest of the learner and educator population. The respondents' views from the three sampled schools have been graphically presented by means of pie and bar charts.

4.2.1 Personal details

Fifty seven (57) questionnaires were distributed to participants; nineteen (19) questionnaires in each school. Fifty four (54) respondents who constituted (94.7%)

returned the questionnaires and (3) respondents represented by (5.3%), could not return the questionnaires.

The research population comprised of three (3) school principals, eighteen (18) educators and thirty six (36) learners from all three sampled schools. Equitable gender representation of 50% male and female was ensured by the researcher.

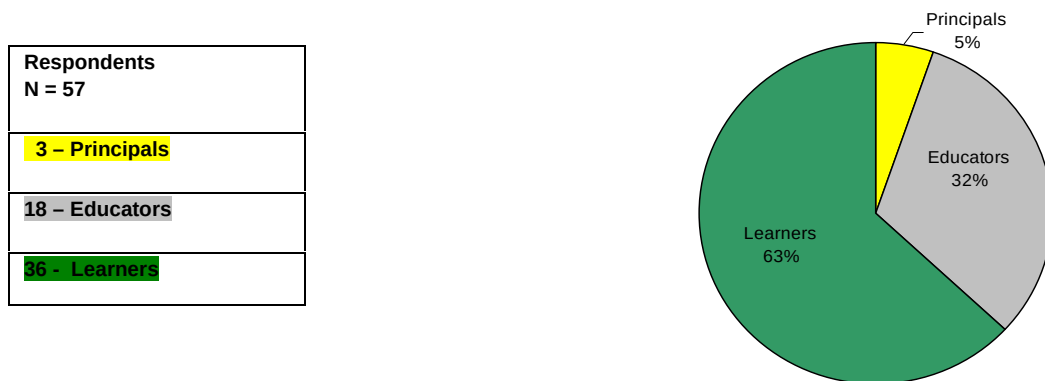


Figure 4: Information distribution of respondents

The pie chart in Figure 4 outlines the general representation of research respondents (principals, educators and learners) who participated in the research by parting with information contained in the research. According to the captured data, principals are represented by 3, which constitutes 5%; educators by 18, which constitutes 32% and learners by 36, which constitutes 63% of the total sample size. In the three sampled schools, distribution of participants was done equitably without discriminating between the schools.

4.2.2 Respondents' age range

In terms of learners of the three sampled schools, the age range varied in the region of 10 to 25 years. The distribution of learner ages of the three sampled schools are summarised as follows: 5% represents the age range of 10 to 15 years, 92% were between 15 to 20 years and 3% were between 20 to 25 years of age. With regard to staff members' ages, it varied between 35 to 55 years. Seventy seven point seven

percent 77.7% ranged between 35 to 45 years of age and 22.3% was between 45 to 55 years of age.

4.2.3 Gender representation

Figure 5 represents the gender representativity as selected by the researcher. The data demonstrated by the graph equitably covers participants (principals, educators and learners) from all three sampled schools.

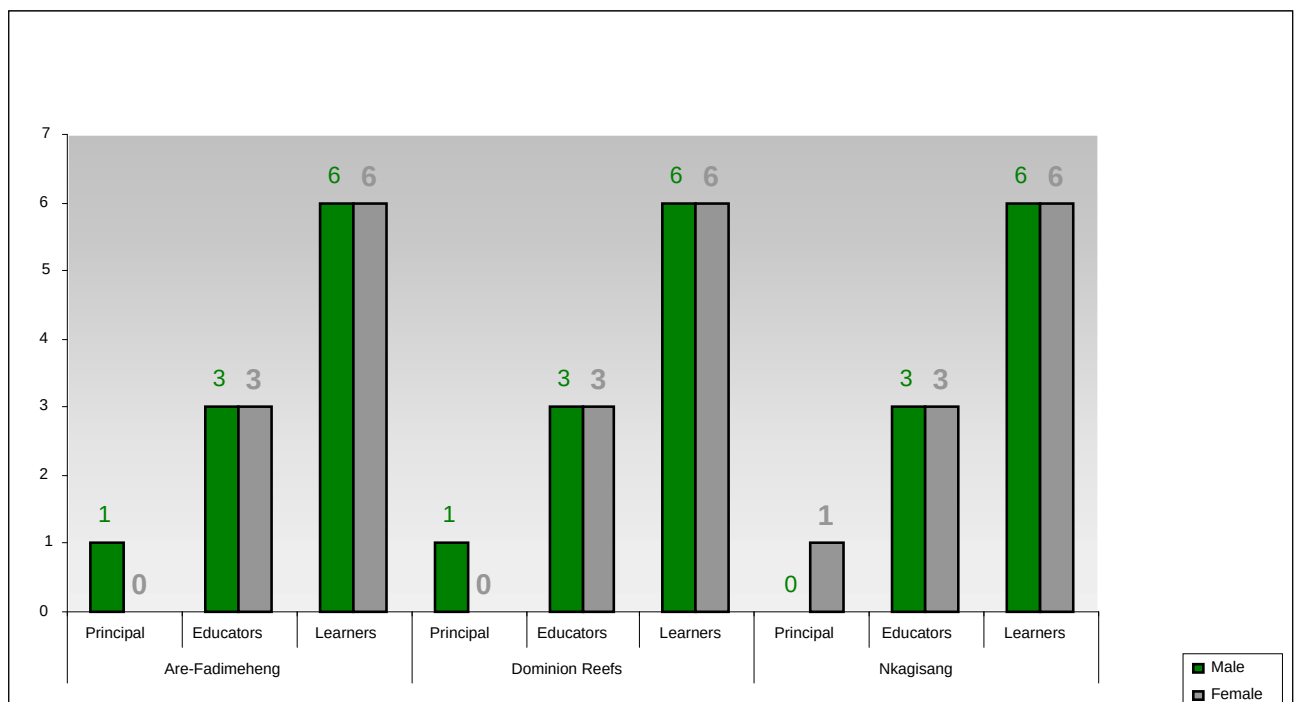


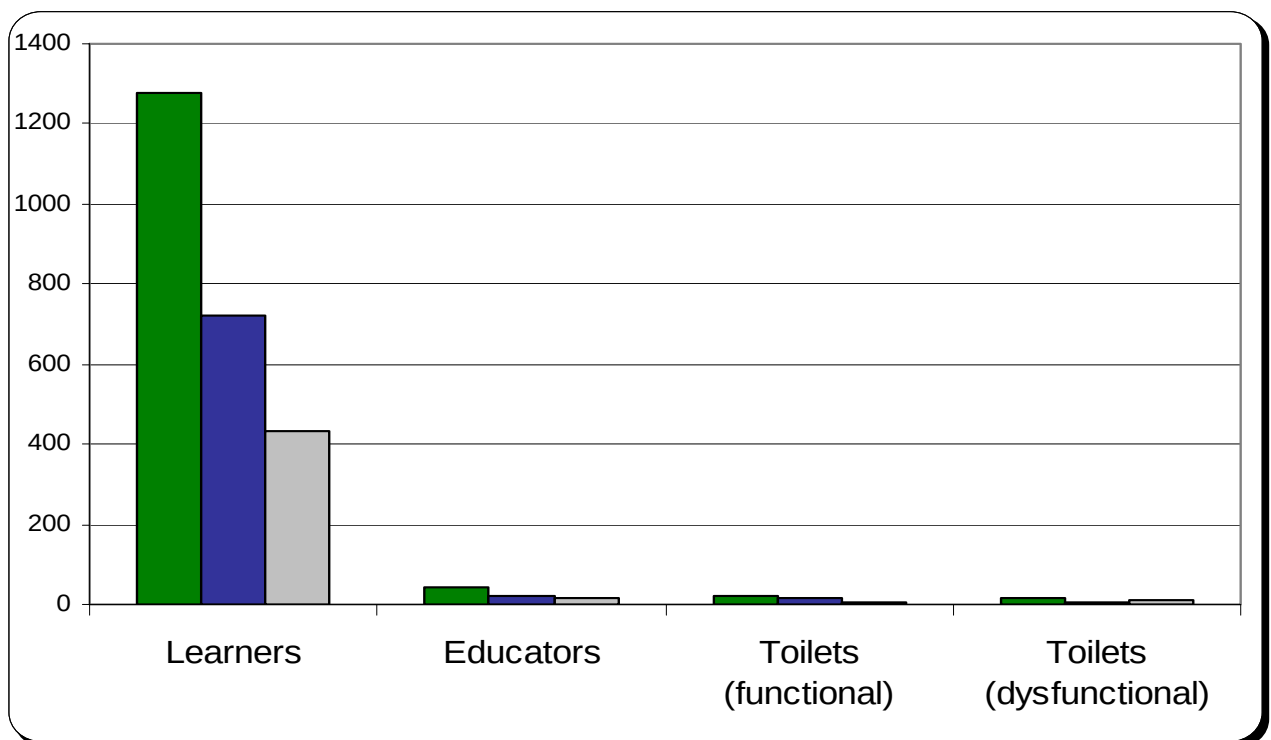
Figure 5: Gender representation

The above chart outlines gender representation of male and female educators as follows: two (2) male principals, one (1) from Are-Fadimeheng and one (1) Dominion Reefs Schools and one (1) female principal from Nkagisang School. In all three schools both educators and learners are equally distributed on a 50/50 basis, three (3) male educators and three (3) female educators and six (6) male learners and six (6) female learners.

