



# **2008/09 –2016/18**

# **INFRASTRUCTURE PLAN**

For the

## **NORTH WEST DEPARTMENT OF EDUCATION**

**2008/2009 Version - Final**

**Prepared by: Directorate  
Physical Resources and  
Facilities Planning and  
Management.**

**Contact: Mr M.S.C. Morokane**

**Tel: ( 018) 389 8053**

**Tel: (018) 389-8063**

**Fax: (018) 384-3316 OR**

**(018) 389 8237**

**Final Document : March 2008**

## TABLE OF CONTENTS

	<b>Page</b>
<b>A ACCOUNTING OFFICER .....</b>	<b>4</b>
1.1 A.1 CONTACT DETAILS .....	4
1.2 A.2 APPROVAL .....	6
<b>B ABBREVIATIONS .....</b>	<b>9</b>
<b>1. EXECUTIVE SUMMARY .....</b>	<b>12</b>
1.1 PURPOSE OF THE INFRASTRUCTURE PLAN .....	12
1.2 DESCRIPTION .....	12
1.3 LEVELS OF SERVICE .....	12
1.4 COMMUNITY NEED .....	13
1.5 LIFE CYCLE MANAGEMENT PLAN .....	13
1.6 FINANCIAL SUMMARY .....	13
1.7 ASSET MANAGEMENT PRACTICE .....	14
1.8 MONITORING AND IMPROVEMENT PLAN .....	15
<b>2. INTRODUCTION .....</b>	<b>16</b>
2.1 BACKGROUND .....	16
2.1.1 Purpose, Strategic and Departmental Goals .....	16
2.1.2 Relationship with other planning documents .....	18
2.1.3 Locality and Scope .....	20
2.1.4 Key Stakeholders .....	21
2.1.5 Organisational Structure .....	23
2.2 GOALS AND OBJECTIVES OF INFRASTRUCTURE OWNERSHIP .....	26
2.2.1 Department's Vision and Mission .....	26
2.2.2 Reasons for Providing Education Infrastructure .....	26
2.2.3 Reasons for Effective Infrastructure Management .....	26
2.3 FRAMEWORK OF THIS INFRASTRUCTURE PLAN .....	27
2.4 BASIC INFRASTRUCTURE PLAN .....	27
<b>3. LEVEL OF SERVICE .....</b>	<b>ERROR! BOOKMARK NOT DEFINED.</b>
3.1 COMMUNITY RESEARCH AND EXPECTATIONS .....	28
3.1.1 Background and community research undertaken .....	28
3.1.2 Details of how research translates into levels of service .....	28
3.2 STRATEGIC AND DEPARTMENTAL GOALS .....	28
3.3 LEGISLATIVE REQUIREMENTS .....	29
3.4 NORMS AND STANDARDS .....	29
3.5 CURRENT LEVELS OF SERVICE .....	29
3.6 DESIRED LEVEL OF SERVICE .....	29
<b>4. COMMUNITY NEED .....</b>	<b>34</b>
4.1 CURRENT PROVISION .....	34
4.2 DEMAND FORECAST .....	<b>ERROR! BOOKMARK NOT DEFINED.</b>
4.2.1 Factors influencing demand .....	35
4.2.2 Details of projected growth or decline of demands on services .....	38
4.2.3 Anticipated changes in community expectations .....	40
4.2.4 Impact of changes in demand on infrastructure utilisation .....	41

4.3	CHANGES IN TECHNOLOGY .....	42
4.3.1	<i>Use of new technology and effects on providing future services</i> .....	42
4.3.2	<i>Obsolescence</i> .....	42
4.4	DEMAND MANAGEMENT PLAN .....	43
4.4.1	<i>Non-infrastructure Solutions</i> .....	43
4.4.2	<i>New Works Programmes and Costs</i> .....	45
<b>5.</b>	<b>INFRASTRUCTURE MANAGEMENT PLAN.....</b>	<b>49</b>
5.1	BACKGROUND DATA .....	49
5.1.1	<i>Physical Parameters</i> .....	49
5.1.2	<i>Capacity and Performance</i> .....	50
5.1.3	<i>Condition</i> .....	51
5.1.4	<i>Valuations</i> .....	51
5.1.5	<i>Historical Data</i> .....	51
5.2	EPWP .....	52
5.3	ENVIRONMENTAL CONSIDERATIONS .....	53
5.4	ROUTINE MAINTENANCE.....	54
5.4.1	<i>Routine Maintenance Plan</i> .....	54
5.4.2	<i>Standards and Specifications</i> .....	54
5.4.3	<i>Summary of Future Costs</i> .....	54
5.5	RENEWAL OF INFRASTRUCTURE .....	56
5.5.1	<i>Renewal Plan</i> .....	56
5.5.2	<i>Repairs</i> .....	56
5.5.3	<i>Refurbishment</i> .....	56
5.5.4	<i>Estimated Repair and Refurbishment Costs</i> .....	57
5.5.5	<i>Renewal Standards</i> .....	58
5.6	CREATION / ACQUISITION PLAN.....	59
5.6.1	<i>Selection Criteria</i> .....	59
5.6.2	<i>Standards and Specifications</i> .....	59
5.6.3	<i>Summary of Future Costs</i> .....	60
5.7	DISPOSAL PLAN .....	60
<b>6.</b>	<b>FINANCIAL SUMMARY.....</b>	<b>61</b>
6.1	FINANCIAL STATEMENTS AND PROJECTIONS .....	61
6.1.1	<i>Financial Systems</i> .....	61
6.1.2	<i>MTEF Allocations</i> .....	61
6.1.3	<i>Cash flow Forecasts</i> .....	63
6.2	FUNDING STRATEGY .....	65
6.3	VALUATION FORECASTS.....	65
6.4	PROJECTS TO BE COMPLETED IN THE 2006/07 FINANCIAL YEAR.....	65
<b>7.</b>	<b>ASSET MANAGEMENT PRACTICE .....</b>	<b>66</b>
7.1	HUMAN RESOURCES.....	67
7.1.1	<i>Priority Functional gaps</i> .....	67
7.1.2	<i>Key skills gaps</i> .....	68
7.1.3	<i>Human resources gaps</i> .....	68
7.1.4	<i>Immediate and future expertise requirements</i> .....	69
7.1.5	<i>Initiatives to address gaps</i> .....	69
7.1.6	<i>Anticipated impact</i> .....	70
7.2	SYSTEMS AND PROCESSES.....	70
7.2.1	<i>Implementation Plan</i> .....	70

7.2.2	Accounting and Financial Systems.....	71
7.2.3	Infrastructure Management Systems.....	71
7.2.4	Information Flow Requirements and Processes.....	74
7.2.5	Standards and Guidelines.....	74
<b>8.</b>	<b>PLAN IMPROVEMENT AND MONITORING.....</b>	<b>75</b>
8.1	IMPROVEMENT PROGRAMME.....	75
8.2	GAP BETWEEN CURRENT AND DESIRED MANAGEMENT PRACTICE.....	77
8.3	RESPONSIBILITIES FOR REVIEW.....	77
<b>9.</b>	<b>REFERENCES AND APPENDICES.....</b>	<b>79</b>
9.1	REFERENCES.....	79
9.1.1	International Infrastructure Management Manual Version 2.0 (2002).....	79
9.1.2	Toolkit Version 3.1 (2004).....	79
9.2	APPENDICES.....	79

**ANNEXURE A: Project Lists**

- **2008/09**
- **2009/10**
- **2010/11**



**A ACCOUNTING OFFICER****A.1 CONTACT DETAILS**

Responsible MEC	Rev O.J Tselapedi
Superintendent General	Mr H.M Mveli
Deputy Director General	Mr A. Seakamela
Executive Manager: Education Support Services	Mr M.G. Mompei
Acting Director: Physical Resources and Facilities Planning and Management	Mr D.N. Sefanyetso
Address	1305 Dr Albert Luthuli Drive Mmabatho Private Bag X2044 Mmabatho 2735
Telephone No.	(018) 389-8063
Fax No.	(018) 384-3316

Email	Dsefanyetso@nwpg.gov.za
-------	-------------------------



**A.2 APPROVAL**

This document is submitted on behalf of the Department of Education and has been approved by:



---

**Mr D.N. Sefanyetso**

**ACTING DIRECTOR PHYSICAL RESOURCES AND FACILITIES PLANNING  
AND MANAGEMENT.**

---

.....  
**Mr M.G. Mompei**

**ACTING EXECUTIVE MANAGER –AUXILIARY SERVICES**



.....  
**Mr A. Seakamela**

**DEPUTY DIRECTOR GENERAL**



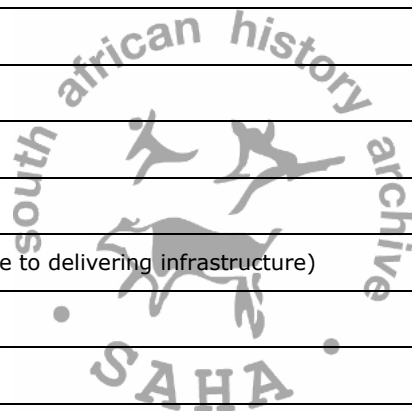
.....  
**Mr M.Mweli**

**SUPERINTENDENT GENERAL**



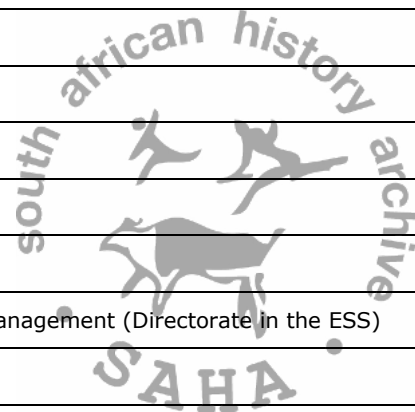
**B ABBREVIATIONS**

APO	Area Project Office (each APO manages a number of ISC'
ASSET REG	Asset Management Register
BEP	Built Environment Professional (eg Engineer, Architect, Quantity Surveyor, etc)
BMMS	Building Maintenance Management System (managed by the NW DPW; part of the PREMIS asset register system)
CIDB	Construction Industry Development Board
DDG	Deputy Director General
DBSA	Development Bank of Southern Africa
DCES	Deputy Chief Education Specialist
DMEA	Department of Mineral and Energy Affairs
DMS	Delivery Management System (Step by step guide to delivering infrastructure)
DoE	Department of Education
DORA	Division of Revenue Act
DPW	Department of Public Works
Dwaf	Department of Water and Forestry
EIA	Environmental Impact Assessment
EMIS	Education Management Information System
ESS	Education Support Services (Chief Directorate in NW DOE)
EPWP	Expanded Public Works Programme



GAMAP	Generally Accepted Municipal Accounting Practices
GIS	Geographic Information System (Computer software used to illustrate data spatially, e.g. population density, location of infrastructure, condition of infrastructure, trend analysis, etc)
IA	Implementing Agent
IDP	Integrated Development Plan (developed by municipalities every 5 years and reviewed annually)
IDIP	Infrastructure Delivery Improvement Programme (National Treasury initiative to enhance infrastructure delivery through application of sound planning and delivery practices)
IDIP	Infrastructure Improvement Development Programme
IDT	Independent Development Trust
IIMM	International Infrastructure Management Manual (developed by Australian and New Zealand local authorities to promote best practice in Infrastructure Asset Management)
IP	Infrastructure Plan (long term plan for provision and management of fixed infrastructure)
IPMP	Infrastructure Programme Management Plan (Developed by infrastructure to manage the provision of infrastructure – construction, maintenance, rehabilitation, disposal)
IPIP	Infrastructure Programme Implementation Plan
ISC	Institutional Support Co-ordinator (each ISC works with a number of schools in their cluster)
LOS	Level of Services (basis for provision of fixed infrastructure)
LSEN	Learner with Special Education Needs
MEC	Member of Executive Council

MTEF	Medium Term Expenditure Framework
NIEMS	National Information Management System
NW	North West (Province)
NWDEAT	North West Department of Environmental, Agriculture and Tourism
NW DOE	North West Department of Education
NW EDT	North West Education Development Trust
NW DPW	North West Department of Public Works
OOP	Office of the Premier
PREMIS	Asset Register Management
PROMIS	Project Management Information System
PGDS	Provincial Growth and Development Strategy
PIP	Programme Implementing Plan
PRFPM	Physical Resources and Facilities Planning and Management (Directorate in the ESS)
PTAT	Provincial Technical Assistant Team
SFR	Special Function Room
SG	Superintendent General
SLA	Service Level Agreement
SRN	School Register of Needs



## 1. EXECUTIVE SUMMARY

The Executive summary should emphasise the key issues contained in the body of the plan and provide readers with a succinct overview of the entire plan. Some readers who are not concerned with the finer details of the plan may only read the Executive Summary.