4.2.4 Data analysis

The analysis of data presented is based on the research findings. The data analysis is interpreted according to the questions posed in the questionnaire (See annexure B for a copy of the questionnaire used in the data collection).

Figure 6 below illustrates information on learner-educator numbers per individual sampled schools. It also sheds information on the number of functioning toilets at a particular school which cater for both learners and educators. It further elaborates on the number of toilet facilities which are dysfunctional.



Sampled School	Learners	Educators	Toilets (functional)	Toilets (dysfunctional)
Are-Fadimeheng Secondary Public School	1275	45	20	14
Dominion Reefs Public School	724	23	16	8
Nkagisang Public School	431	15	8	10
Totals	2430	83	44	32

Figure 6: Composite analysis of the three sampled schools' toilet facilities

At Are-Fadimeheng there are 1275 learners and 45 staff members amounting to 1320 people having only 20 toilet facilities available to them for use.

This research has found that, out of $4 \times 3 = 12$ toilets pans available to boy learners, only 5 were found to be in functioning order (researcher's inspection: 28/08/2009). During the same site visit and data collection the researcher found that of $5 \times 4 = 20$ pan connections available to girl learners, only 10 toilets were in functioning order.

In the staff toilets there are three functional pan connections in the female toilets and two hand wash basins. In the block for male staff there are two functional pan connections, two hand wash basins and two ceramic urinals of which one is dysfunctional. The remaining 14 dysfunctional toilets must be fixed to accommodate and alleviate the pressure carried by the functional toilets: see paragraph 3.4.1.

At Dominion Reefs there are 724 learners and 23 staff members amounting to 747 people in total having only 16 toilet facilities at their disposal for use by all learners. In the staff toilets, there is one toilet which is shared for use by both male and female educators and the other one is dysfunctional. This arrangement raises the feelings of dissatisfaction to female staff educators: see paragraph 3.4.2.

At Nkagisang there are 431 learners and 15 staff members amounting to 446 people who are having only 8 functional toilet facilities at their disposal. Ten of the old structures are dysfunctional. Both learners and female educators use these functional toilet facilities jointly: see paragraph 3.4.3.

Figure 6 demonstrates that the ratio for functional toilet to users (learners and educators) at the three sampled schools stands as follows:

At Are-Fadimeheng it is 1:66; at Dominion Reefs it is 1:46 and at Nkagisang it is 1:55. It then suffices to conclude that this situation is not in line with the recommended ratio of 1:25 determined and recommended by DWA (Lake, 2009:2).

The following graphs will be used to graphically illustrate the nature of responses put in the questionnaire and the interpretation and analysis of data collected thereof.

The bar chart in Figure 7 represents the views of educators on the state of their school toilet facilities at the three sampled schools. The researcher has made use of a “Yes/No” response sheet for educator respondents to indicate their views on the toilet facilities conditions, whether conditions are good or not. The following question was asked:

Are all toilets in good working condition?

The following responses were collected:

Response	Are-Fadimeheng	Dominion Reefs	Nkagisang
Yes	0	6	0
No	7	0	5
Totals	7	6	5

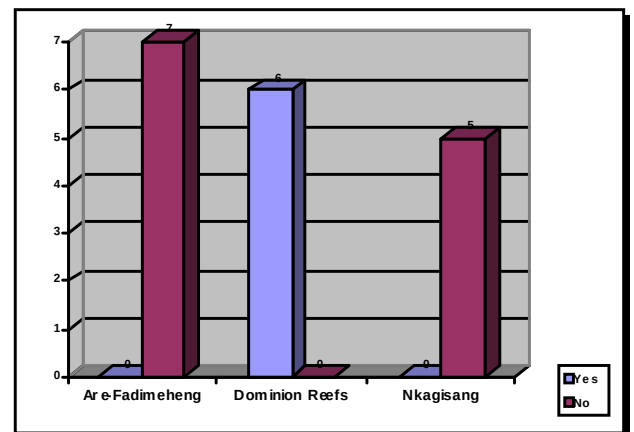


Figure 7: Illustration of state of educator's toilets at the three sampled schools

At Are-Fadimeheng and Nkagisang the majority of educator respondents seem not to be happy with the toilet facilities' conditions at their schools. Educators at Dominion Reefs however are happy with the state of their toilet facilities.

The bar chart in Figure 8 represents the views of learners regarding the state of toilets at the three sampled schools. The researcher has made use of a “Yes/No” response sheet for learner respondents to indicate their views on the toilet facilities’ condition. The question stated was:

Are all toilets in good working condition?

The following responses were collected:

Response	Are-Fadimeheng	Dominion Reefs	Nkagisang
Yes	2	1	12
No	10	11	0
Totals	12	12	12

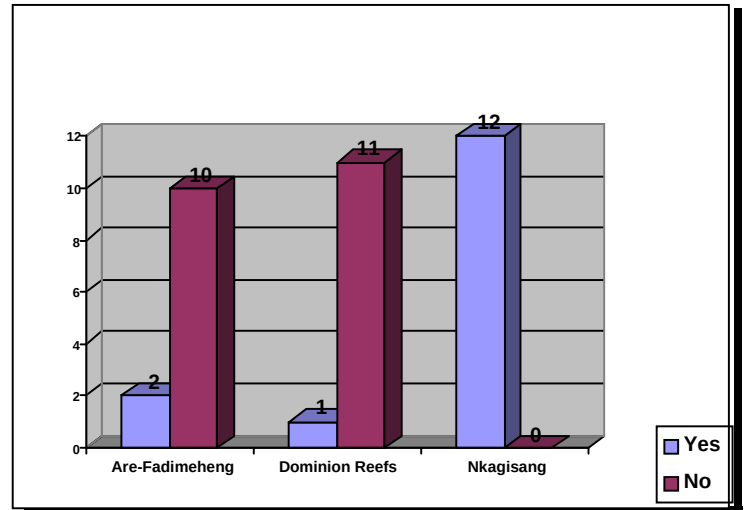


Figure 8: Illustration of state of learner toilets at the three sampled schools

The majority of the respondents indicated that a large number of learners at Are-Fadimeheng and Dominion Reefs are not happy with the state of their toilet facilities, except for Nkagisang learners who seem to be happy with the state of toilet facilities.

Data interpretation points to the fact that 85% of respondents are not happy with the state of their school toilets facilities at the two sampled schools that is: Are-Fadimeheng and Dominion Reefs, whilst 15% is shared by Nkagisang. Findings are in line with paragraph 3.4.2 which states the plight of toilet facilities in per-urban and urban areas.

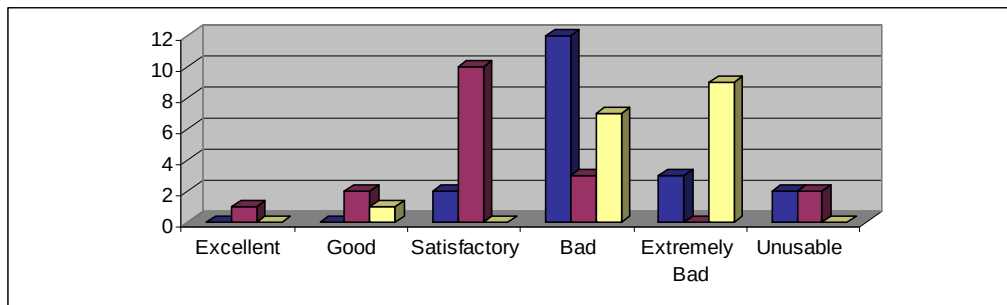
Figures 7 and 8 are bar charts which indicate the working state of toilet facilities at the three schools. The majority of both learners and educators respondents’ said no to the prevailing conditions of the toilet facilities. Both learners and educators view their toilet facilities as not suitable for usage. Findings are also in line with paragraph 3.4.2 which deals with the problems associated with toilet facilities in peri-urban and urban public

schools. In comparing the three case studies, it becomes clear that the state of toilet facilities in the three sampled schools is very poor.

To determine the toilet conditions at the three schools and the views of respondents, question 14 was put as follows:

What is the condition of these toilet facilities?

The following responses were made:



Sampled School	Excellent	Good	Satisfactory	Bad	Extremely Bad	Unusable
Are-Fadimeheng	0	0	2	12	3	2
Dominion Reefs	1	2	10	3	0	2
Nkagisang	0	1	0	7	9	0
Totals	1	3	12	22	12	4

Figure 9: Conditions of toilet facilities at the three sampled schools

The above chart represents the views of respondents on the extent of cleanliness of toilet facilities in the three sampled schools. At Are-Fadimeheng the majority of respondents generally perceive the cleanliness of toilet facilities as bad, whilst a small number of respondents view them as extremely bad and unusable. Only two learner respondents regarded the toilets as satisfactory.

At Dominion Reefs, the majority of learner respondents view the cleanliness of the (ventilated improved pit [VIP] toilet facilities to be satisfactory, whilst half of the educator respondents demonstrate bad responses. Two of the entire respondents view toilet facilities as good. Only one views the toilet facilities at the school as excellent.

At Nkagisang there is a huge feeling of bad and extremely bad about the extent of cleanliness of toilet facilities by respondents. Only one educator seems to be satisfied about the toilet conditions.

At the three schools the majority of respondents are not satisfied with the working conditions of toilet facilities at their schools except for a small number of respondents which is satisfied. The findings therefore indicate that in the three schools there is a need for the appointment of a full-time janitor with plumbing skills to maintain and clean the toilets on daily basis.

With reference to question 15 of the questionnaire stating:

Are toilets separate for males and females?

The following responses were made:

Sampled School	Yes	No
Are-Fadimeheng	19	0
Dominion Reefs	1	17
Nkagisang	13	4
Totals	33	21

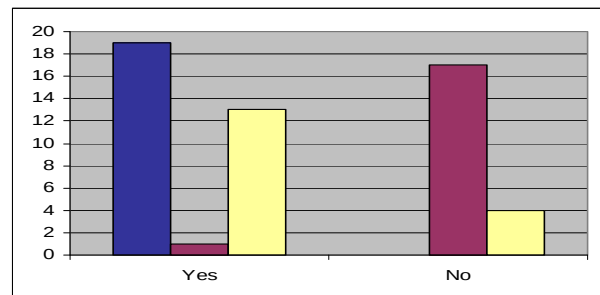


Figure 10: Separate toilet facilities for male and females

At Are-Fadimeheng the indication is that there are separate toilets for both males and females.

At Dominion Reefs the indication is that the majority of educators said no to the fact that there are separate toilets for male and female. The entire learner population indicates that there is no distinction of separate male and female toilet facilities. This arrangement compromises the hygiene standards as girl learners' behavioural conduct with regard to cleanliness differ to that of boy learners.

At Nkagisang the majority of educator respondents four (4) of them indicated that there are no separate toilets for male and female staff. Female educators share the same

toilet facilities with learners when nature calls, whilst on the other hand male educators have to walk a distance of between 50-100 meters to use toilets in the nearby private houses when nature calls. Learner respondents thirteen (13) of them indicated that there is a separation of girls and boys toilet facilities. In schools where there are no separate toilets for males and females' there is a need for the expansion of more additional toilet structures to address the challenge. This infringes on the individuals' privacy. Refer to paragraphs 3.4.1; 3.4.2 and 3.4.3 for more detailed information on this question.

The following Figure 11 indicates the respondents' knowledge on the availability of toilets for visitors at their schools which was put in question 17 of the data collection questionnaire:

Are there special toilets for visitors?

The following responses were made:

Sampled School	Yes	No
Are-Fadimeheng	4	15
Dominion Reefs	0	18
Nkagisang	0	17
Totals	4	50

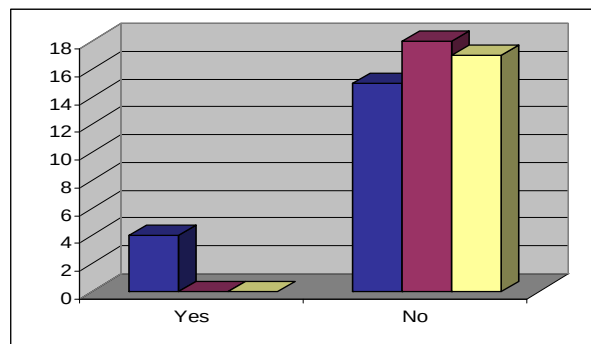


Figure 11: Separate toilet facilities available for visitors

At all three sampled schools the indication is that the majority of the respondents said no to the fact that there are separate toilet facilities for visitors.

In terms of the availability of a janitor at the schools, Figure 12 indicates the views of respondents to question 18 of the data collection questionnaire:

Is there a janitor in the school?

The following responses were made:

Sampled School	Yes	No
Are-Fadimeheng	14	5
Dominion Reefs	0	18
Nkagisang	16	1
Totals	30	24

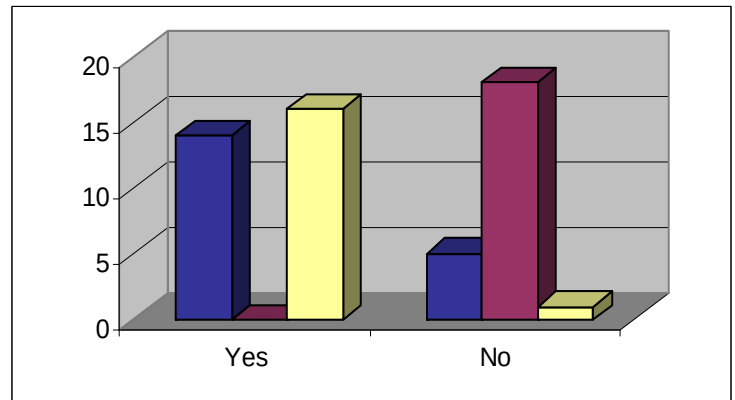


Figure 12: Availability of a janitor at the three sampled schools

Figure 12 illustrates the availability of a janitor at the three (3) sampled schools. The majority of learner and educator respondents at Are-Fadimeheng said yes on the availability of a janitor, except for five (5) learners who said no to the point of view of the rest of the respondents, see paragraph 3.4.1 for additional information on the state of toilet facilities at Are-Fadimeheng secondary public school.

At Dominion Reefs the respondents said no on the availability of a janitor. The findings are in line with (paragraph 3.4.2) which states the non-availability of a janitor at the school.

At Nkagisang 16 of the 17 respondents said yes on the availability of a janitor. However, the principal does not share the same view with other respondents (educators and learners).

In comparing the three case studies, it becomes clear that there are efforts by two schools (Are-Fadimeheng and Nkagisang) to ensure the cleanliness of toilets through the employment of a janitor. At Dominion Reefs there is no janitor at all to look after

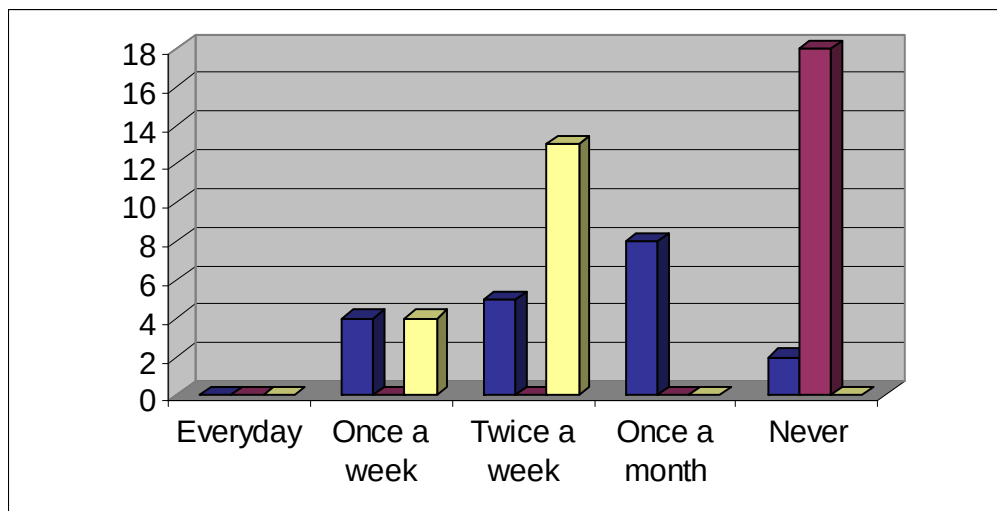
toilet facilities; a situation which can lead to the complete deterioration of hygiene standards as time goes on.

The findings therefore indicate that in the three schools there is a need for the appointment of a full-time janitor with plumbing skills to maintain and clean the toilets on a daily basis.

Figure 13 below determines the frequency on cleaning of toilets at the three schools as put by question 19 of the questionnaire:

How often does the janitor clean toilets?

The following responses were made:



Sampled School	Everyday	Once a week	Twice a week	Once a month	Never
Are-Fadimeheng	0	4	5	8	2
Dominion Reefs	0	0	0	0	18
Nkagisang	0	4	13	0	0
Totals	0	8	18	8	20

Figure 13: Frequency on cleaning of toilets at the three sampled schools

The bar chart on the frequency of cleaning of toilets, demonstrates that the cleaning of toilets at Are-Fadimeheng is taking place although it is not as effective as expected, based on dissatisfaction of respondents demonstrated by the analysed data. Although

there is a janitor at the school, most respondents agree that the janitor does not clean toilets regularly as expected. He only cleans them once or twice a week, and to a large extent once a month or never at all. The inconsistent pattern of cleaning of toilets by the janitor points to the fact that cleanliness lacks far behind in terms of meeting the expected hygiene standards, see paragraphs 3.4.1; 3.4.2 and 3.4.3.