### PURPOSE OF THE INFRASTRUCTURE PLAN

- To demonstrate responsible management.
- To communicate and justify funding requirements.
- To comply with regulatory requirements (both financial(PFMA,DORA)and non-financial (RIPS, EPWP)

### DESCRIPTION

The Infrastructure Plan is based on life cycle management of infrastructure because of its long term nature. The Plan covers all the physical fixed infrastructure assets used by the NW DOE to provide the education service in the province.

In many instances information is incomplete. This draft therefore lends itself to identifying the data and processes outstanding that need to be collected, verified and developed.

### LEVELS OF SERVICE

Continuously meeting LOS requirements in a sustainable manner is one of the main reasons for the provision of infrastructure.

The levels of service are based on national norms and standards, modified to suit provincial experiences. These levels of service need to be based on an infrastructure policy which will guide implementation of improvements and changes.

In many areas in the province education infrastructure does not meet these minimum levels of service. These gaps need to be addressed incrementally and then managed on a life cycle basis.

## COMMUNITY NEED

This need defines the demand for infrastructure based on the required LOS. These needs should also be reflected in municipalities' IDP's. To this end a system for integrating inputs to the infrastructure plan and municipal IDP's needs to be implemented.

Information on population migration and economic trends need to be included in the demand forecast so that the Infrastructure Plan is forward looking and not only reporting on responses to crisis.

## LIFE CYCLE MANAGEMENT PLAN

Formal long term plans (10 to 20 years) need to be formulated for infrastructure. These plans should be based on factors relevant to educational infrastructure and address the key areas of infrastructure management, namely: operations, administration, routine maintenance, renewal (refurbishment and repairs) and acquisition (new building and extensions).

Currently infrastructure provision is based on backlog lists that need to be verified. By implementing the asset register managed by the NW Public Works and integrating it with the provincial GIS and the EMIS at NW DOE a more reliable and accurate description of infrastructure will be available.

One of the major constraining factors for implementing the Infrastructure Plan in the long term is the lack of human resources. Using an incremental approach to implementing the Plan will allow time for filling posts and training staff and implementing agents.

## FINANCIAL SUMMARY

**Based on current projections and estimates the NW DOE should increase infrastructure expenditure to approximately R900 million per annum by 2013.** This will need to be verified by implementing an accurate asset information system.

Provision for operations, regular maintenance and scheduled renewal costs should be made. Expenditure on this work should also be closely monitored to ensure the long term availability of infrastructure.

Currently available financial systems should be upgraded to support this level of expenditure.

## ASSET MANAGEMENT PRACTICE

(Organisational and support plan)

Personnel capacity needs to be improved by employing experienced staff in vacant posts and providing infrastructure asset management, programme management and prioritisation skills training.

Utilisation of Programme Implementing Agents and managing them by means of Service Level Agreements will enhance the NW DoE's capacity to deliver infrastructure without installing systems that will not be required once infrastructure backlogs have been addressed.

Provincial systems such as the **IRM at Provincial Treasury, asset register/BMMS at the NW DPW, the GIS and ProMis** at the Office of the Premier and the EMIS at the NW DoE should be integrated. This will provide better management information for planning, progress monitoring and responding to ad hoc queries. Currently the National Department of Education has appointed a Service Provider by name of Biggen Africa to assess all **CONDITIONS OF** every School in South Africa to come out with a better School Register of Needs in the future. This report will be availed as soon as it is released.

## MONITORING AND IMPROVEMENT PLAN

An improvement to infrastructure management needs to be made in the following areas:

- Develop an Infrastructure Policy;
- Formalise the definitions of LOS;
- Determine the current LOS throughout the NW;
- Carry out condition assessments;
- Determine the utilisation of infrastructure;
- Determine the operations and maintenance costs of infrastructure;
- Improve project identification and prioritisation procedures;
- Determine life cycle costs of infrastructure ownership and use;
- Improve LOS demand projections;
- Develop operations and maintenance procedures.

These improvements should be carried out incrementally over an appropriate period.





## 2. INTRODUCTION

### BACKGROUND

#### 2.1.1 Purpose AND Strategic Departmental Goals

This is the first draft Infrastructure Plan for 2008/09-16/18 associated with the provision of fixed physical infrastructure for the Department of Education in the North West Province.

The purpose of an Infrastructure Plan is to:

- Assess capital and operational funding implications and requirements;
- Provide assistance to the Provincial Technical Assistance Team appointed by National Treasury to improve Infrastructure delivery as part of the IDIP;
- Document the nature, age, extent, utilisation, condition, performance and value of the infrastructure used to provide education facilities;
- Identify existing and proposed levels of service to be achieved in the next 10 years as well as any expected changes in demand;
- Identify life cycle management needs (acquisition, renewal, operations and maintenance and disposal) over the next 10 years;
- Assess existing infrastructure asset management practice and identify improvements.

Some of these objectives could not be addressed beyond identifying the gaps in infrastructure asset management information and practice although they were identified in the 2007/08 IP. This illustrates that the improvement process is a continuous process and spans more than the provincial department. Infrastructure management improvement is also carried out while infrastructure is being provided; thus although the focus of the IP is long term (more than 10 years) infrastructure delivery is required on a daily basis.

The IP is intended to assist managers to make decisions for the current provision of infrastructure while focussing on the sustainable provision of the desired levels of services. Thus the IP should support strategic, technical and financial planning within the NW DOE.

The Infrastructure Plan is intended to be a living document used by planners and delivery managers as a daily guide to meeting LOS requirements.

The IP should be updated, extended and improved on a regular basis. Formal capturing of improvements should be done in annual reviews.

Ultimately the Infrastructure Plan will:

- Provide justification for the allocation of appropriate resources for infrastructure maintenance and renewal;
- Consider the risks and consequences of infrastructure failure; and
- Improve decision making through improved infrastructure asset knowledge, including long term implications.

Successful implementation of the Infrastructure Plan depends on the:

- Recognition of the need for (and commitment at all levels of the department to) a service driven culture;
- Establishment of clear service delivery targets; and
- Allocation of appropriate responsibilities and resources.

#### **2.1.1. (a) Strategic: Departmental Goals**

**Through its infrastructure programme the Department seeks to achieve the following objectives as set out in its Strategic Plan for 2005-2009**

- **Elimination of the backlog in classroom accommodation and other facilities with a reasonable period.**
- **Re-alignment of schools and re-organisation of small schools that are no longer sustainable or which are under – utilised.**
- **Promoting the principles of Government policy initiatives (such as the PGDS, EPWP and NYS etc) as far as possible.**
- **Provision of infrastructure that complements and promotes the relevant curriculum especially regarding outcomes based education.**
- **Replacement of mud and other inadequate structures or provision of alternative accommodation**

- Promoting the principles of sound asset management and laying the foundation for ensuring that all the relevant parties comply with their commitments in terms of current asset management legislation. Relationship with other planning documents

The key planning documents used by the NW DOE are summarised in Table 2.1

<b>No.</b>	<b>Planning Document</b>	<b>Characteristics</b>	<b>Planning Horizon</b>
1	MTEF Budget	Multi year fund allocation to infrastructure	3 to 5 years
2	North West 2014 Development Strategy	Employment requirements	10 years
3	NW DOE Strategic Plan	Infrastructure level of service targets	3 to 5 years
4	Infrastructure Plan	Life cycle planning Service delivery "contract" Long term funding requirements Sustainability of service delivery Risk management Performance measurement Improvement planning and	10 to 20 years

---

		monitoring	
5	Municipal IDP's	Municipal development plans including services and residential developments	5 years with an annual review



### 2.1.2 Locality and Scope

The infrastructure considered in this Infrastructure Plan includes all the fixed physical assets managed by the North West Department of Education as part of its mandate. These are summarised in Table 2.2.

<b>Table 2.2: Scope of Infrastructure</b>		
<b>No.</b>	<b>Infrastructure</b>	<b>Physical assets included in category</b>
1	New buildings	<p>New schools and Colleges</p> <p>Extensions to existing schools and colleges (additional classrooms, SPF's, libraries, computer rooms, etc)</p> <p>New office accommodation. <b>This function has been transferred to the Department of Public Works following Exco decision last year(2006)</b></p>
2	Sanitation	<p>New toilet blocks</p> <p>Additional toilets</p> <p>Repairs to toilet and ablution blocks</p> <p>Repairs and improvements to conservancy and septic tanks</p> <p>Upgrading of sanitation systems</p>
3	Water	New water connections

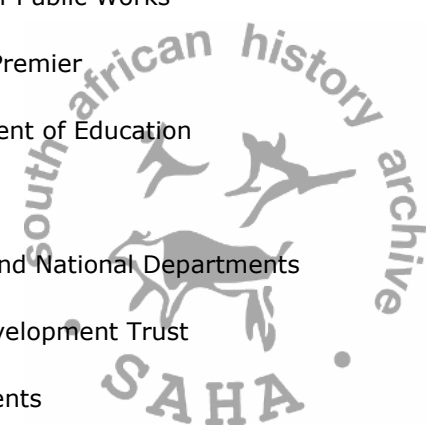
		<p>New boreholes, pumps, tanks, etc</p> <p>Repairs to existing connections and boreholes</p> <p>Upgrading of existing water supply</p>
4	Electricity	<p>New electrical connection</p> <p>Electrification of schools</p> <p>Repairs to existing connections</p> <p>Upgrading of existing electrical reticulations</p> <p>The Department of Mineral and Energy Affairs has since 2001 been funding projects of schools without Electricity. School Electrification prior this period of 2001 has moved well and to date only 151 Schools are remaining to be installed with electricity in the whole Province.</p>
5	Fencing	<p>New fencing</p> <p>Repairs to existing fencing</p> <p>Extension/additional fencing</p>

### 2.1.3 Key Stakeholders

Table 2.3 lists the stakeholders that should be involved with preparing, using and improving the Infrastructure Plan.

**Table 2.3: NW DOE Infrastructure Plan: Key Stakeholders**

No.	Internal/External	Description
1	Non-departmental staff	North West community North West Municipalities (Local and District) NW Treasury NW Department of Public Works NW Office of the Premier National Department of Education National Treasury Other Provincial and National Departments NW Education Development Trust Implementing Agents Potential Donors Department of Water & Forestry. Department of Local Government and Housing
2	North West Department of Education	MEC: Education SG: Education



<b>Table 2.3: NW DOE Infrastructure Plan: Key Stakeholders</b>		
<b>No.</b>	<b>Internal/External</b>	<b>Description</b>
		DDG: Education Senior Management Team Chief Director: Educational Auxiliary Services Chief Director: Professional Support Services Director: Physical Resources and Facilities Planning and Management Director: Information and Communications Technology Physical Resource and Facilities Planning and Management Officials

#### 2.1.4 Organisational Structure

Figures 2-1 and 2-2 show the head office and regional offices organisational structure directly responsible for infrastructure management.