At Dominion Reefs, there is no janitor at all, in accordance with the data captured and analysed. All respondents agree on the non-availability of the janitor to clean toilet facilities. This situation can lead to the complete deterioration of hygiene standards as time goes on.

At Nkagisang school, all respondents agree that there is a janitor who is looking after the cleanliness of toilets. Refer to paragraph 3.4.3 for more detail on the cleaning frequency of toilet facilities. In this school, however, there is no strict monitoring of the janitor and no evaluation instrument. It still boils down to the fact that a full-time janitor is indispensable in order to maintain the expected health standards.

In Figure 14 the views of respondents to question 20 of the questionnaire are reflected:

Is there a basin for washing hands?

The following responses were made:

Sampled school	Yes	No
Are-Fadimeheng	10	9
Dominion Reefs	18	0
Nkagisang	1	16
Totals	29	25

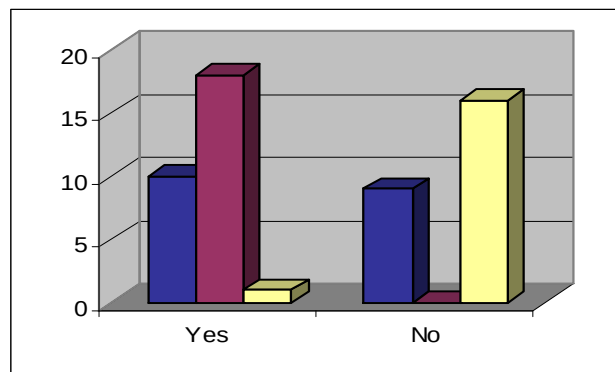


Figure 14: Availability of a hand washing basin

At Are-Fadimeheng the educators and some learner respondents said yes, there is a hand washing basin and a relatively large number of learner respondents said no. This is an indication that not all learner toilets have hand washing basins. At Dominion Reefs the indication is that there are hand washing basins for both educator and learner toilets.

At Nkagisang the majority of both educator and learner respondents indicated that there is no hand washing basin.

The bar chart in Figure 15 represents the views of respondents to questions 21 and 22 of the data collection questionnaire.

Is there soap for washing hands and toilet paper?

The following responses were made:

Sampled School	Yes	No
Are-Fadimeheng	5	14
Dominion Reefs	0	18
Nkagisang	1	16
Totals	6	48

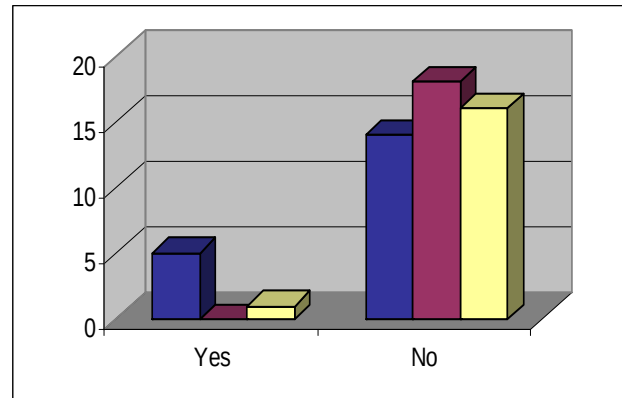


Figure 15: Provision of hand washing soap and toilet paper

At Are-Fadimeheng the educator respondents' views are that soap and toilet paper are provided in the educator toilets except for two educators who do not share the same sentiments with the rest of the respondents. With regard to twelve (12) learner respondents, it is clear, reading from the information displayed on the chart, that no soap and toilet paper are provided for learners in their toilets.

At Dominion Reefs and Nkagisang all educators and learner respondents share the view that no soap and toilet paper are provided in their toilets, except for one educator at Nkagisang who differs with the rest of the respondents. The picture painted by the graph points to the fact that health and hygiene standards are being compromised particularly when coming to the catering for learners' interests. This situation bears the potential of disease transmission to learners, considering the fact that there is no soap for washing hands and even hand washing basins and toilet paper for learners at the three sampled schools.

Figure 16 illustrates the nature and extent of budgeting for toilet facilities.

To determine the views of the three school principals' budget for maintenance and cleaning, question 25 was put as follows:

Is there a budget for the maintenance and cleaning of toilet facilities?

The following responses were made:

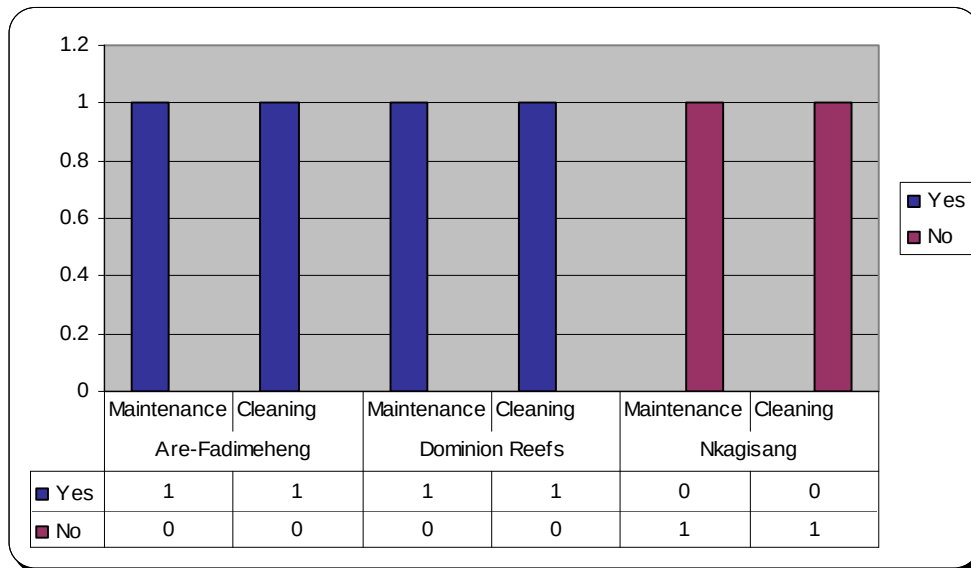


Figure16: Budget allocation for maintenance and cleaning of toilets

The bar chart above demonstrates that there are funds being set aside in the two sampled schools for the maintenance and cleaning of toilet facilities by the respective School Governing Bodies (SGBs). Both the principals of Are-Fadimeheng and Dominion Reefs schools agree to the fact that there is a budget that is set aside for maintenance and cleaning. However, it is not being utilised for its purpose in these two sampled schools. Only the Nkagisang school principal disagrees to the question that was asked. In the case of Nkagisang public school, no provision has been made in the budget for the maintenance and cleaning of toilet facilities. It was found by the researcher that in those schools where budgeting for the maintenance and cleaning of toilet facilities exist, more often than not it is not utilised for its main purpose.

The graph in Figure 17 represents the views of the school principals to question 27 of the data collection questionnaire. This question focused on school principals to solicit the level of satisfaction on the state of toilet facilities in their respective schools. The following question was put:

Are you satisfied with the state of toilets of your school?

The following responses were made:

Sampled Schools	Yes	No
Are-Fadimeheng	0	1
Dominion Reefs	0	1
Nkagisang	0	1
Totals	0	3

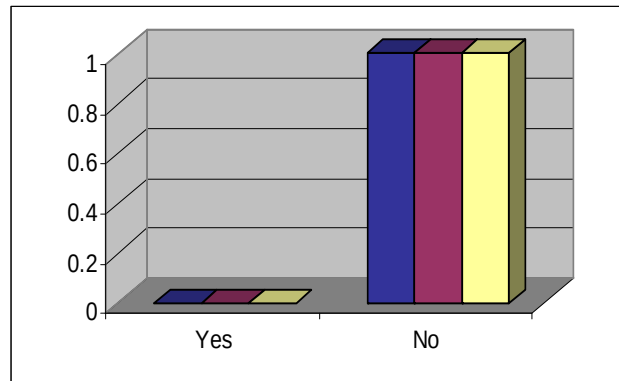


Figure 17: Principals' satisfaction on state of toilets

In all the three sampled schools the principals are not happy with the conditions of toilets facilities in their respective schools.

To determine the views of principals' respondents to question 28 of data collection questionnaire on the availability of monitoring tools of toilets, the following question was asked:

Are there monitoring and evaluation instruments for the state of toilets at your school?

The following responses were made:

Sampled Schools	Yes	No
Are-Fadimeheng	0	1
Dominion Reefs	0	1
Nkagisang	0	1
Totals	0	3

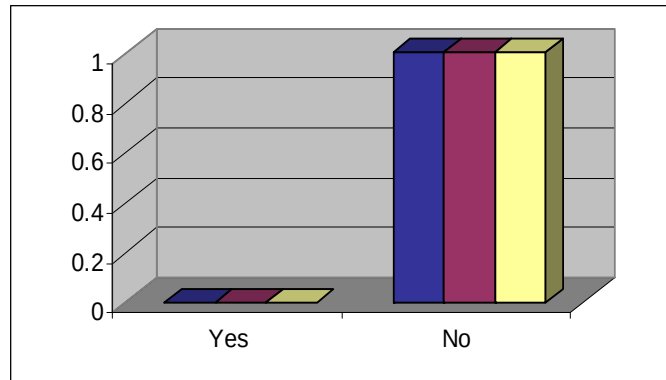


Figure 18: Monitoring and evaluation of state of toilet facilities

All school principals of the three sampled schools attested to the fact that there is no monitoring and evaluation instrument to check the conditions of toilet facilities either for maintenance or cleaning on a regular basis.