Figure 2.1: Organogramme for Infrastructure Delivery: Corporate Office

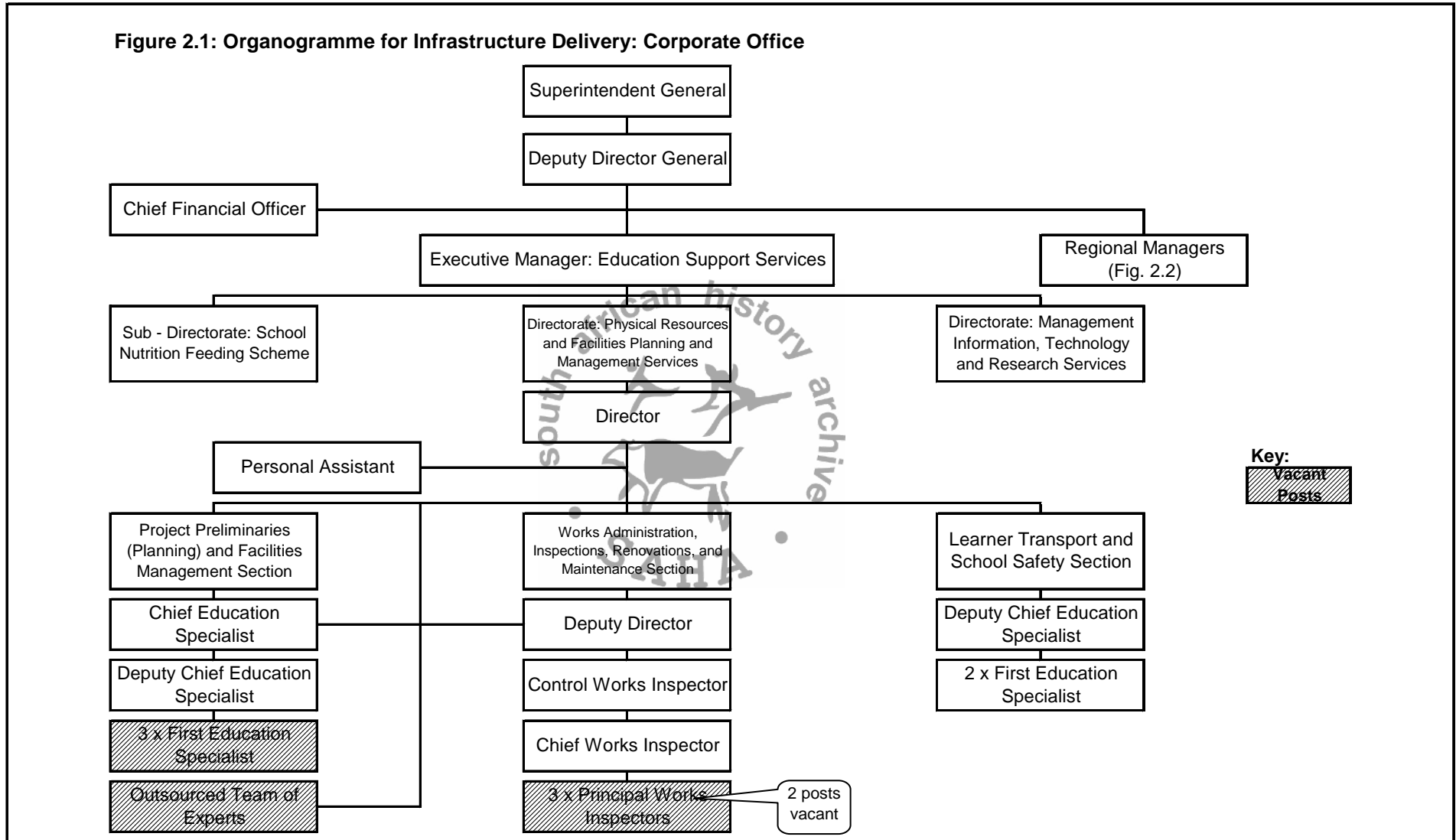
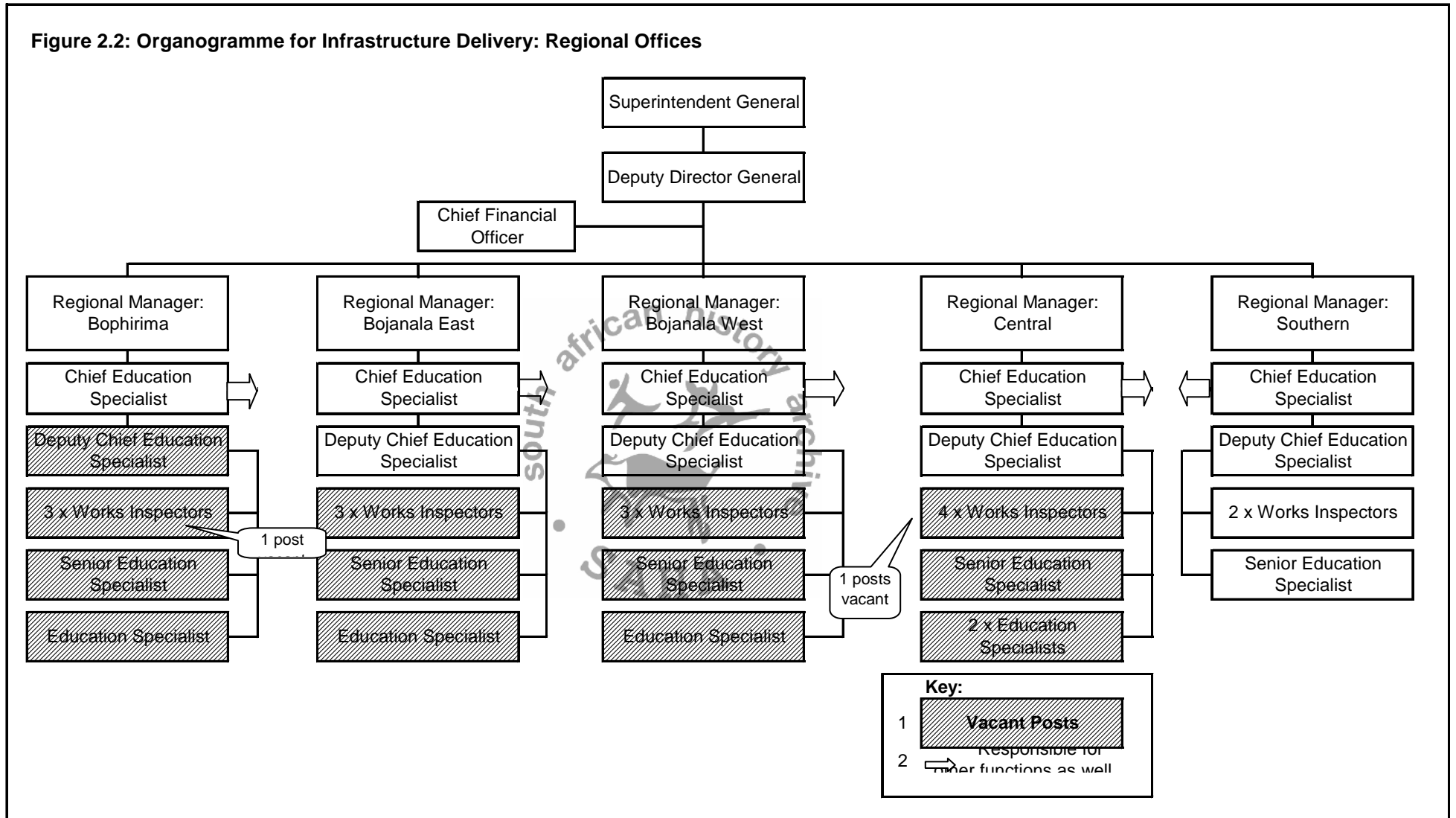


Figure 2.2: Organogramme for Infrastructure Delivery: Regional Offices



## GOALS AND OBJECTIVES OF INFRASTRUCTURE OWNERSHIP

### 2.1.5 Department's Vision and Mission

The North West Department of Education: A Portrait of Excellence

We provide quality education and training through the implementation of policies, strategies and programmes.

### 2.1.6 Reasons for Providing Education Infrastructure

The North West Department of Education delivers education services to all areas within the North West Province. In many instances the communities are not able to provide and support the infrastructure required to provide a quality education service. Therefore in order to meet its mandate the NW DOE must provide fixed infrastructure that:

- Is accessible to learners and educators;
- Supports the curriculum being used by educators
- Assists in the development of life skills by all learners.

### 2.1.7 Reasons for Effective Infrastructure Management

The need for infrastructure is determined by and based on an agreed Level of Service. Thus infrastructure (classrooms, libraries, laboratories, sanitation systems, computer rooms etc) provides the environment for educators to teach learners. All infrastructures should therefore meet minimum requirements to ensure that a high quality learning experience is enjoyed.

In addition infrastructure must meet minimum health and safety requirements.

Once infrastructure has been provided, in order to minimise costs of ownership while still meeting the LOS requirements, it needs to be managed and operated based on life cycle principles.

**This Infrastructure Plan illustrates NW DOE long term commitment to managing the infrastructure it requires to meet its education mandate.**

## FRAMEWORK OF THIS INFRASTRUCTURE PLAN

The format adopted for this Infrastructure Plan consists of the following elements:

- Purpose and Scope of the Infrastructure Plan, its objectives, scope format and process of formulation.
- Levels of Service. Its expected demand for services based on needs of the community
- Community Need (Demand). Community needs and demographics profiles and trends and how this demand is managed.
- Life Cycle Management Plan
- Financial Summary
- Infrastructure Asset Management Practices (Organisational and Support Plan)
- Monitoring and Improvement Plan

## BASIC INFRASTRUCTURE PLAN

The approach used is based on the principles laid out in the International Infrastructure Management Manual (IIMM) and the CIDB Toolkit. The approach has been to address the main elements of preparing a Basic Infrastructure Plan with limited detail. The intention is to identify critical issues that impact on achieving sustainable service delivery in the long term.

Once more accurate data and factors affecting service delivery become available, modelling techniques for demand, financial analysis, condition predications and life cycle costing can be developed.

## PLANNING APPROACH AND METHODOLOGY

### PROCESS OF FORMULATION

The process of compiling this infrastructure Plan has two consecutive components viz

- (a) Strategic input which determines the focus of the Plan and its objectives.
- (B) identification of projects and programmes to give effect to the objectives of the Plan.



### 3. LEVELS OF SERVICE

#### COMMUNITY RESEARCH AND EXPECTATIONS

##### 2.1.8 Background and community research undertaken

The National DOE has commissioned a comprehensive Schools Register of Needs survey that focuses specifically on infrastructure used by education. This SRN will determine, amongst others, the requirement for infrastructure in the NW. The results from this survey should be available in 2009, although preliminary and/or partial results may become available during 2008. A Service Provider by the name of 'Began Africa' has been appointed by the National Department of Education (Head Office) to execute this task of conducting Conditional Assessments to all Schools in the North West Province

Currently levels of service requirements are based on **the annual and "snap" surveys and** requirements submitted to the regional offices by communities and school principals. These needs are then collated at the corporate office.

##### 2.1.9 Details of how research translates into levels of service

Survey results and requests for infrastructure list new infrastructure, renewal and maintenance requirements for infrastructure. Efforts are being made to link municipal planning with education infrastructure requirements.

#### STRATEGIC AND DEPARTMENTAL GOALS

The NW Doe's Strategic Goal No. 4 is

"To end conditions of physical degradation in South African schools".

This goal has been translated into the strategic objective

"To develop and implement a coherent, credible and sustainable provisioning and maintenance plan for all schools".

In addition the NW DOE has identified provincial priorities one of which is:

"An intensive infrastructure development with special emphasis on the provision of sanitation facilities, water and maintenance of existing infrastructure,"

The NW DOE also attempts to provide services in accordance with National Education Policy and Legislation which outlines minimum service levels in all schools.

These goals and objectives link closely with the PGDS overall aim of

**"service delivery for a better quality of life"**

## LEGISLATIVE REQUIREMENTS

The Constitution of the Republic of South Africa (Act 108 of 1996), the South African Schools Act (Act 84 of 1996), the North West School Education Act (Act 123 of 15 December 1995) and other legalisation establish the service level requirements for schools in the North West Province.

## NORMS AND STANDARDS

The Physical Resources Planning Manual (November 2000) provides guidelines on infrastructure planning and procurement as well as establishing Norms and Standards for the provision of infrastructure at schools. These are shown in Table 3.1.

## CURRENT LEVELS OF SERVICE

Table 3.2 illustrates the estimated current and desired levels of service as well as their performance measures and actions to meet the desired levels.

**NOTE:** The estimated current LOS is based on definitions which have not yet been clarified with all relevant personnel.

## DESIRED LEVEL OF SERVICE

The desired levels of service and performance measures have been included in Table 3.2. These may have to be adapted for each region. However in the long term, Provincial performance measures and standards will have to be developed and used as the minimum expected level of service.

<b>Table 3.1: Norms and Standards for Infrastructure Provision</b>			
<b>No.</b>	<b>Infrastructure Category</b>	<b>Quantity, Size, Quality of Infrastructure: Primary Schools</b>	<b>Quantity, Size, Quality of Infrastructure: High Schools</b>
1	Size of land/grounds including sports fields	2,8Ha – 4Ha	4,8Ha – 6Ha
2	Capacity of school	Max 960 learners	Max 840 learners
3	Number schools in residential areas	1 per 550-650 residential erven	1 per 500-800 residential erven
4	Classrooms (maximum ratios)	1 per 40 learners; 24 classrooms per school	1 per 35 learners; 24 classrooms per school
5	Computer centre (minimum size)	300m <sup>2</sup>	
6	Toilets (minimum)	2 toilets per classroom plus at least one toilet per each for both disabled female and male learners; (replace 1/3 of boys toilets with a 3m urinal in each toilet block)	
7	Offices	1 per 5 classrooms	
8	Staffroom	Provide if school has 5 or more classrooms	
9	Reception class	1 classroom per school	None
10	Library/Media Centre	1 per school	
11	Administration Block	Small	Medium
		Up to 8 classrooms	8 to 16 classrooms
		Large	More than 16 classrooms
12	Electricity	Required; type of supply determined by site conditions	
13	Fencing	2,4m high security fence	
14	Water	Required; type of supply determined by site conditions.	
15	Classroom size	50m <sup>2</sup> to 60m <sup>2</sup> (general); Special classrooms to be sized according purpose (laboratories, kitchens, home industries rooms, etc)	
16	Telecommunications	Required; Additional capacity for computer connection	
17	Paved area	0,5m <sup>2</sup> per learner	

No.	Key Performance Indicator	Service Level Characteristic	How Performance is Measured	Current Performance Level	Desired Level of Performance	Actions Required to meet Desired Level of Service
1	Accessibility (to education facilities)	Classroom: Learner ratio	Check available classrooms to number of learners	Varies - 1: 28 to 1:42 for secondary schools; and  Varies - 1:56 to 1:18 for primary schools.	1:35 (secondary schools) and  1:40 (primary schools)	Combine, share, refurbish or build new classrooms
2		Special Function Rooms (SFR):School per Curriculum ratio	Number of SFR's per school per curriculum offered	0.1:1	1:1	Combine existing rooms, refurbish or build; or share with other schools
3		Library: School ratio	Number of libraries compared to the number of schools	0.1:1	1:1	Convert existing rooms, refurbish or build new library rooms
4		Computer/Media rooms:School ratio	Number of Computer/media rooms to the number of schools	0.1:1	1:1	Convert, refurbish or build new computer/media rooms
5		Sanitation	No. of toilet seats per classroom	Varies - 1:5 to 2:1	2 toilet seats per classroom (2:1)	Build toilet blocks and install VIP's
6		Water	Water in ablution block and 1tap per classroom	Water in ablution block and 1tap per classroom	Varies - buckets carried to school; no water on premises, hand pumps in the village; full supply to school;  90% have full reticulation	Potable water on tap in ablution blocks and 1 tap per classroom



<b>Table 3.2: Current and Desired Levels of Service</b>						
<b>No.</b>	<b>Key Performance Indicator</b>	<b>Service Level Characteristic</b>	<b>How Performance is Measured</b>	<b>Current Performance Level</b>	<b>Desired Level of Performance</b>	<b>Actions Required to meet Desired Level of Service</b>
7		Electricity	Determined by design team	Varies – none to sufficient supply;  95% have electricity	Adequate to meet current and future needs (computers, special function rooms, etc)	Liaise with Eskom and local Municipality authorities to install electricity  The Department of Energy and Mineral Affairs are currently funding all Schools which were built prior 2001 with installation of Electricity.
8		Telephone	No of telephone/fax/data lines per school	Varies; 40% have no telephone line	Minimum: 1 Telephone; 1 Fax line; 1 Data line	Liaise with Telkom and local authorities to install lines to permanent buildings.
9	Health and Safety (while using the infrastructure)	Fencing	Every facility to be fenced according standards	90% meet standards	Security fencing around facilities	Install new and maintain existing fencing.
10		Structural Stability	Comply with building regulations	Based on major repairs: 16% do not meet standards	Certificate of occupation renewed every 10 years	Replace dilapidated buildings and carry out major repairs
11		Cleanliness of Building	All buildings clean; windows clean; drains and gutters clean and sound; roof clean and sound.	Estimate 90% of buildings meet requirement	Clean and efficiently operated	Establish operating procedures; monitor performance. Develop facilities management manual(s).
12		Environmental Safety	Exposure to environmental hazards.	99% are not exposed to hazards	Free of environmental hazards eg. asbestos, pesticides	Investigate modifying operations; move facility
13		Hygienic Kitchens/Food Serving Area	At least one food serving area per primary school	20% compliance.	Certificate of cleanliness every 6 months	Build serving area at primary schools. (Provide for PSNP).

<b>Table 3.2: Current and Desired Levels of Service</b>						
<b>No.</b>	<b>Key Performance Indicator</b>	<b>Service Level Characteristic</b>	<b>How Performance is Measured</b>	<b>Current Performance Level</b>	<b>Desired Level of Performance</b>	<b>Actions Required to meet Desired Level of Service</b>
14	Management (of infrastructure facilities)	Standard of Maintenance, Repairs, Condition Assessments and Data Capturing	Operating and maintenance manual drawn up and updated on schedule	10% compliance	95 % of work completed in planned cycle	Draft manuals and implement standard procedures at all facilities



### 3. COMMUNITY NEED

#### CURRENT PROVISION

Table 4.1 illustrates the infrastructure currently provided within each region. This list of infrastructure covers only the schools in the province. Additional infrastructure that NW DOE's uses include:

- Corporate and regional offices
- FET colleges
- Education Development Support Centres
- Hostels
- Special schools and Full Service Centres.
- Farm Schools
- Development of EDSC Centres
- Mega Schools
- Mobile Classrooms

#### NOTES:

- i. The definitions and scope for each of the infrastructure types may vary across the province. These definitions and scope descriptions need to be clarified (eg. the number of toilets has been taken as the number of individual toilets, but in many cases the number probably includes whole toilet blocks consisting of more than one toilet and/or urinal, thus giving a very low existing number of toilets).

Although the definition of infrastructure has improved since the 2007/08 IP, these are still not consistent and therefore the ratios and figures in Table 4.1 are still used as an indication only of the current situation.

- ii. These figures will become more accurate in later reviews, particularly as the 2008 SRN results become available and is updated.
- iii. In addition, these figures are averages across each region, and in some case the whole province, and may not reflect the situation in each APO or at individual schools. More detailed analysis should be carried out to determine the local situation at each ISC cluster.
- iv. Currently there is a Roll out plan to upgrade Certain Primary Schools in the Province to provide Full Service Education to learners with disabilities together with others in the Mainstream. A School called Mphuphuthu Primary has been earmarked for this program. More such schools will be done in the future. A Netherlands Program of assisting in developing Infrastructure to our Local EDSC Centres is also underway. Already 61 centres have been identified and work has been going well in progress regarding the delivery of infrastructure to those centres.

**Table 4.****1: Available School Infrastructure**

<b>INFRASTRUCTURE DESCRIPTION</b>	<b>CENTRAL</b>	<b>BOPHIRIMA</b>	<b>SOUTHERN</b>	<b>BOJANALA</b>	<b>TOTAL</b>
<b>CLASSROOMS</b>	<b>4143</b>	<b>2407</b>	<b>4957</b>	<b>9953</b>	<b>21460</b>
<b>TOILETS SEATS</b>	<b>6950</b>	<b>4137</b>	<b>6901</b>	<b>7387</b>	<b>25375</b>
<b>SPECIAL FUNCTION ROOMS</b>	<b>90</b>	<b>44</b>	<b>190</b>	<b>115</b>	<b>439</b>
<b>COMPUTER/MEDIA CENTRES</b>	<b>70</b>	<b>39</b>	<b>86</b>	<b>122</b>	<b>317</b>
<b>LIBRARIES</b>	<b>89</b>	<b>40</b>	<b>84</b>	<b>147</b>	<b>360</b>
<b>WATER</b>	<b>321</b>	<b>210</b>	<b>285</b>	<b>521</b>	<b>1337</b>
<b>ELECTRICITY</b>	<b>495</b>	<b>230</b>	<b>330</b>	<b>577</b>	<b>1632</b>
<b>FENCING</b>	<b>324</b>	<b>220</b>	<b>189</b>	<b>420</b>	<b>1153</b>
<b>NO OF SCHOOLS</b>	<b>510</b>	<b>266</b>	<b>314</b>	<b>640</b>	<b>1730</b>

**N.B ACCURATE DATA WILL BE USED AFTER THE NEIMS REPORT HAS BEEN UPDATED AND A SITA CERTIFICATION BEEN APPROVED.THE MAY INFRASTRUCTURE PLAN FOR 2009/10 WILL BE HAVING THE FINAL AND CORRECT DATA AVAILABLE.**

**FACTORS INFLUENCING DEMAND**

Table 4.2 illustrates the factors that affect demand for education facilities:

<b>Table 4.2: Factors affecting demand</b>		
<b>No.</b>	<b>Factor</b>	<b>Description of data required</b>
1	Population	Current number of learners by age Projected number of learners by age
2	Proximity to other schools	Can learners be allocated to or transported to neighbouring schools?