To determine the views of the principals' responses to question 29 of the data collection questionnaire on the reporting mechanism of the state of toilets to the health inspector, the following question was asked:

Do you report the state of toilets to the health inspector?

The following responses were made:

Sampled Schools	Yes	No
Are-Fadimeheng	0	1
Dominion Reefs	1	0
Nkagisang	1	0
Totals	2	1

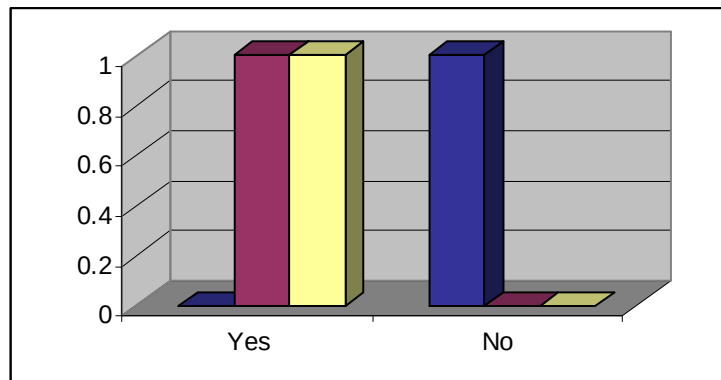


Figure 19: Reporting of the state of toilets to the health inspector

In the three (3) schools only the Are- Fadimeheng principal said no, the other two school principals of Dominion Reefs and Nkagisang said yes to the question.

4.3 CONCLUSION

This chapter presented the findings of the empirical research and the interpretation and analysis of the collected data. Research questions were attended to whilst graphs had been used to interpret the collected data.

From the findings, it is clear that the available toilet facilities in the three sampled schools are not enough to cater for the large number of users in these schools. Even the educators are affected. It therefore stands to conclude that there is a dire need for the expansion of additional toilet facility structures at all three (3) schools. The findings indicate that although toilet facilities are available in some sampled schools, all of them are not in the expected working state. It therefore calls for the Schools' Governing

Bodies (SGBs) to budget sufficiently for the appointment of full-time janitors and for the regular maintenance and cleaning of toilet facilities. Non-provision of indispensable basic items such as soap for the washing of hands and toilet paper to learners and educators raised high levels of dissatisfaction amongst the respondents. It is a legal obligation that these basic items must be readily availed in the toilets. Furthermore, this unacceptable situation may lead to hygiene standards being compromised; thereby spreading infectious diseases amongst learners and educators, more so, that there is no intervention from the health inspectorate.

The next chapter draws this research to its logical conclusions and recommendations.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The South African Government's role as the provider of basic essential services forms part of its core responsibilities. Its commitment to meet the sanitation Millenium Development Goals (MDG) targets by half by 2015 obliges the Government to accelerate the provision and delivery of services to all its citizens. The installation of sanitary facilities such as toilets cannot be limited to households only. Sanitary challenges cut across household communities at large. The aim of this research was to evaluate and analyse the current situation regarding the provisioning and maintenance of toilet facilities in three public schools that are within the jurisdiction area of the Matlosana Local Municipality in the Dr Kenneth Kaunda Region of Education in the North West Province.

The research also paid particular attention to the available legislative framework that aims at addressing sanitary backlogs facing the affected communities. Quantitative and qualitative research methods were used to conduct this research. The questionnaire was designed to determine the number and conditions of toilets (and matters related thereto) in the three selected public schools that are within the Matlosana Local Municipality's municipal area. Fifty seven (57) questionnaires were distributed to all research participants but only fifty four (54) were responded to. The data collected through the questionnaires were analysed and interpreted.

This chapter gives a summarised account of this research project. It further highlights the research objectives and the findings thereof. It reflects on service delivery mechanism and the recommendations that can be considered for the improvement of conditions of toilets in public schools. Recommendations are also made.

5.2 RESEARCH FINDINGS

5.2.1 Findings on objective 1

With reference to the research on the need to investigate and analyse the legal role of the Government in providing and maintaining toilet facilities at public schools in South Africa, the research found that efforts by the South African Government to address sanitation needs in public schools are still underway. It has also found that much still needs to be done in terms of the provisioning of sufficient public school toilet facilities and the maintenance thereof seeing that there is no specific sanitation policy which addresses this area.

5.2.2 Findings on objective 2

Regarding the 2nd research objective on an analysis of the nature and extent of provisioning and maintenance of toilet facilities at the public schools of Matlosana Local Municipality's municipal area of jurisdiction, the research has found that the types of toilet facilities at the peri-urban schools (Dominion Reefs and Nkagisang) are not the preferred options as they need regular maintenance which also has cost implications. The fact that only a few toilet facilities exist and are used by a large number of users is not in line with the Department of Water Affairs' standards of 1:25 (toilet/learner ratio).

5.2.3 Findings on objective 3

The 3rd research objective on an analysis and interpretation of empirical data in the public schools of Matlosana Local Municipality's municipal area of jurisdiction has also been achieved. The findings are that there is a high level of dissatisfaction by both educators and learners about the toilet facilities at the three sampled schools within the Matlosana Local Municipality's area. Non-intervention of health inspectorate officials to address the appalling state of school toilets worsens the situation. It was found that the state of toilet facilities impeaches on the privacy of individuals since there are no separate toilets for girls and boys or male and female educators and visitors to the school.

5.2.4 Findings on objective 4

With reference to the objective to provide a service delivery mechanism that can improve the conditions of toilets in the public schools within the Matlosana Local Municipal area of responsibility, the following mechanism should be considered:

- Public schools toilet facilities require a complete overhaul, upgrading and maintenance to meet the required health standards.
- All schools must be provided with adequate sanitation facilities which comply with the regulations of the National Building Regulations Act 108 of 1997.
- Simple pit latrines and septic tank flush toilets are not viable and preferred toilet facility options. Findings indicate that the more expensive flush toilets with full water-borne sewerage connection are the preferred options, though this will not do in water-scarce areas.
- The Local Municipality of Matlosana must take charge of the sewer network connections and water provision to urban, peri-urban and rural schools sanitation facilities.
- The absence of legislation to regulate the provisioning and maintenance of toilet facilities in the public schools must be given attention by the Local sphere of Government.
- Schools must employ a full-time janitor who has plumbing skills.
- In order for public schools sanitation amenities to be regularly kept clean, funding and financing of such programmes is of paramount significance. Without committing financial resources to this venture there can be no improvement on the state of public school toilet facilities.

5.3 RECOMMENDATIONS

Based on the study conducted and the findings arrived at, the following recommendations can be made for the purposes of improving conditions of toilet facilities in the public schools at the Matlosana Local Municipal area of responsibility:

- Policy formulators must start campaigns with affected institutions (schools) that can result in public policy being formulated on well maintained public school toilet facilities.
- National, Provincial and Local Government sphere must plan and set aside sufficient funds to cater for the provisioning and maintenance of toilet facilities at public schools.
- Design and construction of toilet facilities must suit the needs of young children.
- The Local Government sphere must ensure that there is sufficient water resources provided to schools for the sustainable maintenance of toilet facilities.
- The Local Government Indigent Policy must be revised in order to cater for such schools which admit learners from poor communities.
- It is important that school principals and the school governing bodies (SGBs) must take the maintenance of toilet facilities very seriously. Practical working programmes must be initiated at school level, such as the following:
 - * Hand-washing and good waste management should be promoted through implementation of appropriate awareness campaigns.
 - * Non-functioning toilet facilities must be fixed as a matter of extreme urgency.
 - * Building of more toilet facilities to alleviate the pressure already experienced must be prioritised.
 - * Emptying services of pit latrines must be outsourced to private companies.
 - * Alternatively, the service of providing and maintaining toilet facilities must be outsourced to private companies.

- * Skilled personnel must be solicited to impart knowledge on the maintenance of toilet facilities.
- The complete reliance of schools on the Government funding is another challenge. Schools as public entities need to embark on projects that will generate enough capital to address some of their challenges like the provisioning and maintenance of toilet facilities.
- Some of the results of this study can be located as core functions and responsibilities of Local Government. The drafting and adoption of municipal by-laws on sanitation must be extended to schools since by-laws have a bearing on local communities for which they are being drafted.

5.4 SUMMARY

Chapter 1 of this mini-dissertation gave a broad overview of the nature and extent of sanitary conditions in public schools toilets, and the direction the study will follow.

Chapter 2 paid particular attention to the general picture on legislation in South Africa regarding sanitation provisioning and maintenance as well as legislative efforts taken by the South African Government to address sanitation backlogs.

Chapter 3 went further to identify three sampled schools, which were Are-Fadimeheng, Dominion Reefs and Nkagisang Public Schools for case study purposes. The main intention of the case study approach was to explore and analyse the prevailing conditions of toilet facilities of the sampled schools in detail for logical investigation.

Chapter 4 of this study provided a synopsis of data collected and made an analysis thereof. Findings of the three sampled schools were compared to each other. The chapter made it evident that the majority of learners and educators in the three sampled schools were not satisfied with the sanitary conditions prevailing at the public schools in the Matlosana Local Municipality's area of jurisdiction. This research project revealed that the sampled schools that had janitors were better off in comparison to the other schools that had no janitor at all.

Chapter 5 concluded that although the Government had demonstrated its commitment in meeting the MDG targets by half in 2015 to address sanitation backlogs in the country, attention must also be given to toilets in public schools. In this manner the Government might satisfy its constitutional obligation of ensuring a safe environment and the right to healthy living for all its citizens.

5.5 CONCLUSION

This chapter provided a summarised account of the research project. It further highlighted the research objectives and their findings. It reflected on the service delivery mechanism as well as on the recommendations that can be considered for the improvement of conditions of toilets in the public schools. Recommendations were also provided.

Until there is a serious intervention by the Government and relevant Departments to address the sanitation crises in public schools, learners and staff will continue to be exposed to such bad health hazard conditions that may be detrimental to their lives.

LIST OF SOURCES

AUSTIN, L.M. & VAN VUUREN, S.J. 2001. *Sanitation, Public health and Environment: Looking beyond current technologies: Technical paper. Journal of South African Institution of Civil Engineering*. Vol 43 (1): 29-33 pp.

AUSTIN, L.M., DUNCKER, L.C., & MATSEBE, G.N. 2006. Use and acceptance of urine – diversion sanitation systems in South Africa. South Africa: WRC.

BAARTJIES, R. 2008. *From the courts: the right to water a matter of dignity*. Vol 10 (2), April/May.

BETHAN, E. 2006. In the public interest, health, education and Water and Sanitation for all. United Kingdom: OXFAM international.

BLESS, C. & HIGSON-SMITH, C. 1997. *Fundamentals of Social Research Methods, An African Perspective*, third edition. Zambia: Juta Education (Pty) Ltd.

BRYNARD, P.A & HANEKOM, S.X. 2005. *Introduction to research in Public Administration and related academic disciplines*. Pretoria :J.L Van Schaik.

CARDEN, N., ARMITAGE, N., WINTER, K., SICHONE, O. & RIVETT, U. 2007. Understanding the use and disposal of grey water in the non-sewered area in South Africa. South Africa: WRC.

CLEMENT, K. & MARAH, L. 2007. Involving traditional health practitioners in health, hygiene and sanitation education and promotion. South Africa: WRC.

COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (CSIR). 2001. Guidelines for Human Settlement. Building and construction technology. Boutek report, no. Bou/ E 2001).

COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (CSIR). 2003. *Household Sanitation Guidelines For Human Settlement Planning and Design*, Vol 2 (2), CSIR.

CRESWELL, J, M. 2007. *Qualitative Inquiry & Research Design, Choosing Among Five Approaches*. U.S.A: SAGE Publications Ltd.

DEPARTMENT OF INTERNATIONAL DEVELOPMENT (DFID). 2008. Water and Sanitation Policy, (DFID), UK, 2008.<http://www.gov.uk/pubs/files/water-s...> Date of Access: 16 February 2009.

DEPARTMENT OF WATER AFFAIRS AND FORESTRY (DWAF). 2002. Sanitation for a healthy nation. South Africa Question and Answers on the White Paper on Basic Household Sanitation. South Africa: NSTT.

DEPARTMENT OF WATER AFFAIRS AND FORESTRY (DWAF). 2003a. Strategic Framework for Water Services: Water is Life, Sanitation is Dignity. Pretoria: Government Printers.

DEPARTMENT OF WATER AFFAIRS AND FORESTRY (DWAF). 2003b. Government Targets access to Basic Sanitation For All by 2010. 04 Apr.<http://www.engineeringnews.co.za/article/government-targets-access-to-basic-sanitation-for-all-by-2010>.

DUNCKER, L. C. 2002. Initiating Hygiene Studies In Rural Areas using the KAP Tool Manual: *Water and Sanitation*: Report. SA Water Bulletin. Vol 28 (2), 11p, Mar-Apr.

EDUCATION PORTFOLIO COMMITTEE. 2002. School Infrastructure Development in South Africa; National Working Group on Restructuring of Higher Education System in South Africa: Briefing. 30 Apr. 2002.<http://www.pmg.org.za/node/1557>. Available: Sabinet Online. Date of access: 03 August 2010.

ELECTRIC, F. 2009. Sanitation. South Africa: Housen.

FOXON, K. M, BACKELY, C. A, BROUCKART, C. J., DAMA, P. MTEMBU. Z., RODDA, N., SMITH, M., PILLAY, S., ARRJUN, N., LALBAHADUR, T., & BUX, F. 2006. The Evaluation of the Anaerobic Baffled Reactor for Sanitation in Dense-peri urban Settlements. South Africa: WRC.

GRAY, D.E. 2005. Doing Research in the Real World. London: SAGE Publications Ltd.

HAGAN, F.E. 2002. Research Method in Criminal Justice and Criminology. Boston: Allyn and Bacon.

HENDRICKS, L.B. 2008. Launch of National Sanitation Week. Speech by Minister of Department of Water Affairs and Forestry. 24 May.

<http://www.dwaf.gov.za/Communications/MinisterSpeeches/2008/NSHW26May08.pdf>

INSTITUTE OF MUNICIPAL ENGINEERS OF SOUTHERN AFRICA (IMIESA). 2008. *Poor sanitation impact on health*. Vol 33 (9). 15p. Sept.

INTERNATIONAL WATER AND SANITATION CENTRE (IRC). 2003. Past mistakes and current challenges, Dec.

KASRILS, R. 2001. Statement by Minister of Water Affairs and Forestry. Department of Water Affairs and Forestry – Chief Directorate: Communication Services.

KOMMUNIKATION, J. 2003. Terms and Conditions, Sept, 10 Wed, IRC.

LAGARDIEN, A. & COUSINS, D. 2001. Improving sanitation on farms: Lessons from the farm dweller sanitation pilot programmes and the emerging Western Cape Model. South Africa: WRC.

LAGARDIEN, A. & COUSINS, D. 2005. Sanitation demand and delivery in informal settlements – Planning and implementation support. South Africa: Silowa Printers.

LAKE, L. 2009. Children Count –Schools with Adequate Sanitation. South Africa: Children institute.

LANE, F. 2004. *Upgrading sanitation of schools*. 29 (8) Aug. IMIESA.

NAIDOO, N., MDALA, B., MPHAKE, K. & CHIDLEY, C. 2007. The Effectiveness of Sanitation Awareness and Education Programmes in Informal Settlements, South Africa: WRC.

NDLOVU, M. & ONABOLU, B. 2006. A methodical approach to health and sanitation integration. South Africa: WRC.

NEALER, E.J. & RAGA, K. 2008. *Knowledge about the origin of a Municipality's potable water: A prerequisite for consolidation of more effective local governance: Journal of Public Administration*: 43 (3) Oct 294-307 pp.

NORMAN, K, DENZIN, YVONNA S, LINCOLN. 1998. Strategies of Qualitative Inquiry. London: SAGE Publications.

PERECMAN, E. & CURRAN, S.R. 2006. A Handbook for Social Science Field Research Design and Methods. U.S.A: SAGE Publications, Inc.

POTGIETER, N. 2008. Impacts of the provision of water, sanitation, hygiene and home based care services to HIV and AIDS infected people. South Africa: W.R.C.

REPUBLIC OF SOUTH AFRICA (RSA). 1995. National Sanitation Draft White Paper 1995. Cape Town: Government Printer.

REPUBLIC OF SOUTH AFRICA (RSA). 1996a. National Education Policy Act No 27 of 1996. Cape Town: Government Printer.

REPUBLIC OF SOUTH AFRICA (RSA). 1996b. South African Schools Act 84 of 1996. Cape Town: Government Printer.

REPUBLIC OF SOUTH AFRICA (RSA). 1996c. Constitution of Republic of South Africa Act 108 of 1996. Cape Town: Government Printer.

REPUBLIC OF SOUTH AFRICA (RSA). 1996d. National Sanitation Policy of 1996. Cape Town: Government Printer.

REPUBLIC OF SOUTH AFRICA (RSA). 1996e. South African Schools Act 84 of 1996 (Notice 1439 of 2008). Cape Town: Government Printer.

REPUBLIC OF SOUTH AFRICA (RSA). 1997. Water Services Act 108 of 1997. Cape Town: Government Printer.

REPUBLIC OF SOUTH AFRICA (RSA). 1998. Municipal Structures Act 117 of 1998. Cape Town: Government Printer.

RIEKERT, S.P. 2010. Schools in the Matlosana Local Municipality map. Potchefstroom: 73 p.

STEPHENSON, D. & BARTA, B. 2005. Impacts of storm water and groundwater ingress on municipal sanitation services. South Africa: WRC.