<b>Table 4.2: Factors affecting demand</b>		
<b>No.</b>	<b>Factor</b>	<b>Description of data required</b>
		Is there a hostel school available? Can schools be merged?
3	Occupation of existing schools	Can exist schools be extended? Can more learners be allocated to each school? Can schools be merged?
4	Nature of Residential area supplying learner demand	Is the residential area temporary or seasonal? Will residents support a local school? Can portable schools be used?
5	Local development initiatives	Will development initiatives support a local school? What will the long term demand for facilities be? Use of portable schools?
6	Migratory patterns	What is the trend in population movement? What curriculum is required? What age groups are affected by migration?
7	Learners with Special Education Needs (LSEN)	Number requiring facilities Curriculum required
8	Learners based on farms	Number requiring local facilities(Mega Schools) Number requiring hostel facilities
9	Demographics	Number of learners per household Age of learners requiring facilities
10	Municipal Infrastructure	Can local infrastructure support a school? Where are the most suitable locations for new schools or extensions to existing

<b>Table 4.2: Factors affecting demand</b>		
<b>No.</b>	<b>Factor</b>	<b>Description of data required</b>
		schools?
11	Economics	<p>Is the existing community economically viable?</p> <p>What is the Socio-economic background of the parents in these neighbouring communities?</p> <p>Which quintiles can be used to support the Curriculum development of the schools</p> <p>What are the Poverty rankings of the neighbouring communities in terms of socio-economic background?</p>
12	Availability of education facilities to support curriculum	SPF's, libraries, computer rooms available at schools, FET colleges and resource centres

**Figure 4.2.1 shows Learner Enrolment per Regions**

<b>LEARNER ENROLMENT</b>	<b>CENTRAL</b>	<b>BOPHIRIMA</b>	<b>SOUTHERN</b>	<b>BOJANALA</b>	<b>TOTAL</b>
	<b>205 801</b>	<b>94849</b>	<b>196626</b>	<b>268486</b>	<b>765 762</b>

### 3.1.1 Details of projected growth or decline of demands on services

Table 4.3 and Figure 4.1 illustrate the projected growth in learners in each of the regions for a period of **TEN YEARS From 2008 – 2018**.

Region	Number of Learners		Estimated % Growth
	2008	2018	
<b>Central</b>	205801	210 544	31,6%
<b>Bophirima</b>	94849	96900	27,9%
<b>Southern</b>	196626	198300	36,6%
<b>Bojanala</b>	268486	270832	43,2%
<b>TOTAL</b>	<b>765762</b>	<b>776576</b>	<b>36,1%</b>

**N.B Numbers given above are from the Provincial Emis and are Pre-dermacated information. The next Infrastructure Plan to be submitted in May will indicate numbers after final dermacation process has been finalised.**

**4.2.2.1 Provincial Population Distribution** The four regions according to which the province is divided are unique in many ways. It is the **uniqueness of the regions that influences the distribution of the 3.2 million people. Some** regions are populous than others. The determining factor/s of population density is socio-economic. The latter therefore result in areas such as Rustenburg Potchefstroom, KOSH and Merafong being densely populated and consequently the greater part of earmarked funds for infrastructure being used at these regions. The tables below indicate as to how the requested funds will be used as dictated to by the current migration/urbanization patterns namely:

35%	30%	20%	15%
<b>Bojanala</b>	<b>Southern</b>	<b>Central</b>	<b>Bophirima</b>
<b>Pressure Point</b>	<b>Pressure Point</b>	<b>Manageable area</b>	<b>Most areas are depopulated.</b>
<b>Rustenburg and Surrounding areas</b>	<b>Potchefstroom, KOSH and Merafong</b>	<b>Combination of Permanent and Mobile Classrooms</b>	<b>Mobile classrooms mostly</b>

Figure 4.4. Illustrates how distribution of New Schools will be allocated e in terms of Migration patterns to four Regions

REGION	CENTRAL	BOPHIRIMA	SOUTHERN	BOJANALA	TOTAL
<b>LEARNER GROWTH 2008-2017</b>	4743	2051	1674	2346	10, 814
<b>NO OF SCHOOLS TO BE BUILT PER REGIONS IN TEN YEARS PERIOD</b>	31	23	47	54	155
<b>GROWTH %</b>	31, 6%	27, 9%	36,6%	43,2%	36,1%
<b>NO OF SCHOOLS TO BE BUILT PER YEAR IN TEN YEARS PERIOD</b>	03	02	04	05	14
<b>NO OF MOBILE CLASSROOMS TO BE PROVIDED IN TEN YEAR (No Schools)</b>	200	150	300	350	1000
<b>NO OF MOBILE CLASSROOMS TO BE PROVIDED EACH YEAR(No of Schools)</b>	20	15	30	35	100

N.B.These estimates are based on estimates provided by the EMIS in each region. Correlation with census and Neims data needs to be done.



### 3.1.2 Anticipated changes in community expectations

Currently communities are happy to receive the minimum infrastructure for education, i.e. classrooms and sanitation facilities. It is expected that once these needs have been satisfied, demand will change to improved facilities to improve the quality of the learning experience eg. Special function rooms and improved media rooms and libraries.

In order to meet higher quality of education and higher standards of education needs, additional infrastructure (i.e. SPF's, libraries, computer rooms, etc) will become the norm.

Currently the intention is to provide schools with at least the basic infrastructure so that learners do not have to travel more than 5 km unless transport is provided or learners are in a boarding school. As facilities are improved this level of service may change to less than 5 km and more extra mural facilities.



### 3.1.3 Impact of changes in demand on infrastructure utilisation

Table 4.4 describes the possible impact of these changes on infrastructure demands;

<b>Table 4.4: Impact of changes in community expectations</b>		
<b>No.</b>	<b>Change in Expectations</b>	<b>Impact on Infrastructure Demand</b>
1	Improved quality of learning	<ul style="list-style-type: none"> <li>• More SPF's (laboratories, workshops, home economics centres, etc)</li> <li>• More media rooms and computer centres</li> <li>• Better and more reliable municipal service delivery (electricity, telecommunications, water and sanitation</li> <li>• Provision to use education facilities for longer period in the day and night</li> <li>• More and improved libraries</li> </ul>
2	Demand for sports fields	<ul style="list-style-type: none"> <li>• Provision and maintenance of general purpose and specialist sports facilities</li> <li>• Access to additional municipal services (water and electricity)</li> <li>• Provision of change rooms and grandstands</li> <li>• Hostels at specialist sports schools</li> </ul>
3	Post school courses, technical and practical training	Additional special function rooms; additional parking; catering facilities for evening classes
4	Extra-mural facilities	Additional municipal services, additional special function rooms, improved security, sports facilities, etc

## CHANGES IN TECHNOLOGY

### 3.1.4 Use of new technology and effects on providing future services

The influence of the Provincial Growth and Development Strategy and the North West 2014 Development Strategy will stimulate development in specific areas. These areas will need to be supported with educational infrastructure.

### 3.1.5 Obsolescence

One of the NW Doe's objectives is to remove all schools that do not meet the department's minimum quality standards and are not economical to renew. An estimate of the number of structures that should be disposed of and replaced in each region needs to be prepared.

The definition of infrastructure to be demolished and rebuilt and that to be removed from the asset register (sold, demolished, etc) needs to be clarified.

Currently schools that are built with sub-standard materials – mud/clay, corrugated iron walls, etc- and those that are dilapidated (ie not safe to occupy in the next 2 -3 years) are targeted for demolition.



## DEMAND MANAGEMENT PLAN

### 3.1.6 Non-infrastructure Solutions

The following non-infrastructure solutions are currently being implemented:

No.	Solution	Central	Bophirima	Southern	Bojanala
		1	Hostel schools	12	5
2	Platooning (Temporary solution)	6	0	0	0
3	Learner transport	5650	5597	4349	9141
4	Portable/ Mobile/ Semi- Permanent classrooms	55	61	65	69
5	Mega Schools	2	0	0	1

Other non infrastructure solutions, such as the conversion of existing government owned buildings to schools and offices and the conversion of existing unused classrooms for other uses has not been included in this review. These options need to become part of infrastructure planning.

Figure: 4.6 Illustrates a summary of how Non-Infrastructure Solutions will be addressed in Ten years period. In an event where Surrounding Schools e.g.( Farm ) are merged into one school, facilities in a new school are provided to cater for the Curriculum needs of all those learner.Mega-Schools,learner,transportation and other facilities such as Mobile Units will be provided.

No	Solution	Central	Bophirima	Southern	Bojanala
1	Mega Schools  (No of Schools) in Ten years period.	03	02	04	04
2	Mobile Units/Classrooms	200	150	300	350

	(No of Schools to be provided with Units in Ten years period.				
3	Mobile Classrooms to be provided each year.  (No of Schools)	20	15	30	35
4	Learner Transport  No of Transporting Modes per Given Routes.	-	-	-	Total learners transported per Provincial routes  20 154
5	Platooning /Temporary Solutions.	0	0	0	0
6	Hostels	03	02	04	04



### **New Works Programmes and Costs for 2008/09 financial years**

Currently the Department has a budget of **R240m** to address both existing Projects by DPW and Doe respectively. New Programmes will only be covered under Sanitation, Water, New Schools, Repairs, provisioning of Mobile Classrooms of overcrowded schools. Some budget will be allocated for Day to Day Maintenance; therefore existing final accounts will also be closed in the financial years 2008/09.

**Table 4.6A**

<b>No.</b>	<b>New Infrastructure</b>	<b>Schools</b>	<b>Total Budget</b>
<b>1</b>	<b>New Schools</b>	<b>04</b>	<b>R39m</b>
<b>2</b>	<b>Completion of existing projects, Planning and Final Accounts</b>	<b>-</b>	<b>R21m (DPW)</b>



<b>3.</b>	<b>Final Accounts on DoE projects.</b>	<b>Schools</b>	
		-	<b>R 20m</b>
<b>4</b>	<b>Sanitation</b>	<b>40</b>	<b>R 30m</b>
<b>5</b>	<b>Day to Day Maintenance (Unplanned and Emergencies Projects)</b>	-	<b>R13,0m</b>
<b>6</b>	<b>Major and Minor Repairs (Refurbishment/Renewal)</b>	<b>09</b>	<b>R22m</b>
<b>7</b>	<b>Water Provisioning</b>	<b>50</b>	<b>R5m</b>
<b>8</b>	<b>Fencing</b>	<b>40</b>	<b>R5m</b>
<b>9</b>	<b>Provisioning of Mobile Classrooms</b>	<b>380 Units</b>	<b>R50m</b>
<b>10</b>	<b>Itereleng Projects</b>	<b>20</b>	<b>R30m</b>
<b>11</b>	<b>Dysfunctional Toilets</b>	<b>20</b>	<b>R5m</b>
<b>TOTAL</b>		<b>561</b>	<b>R240, 000</b>

Capital work scheduled for future years is summarised in Table 4.7. From 2008/09 – 2016/18.