STILL, D. & HOLDEN, R. 1997. Water and Sanitation for all: Partnerships and innovations. (Towards Sustainable Sanitation in South Africa 23rd WEDC Conference held in Durban South Africa.).

STRUWIG, F.W & STEAD, G.B. 2007. Planning, designing and, reporting research Cape Town: Hanli Venter. 6,7,68 pp.

UNITED NATIONS CHILDREN'S FUND (UNICEF) & INTERNATIONAL WATER AND SANITATION CENTRE (IRC). 2000. Unite for children – WASH in schools, Seminar of stock house world Water Week, Aug (16) Sunday.

UNITED NATIONS CHILDREN'S FUND (UNICEF). 2002. School Sanitation and Hygiene Education, UNICEFWES-School sanitation, www.unicef.org/programme/wesinfo/school.htm. Date of Access: 16 February 2009.

WALKER, N.J, STILL, D.A, RAVENSCROFT, P., HAZELTON, D. KING, W. ERSKINE, S. & EARDLEY, R. 2010. Financial Sustainability of Sanitation Services in South Africa. South Africa: School of Bioresources Engineering and Environmental Hydrology.

WARD, S., HALL, K., & CLACHERY, A. 2001. Incorporation of water, sanitation, healthy and hygiene issues into soul city, A multi-media edutainment vehicle; South Africa: 4 & 60 pp.

WATE, E. 2002. Questions & Answers on the white paper on basic household sanitation. South Africa: UNICEF.

WATER RESEARCH COMMISSION (WRC). 2000. Background and overview of management of community water and sanitation training programmes for Local Government training programmes, national community water and sanitation training institute. South Africa: WRC.

WATER RESEARCH COMMISSION (WRC). 2007. *Sanitation Weapon against Death and Diseases*. Water Wheel Vol 6 (6), Dec.

WATER RESEARCH COMMISSION (WRC). 2008a. *International year of sanitation*. Water Wheel. Vol 7 (3): p.13. May/June.

WATER RESEARCH COMMISSION (WRC). 2008b. *Sanitation update*. South Africa: 3 (1):3, Aug. 41p.

WORLD HEALTH ORGANISATION (WHO). 1995. *Securing Sanitation - The compelling case to address the crisis*. SWEDEN: SIWI.

WORLD HEALTH ORGANISATION (WHO). 2006. *Meeting the MDG drinking water and sanitation target, the urban and rural challenge of the decade*, Switzerland: UNICEF.

ANNEXURES

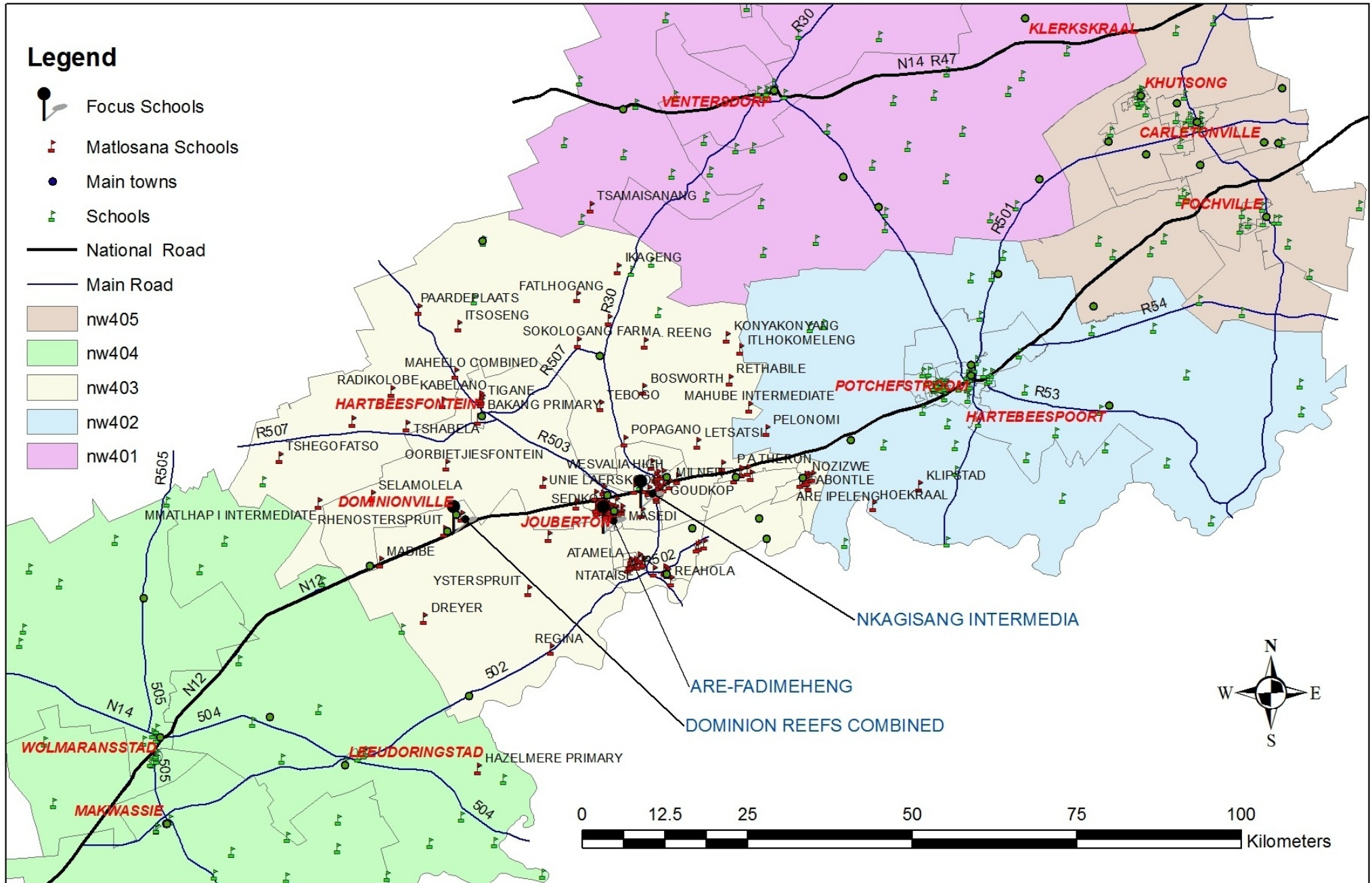
Annexure A: School in the Matlosana Local Municipality map (Riekert, 2010:73).

Annexure B: Questionnaire (Researcher, 2009).

Annexure C: Consent Form (Struwig & Stead, 2007:68).

Annexure D: Sampled schools' Toilet Sketches (Researcher, 2009).

Schools In the Matlosana Local Municipality



(Source : Riekert, 2010)

Annexure A

QUESTIONNAIRE

EVALUATION OF TOILET FACILITIES AT PUBLIC SCHOOLS IN THE MATLOSANA MUNICIPAL AREA OF JURISDICTION

SECTION A

GENERAL INFORMATION

INDICATE WITH AN (X) WHERE REQUIRED

1. Age

Age Range	Mark (X)
6 - 10	
10 - 15	
15 – 20	
20 – 25	
25 – 35	
35 - 45	
45 - 55	

2. Gender

FEMALE	
MALE	

3. Number of learners in your class.

10		20		30		40		50		60	
GIRL			BOY								

Number of learners in your school?		300-500		500-700		700-900	
	100-300						
900-100		1000-1200		1200-1400		1400-1600	

4. In which grade are you?

R		1		2		3		4		5		6		7		8		9		10		11		12			
---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	---	--	----	--	----	--	----	--	--	--

5. School category?

Public		Private		Other	
--------	--	---------	--	-------	--

6. Name of your school?

--

7. Water source?

Dam		River		Borehole		Standpipe		Tap	
-----	--	-------	--	----------	--	-----------	--	-----	--

8. Does the school have a storage tank?

Yes		No	
-----	--	----	--

9. What is the volume of the storage tank?

500 Ltr		1,000 Ltr		10,000 Ltr		More	
---------	--	-----------	--	------------	--	------	--

SECTION B HYGIENE AND SANITATION

10. Are there toilets in the school?

Yes		No	
-----	--	----	--

11. What type of toilets are they?

Flush		VIP		Simple Pit latrines		Bucket		Mobile Chemical	
-------	--	-----	--	------------------------	--	--------	--	--------------------	--

12. How many toilets are available to you in your school?

1-3		3-6		6-9		9-12	
12-16		16-20		20-24		More	

13. Are all toilets in good working condition?

Yes		No	
-----	--	----	--

14. What is the condition of these toilets facilities?

Excellent	Good	Satisfactory	Bad	Extremely Bad	Unusable

15. Are toilets separate for Males and Females?

Educators		Yes		No	
Learners		Yes		No	

16. How many are they?

Female		Male	
--------	--	------	--

17. Are there special toilets for Visitors?

Yes		No	
-----	--	----	--

18. Is there a Janitor in the school?

Yes		No	
-----	--	----	--

19. How often does the Janitor clean toilets?

Everyday		Twice a week		Once a week		Once a Month		Never	
----------	--	--------------	--	-------------	--	--------------	--	-------	--

20. Is there a basin for washing hands?

Yes		No	
-----	--	----	--

21. Is there soap for washing hands?

Yes		No	
-----	--	----	--

22. Is there a toilet roll (Paper) in toilets?

Yes		No	
-----	--	----	--

23. How often is the toilet roll being replaced?

Everyday		Sometimes		Never	
----------	--	-----------	--	-------	--

SECTION C (Principal only)

24. Does the school operate a budget?

Yes		No	
-----	--	----	--

25. Is there a budget allocated for maintenance of toilets?

Yes		No	
-----	--	----	--

26. Is there a budget for the cleaning of all toilets?

Yes		No	
-----	--	----	--

27. Are you satisfied with the state of toilets of your school?

Yes		No	
-----	--	----	--

28. Are there monitoring and evaluation instruments for the state of toilets at your school?

Yes		No	
-----	--	----	--

29. Do you report the state of toilets to the health inspector?

Yes		No	
-----	--	----	--

END --Thank You for Your Time

(Consent Form)

RESPONDENTS CONSENT FORM

**Research title: EVALUATION OF TOILET FACILITIES AT PUBLIC SCHOOLS
IN THE MATLOSANA MUNICIPAL AREA OF JURISDICTION**

PROJECT LEADER: SURNAME: MBELE FIRST NAMES: MLUNGISI
NICHOLAS

ADDRESS: 646 UGAGA STREET, EXT 6, JOUBERTON 2574

CELL: 082 780 0619

WORK TEL: 018 465 5275

We appreciate your willingness to be interviewed for this research project.

You will be contacted to arrange a time for the interview to take place.

Please note the following stated factors below; that:

- Your involvement in this study is voluntary, you are not obliged to divulge information you would prefer to remain private / confidential.
- The project leader will treat the information you provided as confidential.
- You will not be identified in any document, including this questionnaire and research report, by your surname, first name or any other information.
- The research findings will be made available to you should you request them.
- Should you have any queries about the research, now or in future you are welcome to contact the project leader at the above address.

I understand the contents of this document and agree to participate in this research.

Name

Signature

Date

Annexure C

Dominion Reefs Public School

16 Donated VIPs

Boys Urinal – Concrete Channel

Annexure D

Closed toilets

4 metres

Block of classes

5 metres

Block of classes

9 metres

Staff
toilets

Block of classes

15 metres

Closed toilets

3 metres

Block of
classes

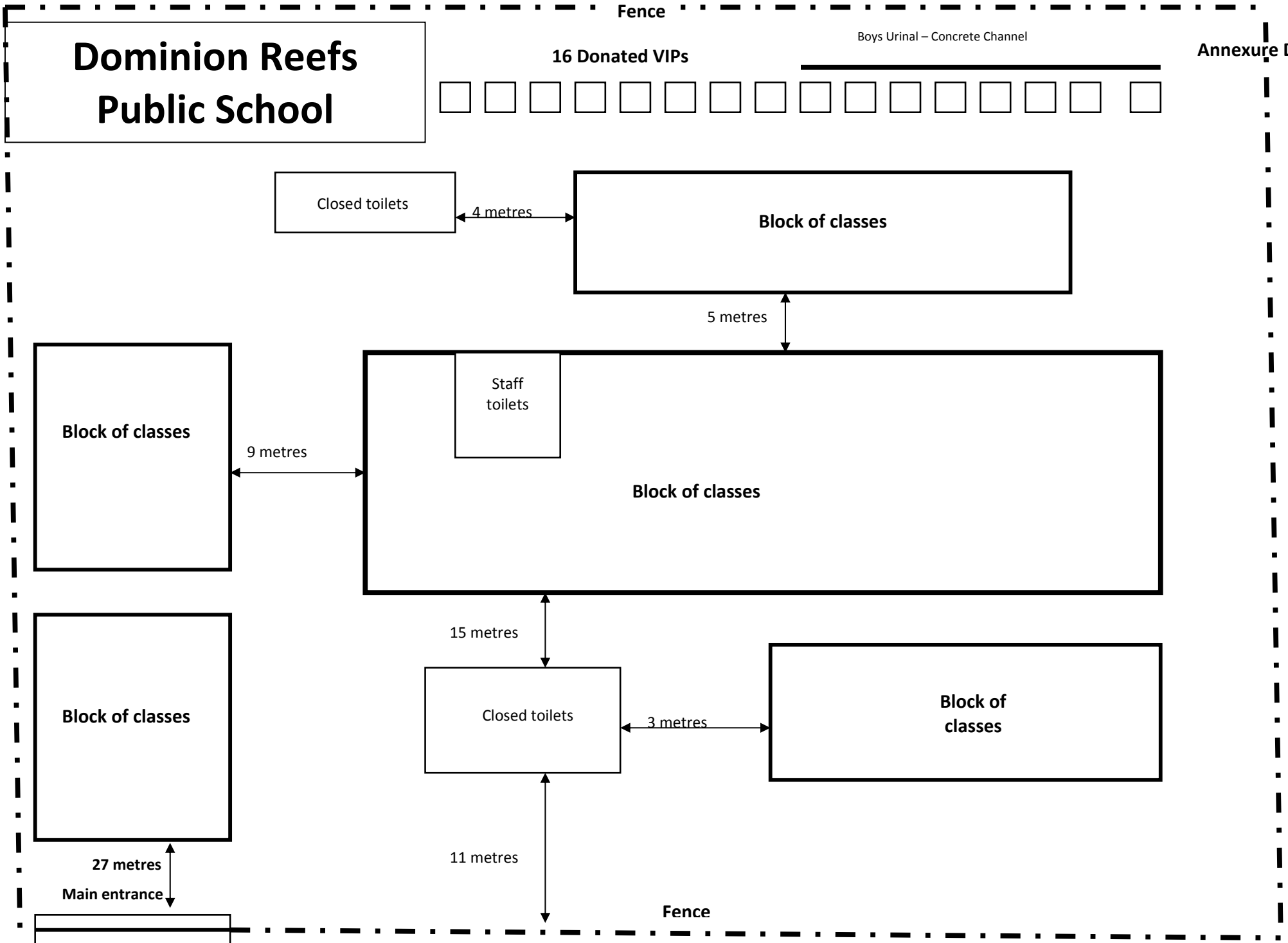
Block of classes

27 metres

Main entrance

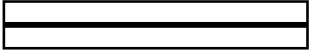
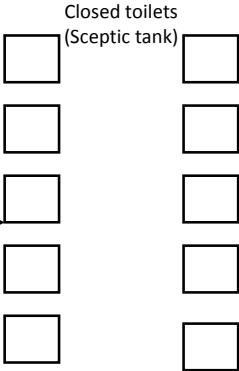
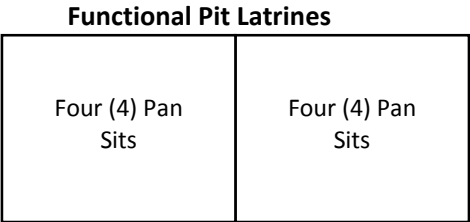
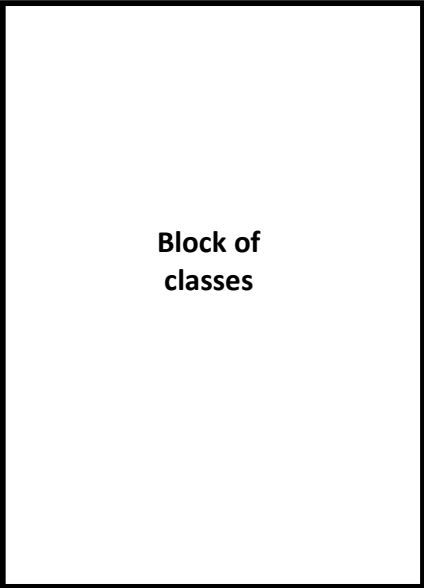
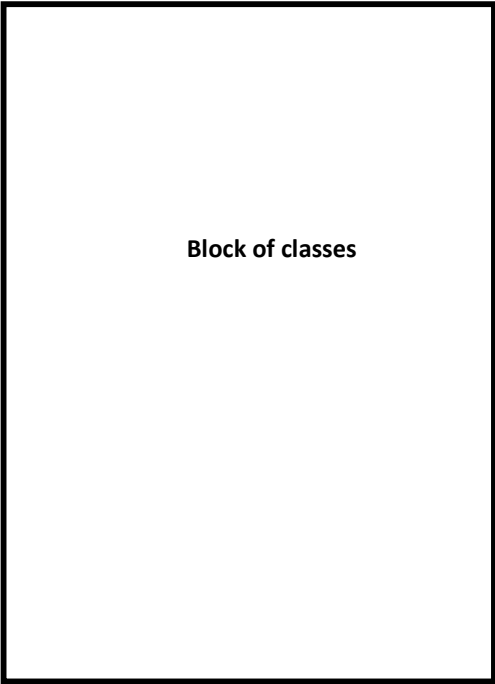
11 metres

Fence



Nkagisang Public School

Annexure D



17 metres

12 metres

21 metres

Fence