Infrastructure Description	TOTAL (Rm)					TOTAL
	Central (Rm)	Bophirima (Rm)	Southern (Rm)	Bojanala (Rm)		
<b>New Schools (no. of 24 cl schools) at R13m per School.</b>	(31) R403,0	(23) R299,0	(47) R611,0	(54) R702,0	(155) R2,015b	
<b>Replacement of Unsafe Schools on a Renewal Programme. At R10m each)</b>	(20) R200m	(30) R300m	(15) R150m	(40) R400m	(105) R1,050m	
<b>New Toilets (no. of 16 seat blocks) at R900 000</b>	(124) R111, 6m	(93) R83,7m	(186) R167, 4m	(217) R195, 3m	(620) R558,0m	
<b>Repair/Renovations at R5m</b>	(322) R1,610billion	(242) R1,210billion	(483) R2,415billion	(563) R2,815billion	(1610) R8,050b	
<b>Provision of water (no. of schools) at R100 000</b>	(264) R264,000	(199) R199, 000	(396) R396,000	(463) R463,000	(1322) R132,200m	
<b>Multi purpose Rooms at R200 000 per classrooms.</b>	(110) R22,0	(83) R16,6	(166) R33,2	(193) R38,6	(552) R110,4m	
<b>Libraries(No of Schools) at R200 000 per classroom</b>	(200) R40,0m	(150) R30,0m	(300) R60,0m	(350) R70,0m	(1000) R200m	
<b>Repairs dysfunctional Toilets (No of 12 seat block) at R200 000 per School.</b>	(100) R20m	(75) R15m	(150) R30m	(175) R35m	(500) R100m	
<b>Computer Rooms(No of Schools)</b>	(264) R132m	(198) R99m	(396) R198m	(462) R231m	(1320) R660m	
<b>Science Laboratories(No of Schools)</b>	(248) R124m	(186) R93m	(372) R186m	(434) R217m	(1240) R620m	
<b>Mobile</b>	(200)	(150)	(300)	(350)	(1000)	



Infrastructure Description	TOTAL (Rm)					TOTAL
	Central (Rm)	Bophirima (Rm)	Southern (Rm)	Bojanala (Rm)		
<b>Classrooms (No of Schools) at R100 000 per unit</b>	R20m	R15m	R30m	R35m	R100m	
<b>Administration Blocks (No of Schools) at R750 000 per block</b>	(100) R75m	(75) R56,3m	(150) R112,5m	(175) R131,3	(500) R375m	
<b>NSNP Rooms(Feeding)</b>	(220) R110m	(165) R82,5m	(330) R165m	(384) R192m	(1099) R549,5m	
<b>Fencing (No of Schools)</b>	195 R29,3m	146 R21,9m	292 R43,8m	340 R51m	973 R145,9m	
<b>TOTAL</b>	2398	1815	3583	4200	<b>R14, 908,5 billion</b>	

The definitions and scope of each of the infrastructure categories used in table 4.7 needs to be clarified. The categories should further be modified to reflect actual infrastructure categories in the DORA reports.

An accurate determination of needs should be based on each town or suburbs' needs and not only based on the regional average. These averages provide a check, and indicate where a minimum of further investigation should be carried out. A Total amount of R14, 908, 5 billion will be required to address the value of total Works to be done in Four Regions in a Ten years Period.

**The update of NEIMS and its SITA Certification process is not yet completed. The Infrastructure Plan 2009/10 will be updated based on credible NEIMS information.**

#### 4. INFRASTRUCTURE MANAGEMENT PLAN

##### BACKGROUND DATA

##### PHYSICAL PARAMETERS

The physical infrastructure available in the North West is summarised in Table 5.1.

Table 5.1 Summary of Physical Infrastructure in Four Regions.

No	Infrastructure	Bophirima	Central	Southern	Bojanala	Total
1	Primary Schools	53507	117590	92866	128764	392727
2	Intermediate Schools	15279	28346	11739	40519	95883
3	Secondary Schools	29151	54163	57233	67890	201237
4	Combined Schools	2961	8452	9961	9846	31220
5	Farm Schools	3	4	27	7	41
6	Adult Centres	82	72	18	86	258
7	Early Learning Centres	86	160	28	297	571
8	Special Schools	4	15	9	24	19
9	Tertiary Institutions	2	4	5	8	19
10	Management Offices	6	8	5	9	28

**N.B These Figures are based on data that needs to be verified. With the availability information from NEIMS which needs to be updated and certified by SETA, an accurate data will henceforth be given as correct and valid. The next Infrastructure Plan to be submitted in May will be having credible and updated data.**

Maps showing the Locality of Schools included in Table 5.1 are also included in the annexure. Note that the Categories need to be verified.

<b>Table 5.2 Summary of Physical Infrastructure</b>			
<b>Description of Asset</b>	<b>Quantity</b>	<b>Age (Years)</b>	<b>Estimated Replacement Value (Rbn)</b>
Schools	1730	Varies from +50 to 0	25,0
Regional & Corporate offices, colleges, hostels, etc)			5,0
TOTAL			30,0

#### 4.1.1 Capacity and Performance

Factors affecting utilisation include:

- Storm damage reducing availability of existing infrastructure;
- Migration of learners from schools resulting in infrastructure being under utilised;
- Migration of learners to schools resulting in higher than standard classroom: learner and learner toilet ratios;
- Dysfunctional facilities causing existing infrastructure to not be available for use.
- Schools requiring major repairs/refurbishment; some classrooms are unsuitable for use.

This information is not available and should be collected. In addition a Locality Plan showing over and under utilisation should be prepared.

#### 4.1.2 Condition

The NW DPW intends collecting condition assessment data for all schools by end of 2007, and capturing this on the PREMIS Asset Register/BMMS that they have compiled.

The National DOE is conducting a survey (SRN) of all education infrastructure determine, amongst others, the condition of the infrastructure. The final data is expected in 2008, but preliminary data should be available in April 2008 this data will be included in the NW DPW asset register/BMMS.

#### 4.1.3 Valuations

The value of the infrastructure should be based on the asset register compiled by the NW DPW in 2001. These valuations could be reinforced by the data from the EMIS. The 2006 SRN being conducted will provide this data during 2008 with the final report in 2009. The data should be included in the NW DPW asset register/BMMS

Currently the estimate is as shown in Table 5.1, i.e. total replacement value of infrastructure is R30bn.

#### 4.1.4 Historical Data

Learner statistics for schools have only been available from 2000. The data has been based on the EMIS and annual surveys within the NW DOE.

Infrastructure data is currently based on existing records and information compiled by school principals. Limited information has been compiled by NW DOE and NW Premis PW works inspectors. The NW DPW has compiled an asset register/BMMS which is based on data compiled in 2002. The DPW is currently working on a System to maintain the data. Conditional assessments that NW DPW plans for 2008/9 will be used to update the asset register/BMMS.

The 2008/9 SRN will also provide accurate data on infrastructure condition, capacity, utilisation, level of service provided, location, etc. An extract from the Premis was used to estimate Arrear Repairs to Schools.

**EPWP**

This programme is aimed at using labour based methods for construction and provision of training for qualifying employees.

Most of the infrastructure work carried out by the NW DOE is labour based. Out of 09 Renovation projects to be implemented by DPW, Three has been earmarked for EPWP and NYS Programmes. In future many projects will be set up for EPWP Purposes. There is still a huge challenge regarding the implementation of EPWP Programmes viz reasons for this include:

- documentation (or relevant portions of the documentation) does not comply with the EPWP requirements;
- no EPWP registered contractors available to tender for work;

**2008/09 EPWP PROJECTS SHOWN ON RENOVATIONS TO BE EXECUTED BY DPW****4. SCHOOL RENOVATIONS 2008/2009**

NO	PROJECT NAMES	LOCATION	MUNICIPALITY	EPWPTYPE
1	Lapologang	Mafikeng	Mafikeng	
2	Goo Seleka	G. delareyville	Tswaing	
3	Tukisang	Khuma	Klerksdorp	
4	Labojang	Wolmaranstad	Maquassi Hills	
5	Phaladi	Ikageng	Potchefstroom	EPWP
6	Monchusi	Morokweng	Kagisano	EPWP
7	Itshupeng	Scwizereneke	Maamusa	
8	Mothotlung	Mothutlung	Madibeng	NYS
9	Lentheng	Sesobe	Moses Kotane	

However the department does include the socio-economic reporting requirements of the EPWP in their reporting requirements from implementing agents.

Future projects should be planned in collaboration with NW DPW to include elements of the EPWP as far as possible. One of the problems hampering the use of EPWP Systems is the low number of Accredited/Trained EPWP Contractors.

The NW DOE could look at including AIDS Awareness and Life Skills Training in the Projects to augment the temporary jobs created by each project.

**ENVIRONMENTAL CONSIDERATIONS**

All projects involving infrastructure should include an environmental assessment. EIA's have not been included in planning to date.

Provision should be made in infrastructure planning to include EIA's and monitoring of impacts in terms of these EIA's after preliminary discussions with NW DACE have been held.

Individual projects should be assessed to determine the level of EIA required.



## ROUTINE MAINTENANCE

### 4.1.5 Routine Maintenance Plan

No formal routine maintenance plan has been established.

Routine maintenance is carried out by schools using an allocation made to each school each year. The allocation is based on the size of the annual budget and not on the amount of work required. Schools use this money to repair small items during the year.

The NW DOE and NW DPW are preparing a maintenance plan for all fixed infrastructure.

Table 5.3 shows the amounts that have been made available for routine maintenance.

<b>No.</b>	<b>Financial Year</b>	<b>Total (Rm)</b>
1	2008/09	70,000
2	2009/10	75, 000
3	2010/11	80, 000

No basis for allocating funds for maintenance has been developed. Available funds are apportioned amongst schools for their own use. This system needs to be replaced by a formal system that monitors expenditure to ensure that maintenance is properly carried out.

The NW DPW Asset Register and BMMS will be used to develop budgets.

### 4.1.6 Standards and Specifications

All new building and refurbishment work is carried out according to building standards and norms. In many cases the work is supervised by a team of built environment professionals. In other cases the work are supervised by either NW DOE or NW DPW works inspectors.

### 4.1.7 Summary of Future Costs

"Maintenance" requirements are based on the funds made available each year as shown in **Table 5.3, R 70m has been allowed for 2008/09.**

Maintenance (ensuring that infrastructure is fit for the purpose for which it was built and installed) needs to be planned and scheduled. This will be provided by the NW DPW BMMS.

Currently no estimates for deferred maintenance have been made. Deferred maintenance often leads to damage which is then included in the "Repairs Backlog" (Table 5.4).

The NW DPW asset register/BMMS will assist in developing budgets and schedules for maintenance and refurbishment.





## RENEWAL OF INFRASTRUCTURE

### 4.1.8 Renewal Plan

Renewal has been divided into repairs and planned refurbishment. Repairs are required to overcome the dilapidated state of some schools before they can be placed on a routine maintenance and refurbishment cycle.

### 4.1.9 Repairs

Schools requiring repairs that can not be classified as day to day are referred to as Major or Minor Repairs. The division between major and minor repairs is R500,000. This differentiation has been made to address schools where smaller repairs are required before they become major and not allow requests for large repairs to swamp requests for smaller important repairs.

Regional offices submit prioritised lists of major and minor repairs to the corporate office. Funds are usually allocated equally to each region. The repairs highest on the Regional list are addressed first.

Currently the estimated costs of repairs to all schools **are R8, 050 billion.**

An accurate assessment of the required repairs needs to be carried out.

BMMS and Asset Register will be used in managing this Category of Expenditure.

Based on the Premis (Asset Register of NW DPW) repairs amounting to R676, 323, 951 were requested in 2002. Allowing for escalation, facilities built or acquired and facilities not included on the Premis at 2002, this "backlog" in repairs is estimated to amount to more than R1billion.

The NW DPW Asset Register and BMMS will assist in scheduling, developing estimates and budgets, prioritisation of projects and recording Refurbishment work.

In addition, the NW DPW will carry out a survey during 2008/9 to determine the extent of major and minor repair requirements at schools.

### 4.1.10 Refurbishment

The annual refurbishment estimate is based on the value of the infrastructure managed by the NW DOE, the condition and the age of the infrastructure. Currently no budget is prepared for refurbishment.

For the purpose of this infrastructure plan, refurbishment costs have been estimated to be 1% per annum of the replacement value of the infrastructure. NW DPW believes that refurbishment should be carried out on 7 year cycle at each school and be confirmed by regular condition assessments.

The NW DPW asset register/BMMS will assist in scheduling, developing estimates and budgets, prioritisation of projects and recording refurbishment work.

#### 4.1.11 Estimated Repair and Refurbishment Costs

Table 5.3 summarises the estimated costs of repairs to all schools. This information has been supplied by regional ESS staff. These estimates can be viewed as the current backlog in repair and refurbishment work.

These estimated backlogs will be verified and localised by the 2008 SRN and the NW DPW schools condition assessment in 2008/9.

No.	Infrastructure Description	TOTAL (Rm)				TOTAL
		Central (Rm)	Bophirima (Rm)	Southern (Rm)	Bojanala West (Rm)	
1	Repair/replace dysfunctional toilets	20,0	15,0	30,0	35,0	100,0m
2	Major repairs (costing more than R500,000)	1,610 b	1,210 b	2,415 b	2,815 b	R8,05 billion
TOTAL		R1,810	R1,360	R2,715	R3,165	R8, 150 billion
4	Premis 2002 Estimations	R3 billion				

This information has been supplied by Regional ESS Staff. These estimates can be viewed as the current Backlog in repair and refurbishment work. These estimated Backlogs will be verified by the 2008 SRN Survey.

Table 5.5 indicates the funds allocated to major repairs in the 2008/09 -2016/18 financial years and a projection of the funds required completing the major repairs by 2016/18 in order to remove the repairs backlog.

Table 5.5 also indicates an increasing amount for planned repairs of infrastructure on a scheduled basis. The total annual refurbishment funds required are based on an estimated 1% of capital value of fixed infrastructure.

In order to ensure that NW DOE immovable assets do not generate a new "Repair Backlog" Table.5.4 has been addressed. Regular Renewal and Refurbishment should be scheduled and budgeted for.

Table.5.5 Estimated Cost of Repairs and Refurbishment/renewals (R'm)				
Financial Year	Repairs Required Table.5.4	Estimated Refurbishment	Repair Funds Allocated	Backlog at end of Financial Year.
2008/9	8,096	32.0	153,7	7,942
2009/10	7,942	64.0	179,6	7,762
2010/11	7,762	96.0	179,6	7,582
2011/12	7,582	128.0	179,6	7,402
2012/13	7,402	160.0	179,6	7,222
2013/14	7,222	192.0	179,6	7,042
2014/15	7,042	224.0	179,6	6,862
2015/16	6,862	256.0	179,6	6,682
2016/17	6,682	288.0	179,6	6,502

From Table.5.5 it can be seen that the "Backlog" is reducing based on the assumption that repairs does not increase. The amount of repairs is however dependent on the amount and quality of routine Maintenance that is carried out at Day to day.

Present estimates indicate the amount of this work is well below Industry norms of approximately 0,8% of the replacement value of immovable assets.

#### 5.5.6. Renewal Standards

All renewals are carried out to return the infrastructure to its original intended state. Where possible the same material is used unless this material is not economically available, is unsafe to use (eg. asbestos) or was not building quality material (eg mud) when the infrastructure was built.

The risk involved in applying these standards is to ensure that resources (funds, building materials, skill labour and skilled supervision) are available to implement these requirements.

## CREATION / ACQUISITION PLAN

### 4.1.12 Selection Criteria

School building programmes are currently based on priority lists submitted by the regions to the corporate office. These priorities are based on the school and regional office estimation of the demand for infrastructure which either provides for new demand or addressing "unbearable" conditions in which learners are taught (unsafe structures, more than one class in a large hall, none or very poor sanitation facilities, etc).

The NW DOE needs to move towards an integrated planning system where the following criteria are consistently used for determining the infrastructure to be created in the future:

- Demographic trends;
- Availability of alternative education facilities;
- Availability of alternative infrastructure solutions (temporary facilities, transport, hostels, platooning in the short term);
- Municipal services availability;
- Economic development projects and initiatives in the area;
- Curriculum to be provided in the future; and
- Funds.

These factors form part of the initial determination of infrastructure needs. Using this data in a consistent manner will assist the planners to develop a long term plan for the creation of infrastructure throughout NW.

### 4.1.13 Standards and Specifications

Infrastructure is built to meet the South African National Standards requirements for buildings and associated infrastructure and NW DOE requirements for specific conditions.

In cases where it is not possible or feasible to provide permanent structures, temporary facilities using materials appropriate to the estimated period for which the infrastructure will be required, should be used.

This implies that improved projections of the required service life of a facility should be developed; i.e. where communities will only require the facility for 5 years, use of modular, mobile or semi-permanent structures should be considered.

This implies that improved Projections of the required service life of a school should be developed, i.e. where Communities will only require the School for 5 years use of modular OR Mobile schools should be considered.

#### 4.1.14 Summary of Future Costs

Currently planning has been based on the proposed MTEF budget to be made available to the NW DOE. Table 5.5 based on Table 4.7 indicates the required expenditure for infrastructure. As noted in section 4.4.2 these estimates need to be verified. Table 5.5 also illustrates the current planned expenditure on new infrastructure.

Infrastructure Description	Total Required Table.4.7	Budget Provision				Backlog after MTEF
		08/09 (Rm)	09/10 (Rm)	10/11 (Rm)	Total MTEF	
<b>New Schools</b>		130	200	233,6	563,6	
<b>New Buildings</b>						
<b>New Toilets</b>		30.0	40.0	60.0	130,0	
<b>Provision of water</b>		5,0	5.0	5.0	15,0	
<b>Provision of electricity</b>		0.0	0.0	0.0	0.0	
<b>New fencing</b>		5,0	5.0	5.0	15,0	
<b>Total</b>		<b>170,0</b>	<b>250,0</b>	<b>303,6</b>	<b>475,0</b>	

#### DISPOSAL PLAN

No formal system for identifying infrastructure that needs to be disposed of has been developed. Infrastructure that needs to be disposed of falls into the following categories:

- Infrastructure constructed using poor materials or building methods; and
- Infrastructure that is no longer required e.g. in areas where learner numbers cannot support a school, or the curriculum has changed rendering certain facilities obsolete.

Generally where schools are constructed with poor materials, the NW DOE attempts to rebuild these schools. A building programme – replacement or major repairs – needs to be developed. This programme should be linked to the 2008 SRN and the NW DPW asset register/BMMS and future community demand.

## 5. FINANCIAL SUMMARY

### FINANCIAL STATEMENTS AND PROJECTIONS

#### 5.1.1 Financial Systems

The North West province uses the Walker system to make all its payments. Thus all of NW DOE's infrastructure expenditure is done through this system. Expenditure is also recorded on both the Project Register and the IRM (Infrastructure Reporting Model) which is an initiative managed by both Provincial Treasury and the Office of the Premier.

The following cost centre codes are used for NW DOE infrastructure expenditure:

- AB7: National Conditional Grant – School Building;
- G01 Provincial Conditional Grant – School Building;
- G81: Provincial Conditional Grant – Maintenance.
- GO2: Sanitation

#### 5.1.2 MTEF Allocations

Income to the department is in the form of budget allocations from the provincial budget and an allowance from the national treasury. Both of these allocations are managed by the NW Provincial Treasury. The NW DOE also receives income for infrastructure from the NW Education Development Trust. This Trust counter funds expenditure on new infrastructure that falls into certain categories.

Balancing of the income and expenditure occurs by not permitting any over-expenditure and either rolling over unspent funds into the following financial year or surrendering the unspent funds back to provincial treasury.

Currently projections are based on the allocations provided in the MTEF budget statements for the following 2 financial years.

Table 6.1 illustrates the MTEF budget for the 2008/09 to 2010/11 financial years.

Financial Year	New Buildings	Maintenance	Total
	Budget	Budget	Budget
08/09	170, 000	70, 000	240, 000
09/10	250, 609	75, 000	325, 609
2010/2011	303, 515	80, 000	383, 515

---

<b>Total</b>	<b>R724, 124</b>	<b>R225, 000</b>	<b>R949, 124million</b>

**Note:** Maintenance includes major and minor repairs and day to day maintenance.



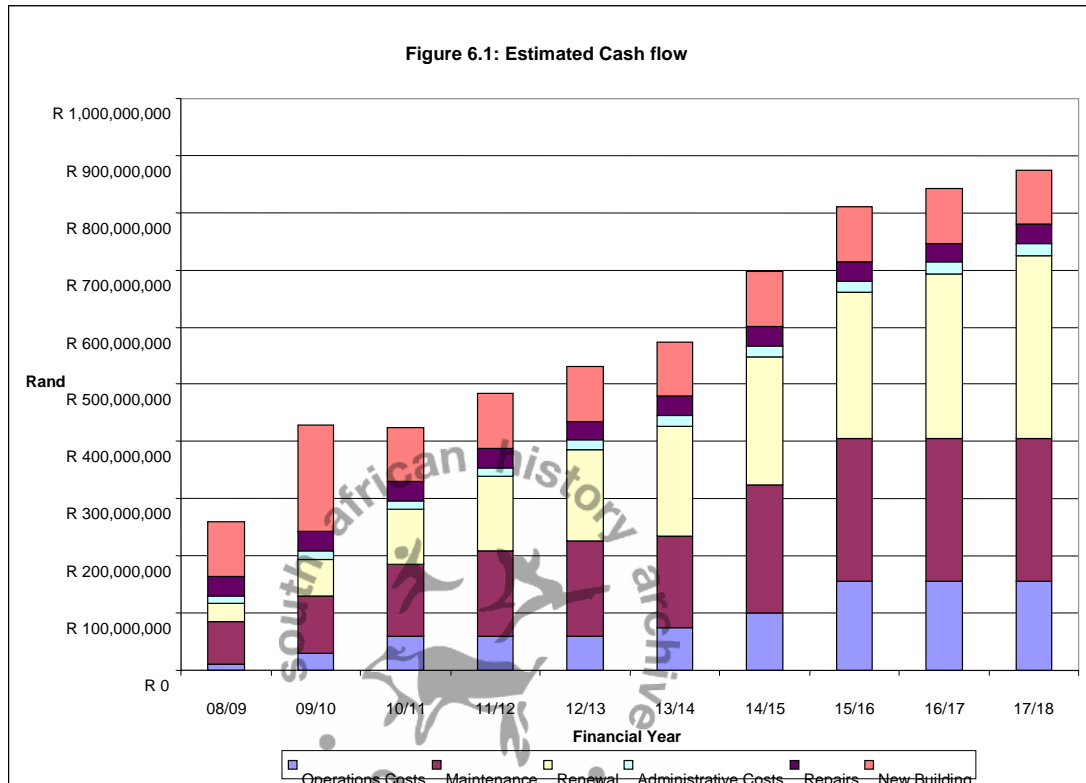
### 5.1.3 Cash flow Forecasts

Table 6.2 lists the assumptions made to develop cash flow projections. All these assumptions need to be verified and are used to develop initial estimates.

<b>Description of assumption</b>	<b>Assumption</b>	<b>Comment</b>
Current infrastructure replacement value.	R36bn	Based on number of schools and buildings. This assumption is to be confirmed by the asset registers and condition assessments
Current value of repairs required.	R8,150 billion; 10 years to complete these repairs, i.e. by March 2017.	Based on estimates by schools, APO's and Regional offices; The assumption to be confirmed by estimates based on assessments by NW PW and NW DoE
Current value of new buildings required.	R2,015 billion Complete these new buildings, i.e. by March 2015.	Based on estimates by schools, APO's and Regional offices; The assumption to be confirmed by estimates based on assessments by NW PW and NW DoE
Operations allowance.	0.5% of replacement value (highest estimate R 160,0m per year)	Allow an increasing allocation and verify assumption with improved data.
Maintenance allowance.	0.8% of replacement value (highest estimate R250,0m per year)	Includes scheduled routine maintenance and day to day repairs.
Refurbishment costs	1% of replacement value (highest estimate R315,0m per year)	Increase the allocation to reach the allowance each year; All requirements to be verified on site; Increase the accuracy of the assumption with improved data.
Inflation	5% per year	



Figure 6.1 illustrates the cash flow based on the above assumptions. This cash flow is based on increasing infrastructure expenditure until the outstanding repair and building requirements have been met and expenditure on scheduled maintenance, renewal and operations have reached their theoretical values. These values should be investigated and amended as more accurate data becomes available once the Infrastructure Plan has become operational.



## FUNDING STRATEGY

Funds are obtained from three sources for infrastructure development in the NW DOE. Table 6.3 illustrates the uses that can be made of each source of funding.

<b>Funding Source</b>	<b>Comments</b>
Provincial Treasury (G01, and G81)	Funds are earmarked for either new building or maintenance work.
National Conditional Grant (AB7)	Funds may only be used for new buildings.
NW Education Development Trust	Funds are provided by the private sector on a co-funding basis. Funds are used for new buildings, provision of water, toilets, fencing and refurbishment.
Provincial Treasury (G02)	Funds may only be used for building of New Toilets(SANITATION PROGRAMME)

## VALUATION FORECASTS

Currently no formal procedures exist to value infrastructure. The value of the infrastructure is based on an estimate of the replacement cost at 2004 prices. This method is not acceptable and needs to be replaced by a formal system that is linked to the asset register/BMMS and the condition of the infrastructure.

Most of the infrastructure consists of buildings. No depreciation has been allowed. In terms of GIAMA an allowance or a statement of the provision for depreciation needs to be made.

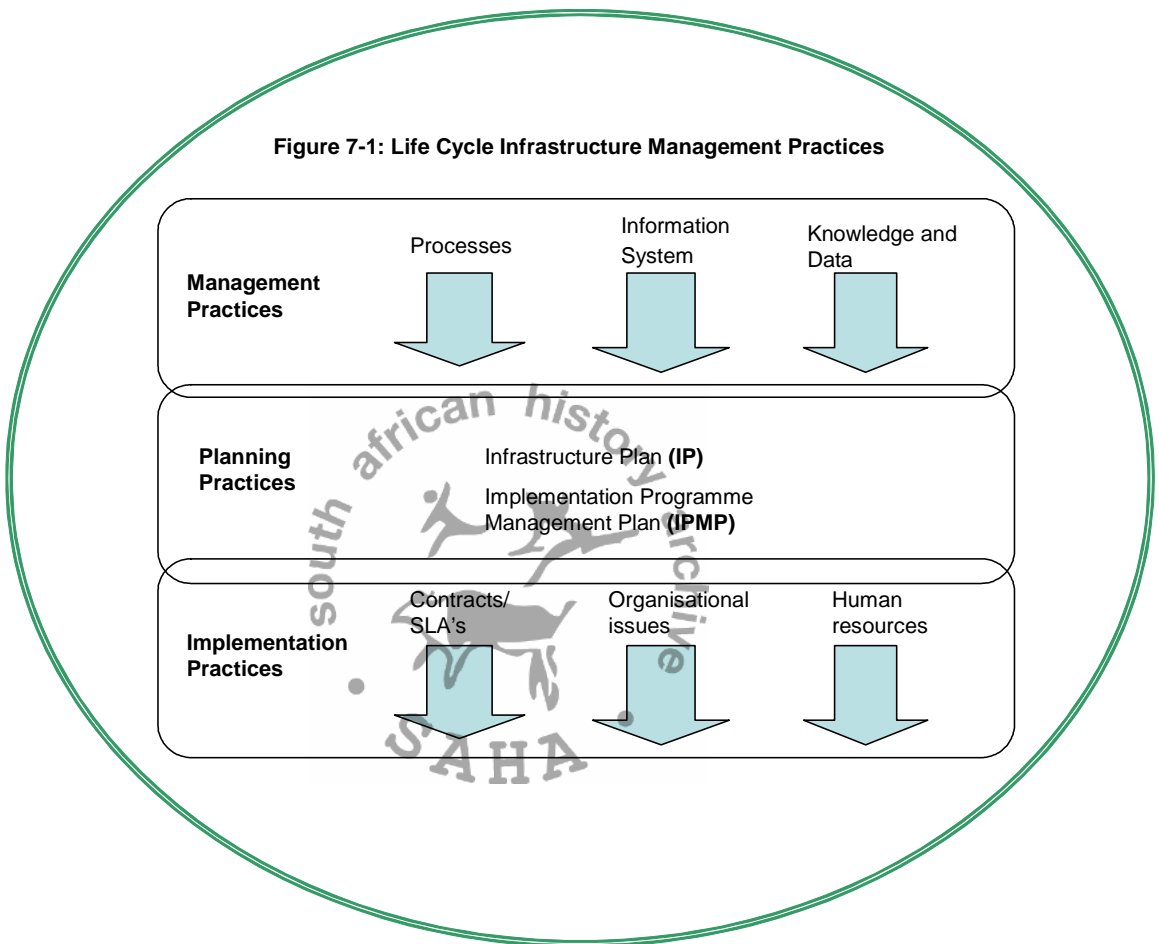
## PROJECTS TO BE COMPLETED IN THE 2008/09 FINANCIAL YEAR

Some Projects have not been finalised. The final accounts need to be certified to be paid during 2008/09 financial years.

**6. ASSET MANAGEMENT PRACTICE**

(Organisation and Support Plan)

The key elements of life cycle infrastructure asset management practice are illustrated in Figure 7.1.



## HUMAN RESOURCES

### 6.1.1 Priority Functional gaps

#### (a) Planning

Sufficient capacity until recently has not existed in the PRFPM directorate to develop long term Infrastructure Plans. This capacity has now been partially provided, but skills training is required to make the additional resources effective.

#### (b) Integration of Effort

In many cases the functions of NW DPW and NW DOE overlap. Should these two departments, initially and others later, be able to integrate their planning and operational roles a more effective infrastructure management service could be provided.

This will also be assisted should it be possible to use the same infrastructure training courses for both departments' officials responsible for infrastructure management.

#### (c) Sustainability of Training

A long term skills development and training programme will provide staff with the planned mechanism for addressing their skills shortage and give them greater confidence in providing the services required of them.

#### (d) Fill Organogramme

The approved organogramme needs to be filled with staff that either have the required skills or can be trained in such a manner that skills can be passed on the department. Currently the Physical Resources and Facilities Planning and Management staff of the department number 19 of 51 according to the approved organogramme (ie less than 40%).

#### (e) Crisis Management

Infrastructure Asset Management including sustainable planning and management of delivery is a service focussed on long term results. Systems and staff skills should be developed that are focussed on delivering sustainable LOS.

Currently staffs are required to respond to crisis varying from information about a particular school to genuine emergencies (storm damaged buildings). Prioritisation of projects based on confirmed needs (long and short term), backed up by reliable systems (EMIS, asset register/BMMS, IP) should be used to guide staff deployment and development.

### 6.1.2 Key skills gaps

#### (a) Infrastructure Management

Infrastructure users, service providers, implementing agents and staff need to appreciate the value of the infrastructure that needs to be managed and be able to plan based on the life cycle costs of providing infrastructure.

#### (b) Programme and Project Management

Staff will be required to manage a variety of implementing agents, including NW DPW, professional programme and project teams and short term contract teams.

#### (c) Prioritisation of Projects

Prioritisation skills need to be developed so that long term project choices can be made to achieve both short and long term objectives.

#### (d) Communication Skills

Staffs needs to be able to communicate with communities, municipalities, project and programme implementing agents, fellow staff members and other non-infrastructure related staff for whom they are providing the infrastructure service.

### 6.1.3 Human resources gaps

The following training and skills development systems need to be implemented:

- Formal and easy mechanism for distribution of planning and management tools developed in the department;
- Training and mentoring systems to support long term skills development;
- Customised training plans for each staff member in the PRFPM; and
- Mechanism for reporting on the effectiveness and benefits of training and skills development.

#### **6.1.4 Immediate and future expertise requirements**

The PRFPM directorate is focussed on providing infrastructure to meet service delivery requirements in the long term. This will require the following initial skills:

- Infrastructure asset management; and
- Project and programme management.

In the future the above skills need to be refined and continuously developed and the following skills will also be required:

- Property management
- Technical and Trade skills (specifications, contract administration, artisan)
- Condition assessment
- Prioritisation of projects
- Long term planning in collaboration with local communities and municipalities
- Financial management (budget, commitment register, cash flow management, etc)

#### **6.1.5 Initiatives to address gaps**

The following initiatives have been proposed to address the gaps:

- Recruit suitable staff
- Train staff in the skills required in a systematic manner
- Provide continuous mentoring for staff
- Budget for training and skills development in a sustainable manner
- Develop, install and implement information sharing systems, flexible training plans and succession planning for staff.

**6.1.6 Anticipated impact**

The impact of filling posts and training on the PRFPM directorate should improve planning and delivery management significantly. Challenges that will be encountered include changing perceptions of some implementing agents to comply with both the letter and the spirit of their SLA's and reducing the "crisis management" culture currently in operation in the directorate.

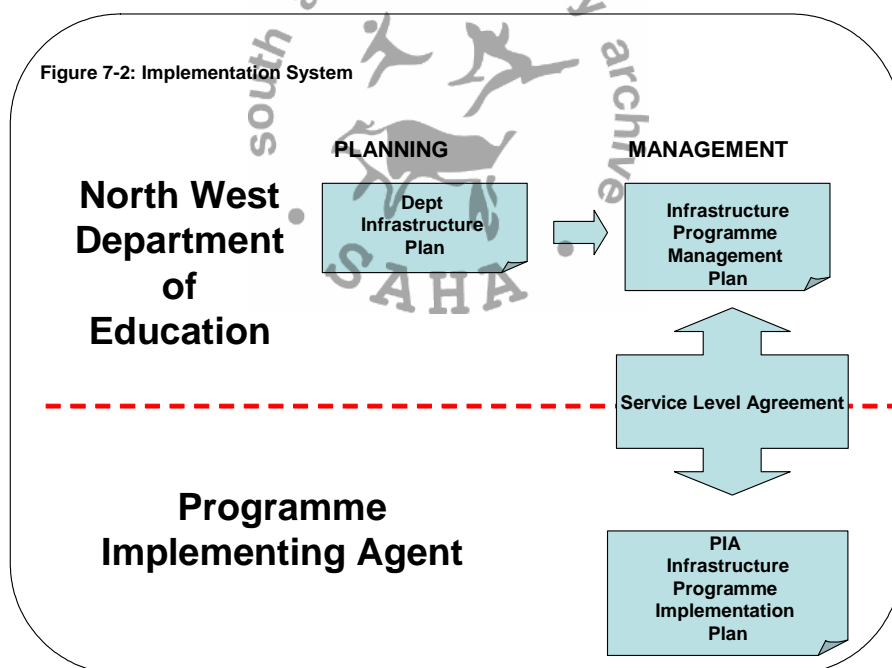
This staffs currently manages an infrastructure budget of approximately R250m per annum. It is expected that the infrastructure budget will increase until 2012/13 **when it will stabilise at approximately R900 million per annum.**

PRFPM directorate staff and ESS representatives at the Regional offices will be required to play a larger role in infrastructure planning and project prioritisation. In order to manage the increased infrastructure budget the PRFPM directorate will have to make more use of built environment programme managers (eg NW DPW).

**SYSTEMS AND PROCESSES**

**6.1.7 Implementation Plan**

Figure 7.2 illustrates the proposed implementation system for NW DOE.



This system requires the Programme Implementing Agent to prepare and monitor a Programme Implementation Plan. Currently these plans are one year long (the financial year), but could be extended to include 2 or more years, e.g. the MTEF cycle.

### **6.1.8 Accounting and Financial Systems**

NW uses the Walker Financial System for monitoring and approving expenditure against budget votes. In addition the Office of the Premier has established a project tracking system for all projects which includes financial indicators.

These systems, used correctly, should provide sufficient data to monitor NW DOE infrastructure expenditure at present.

The PRFPM directorate has developed a Commitment Register that tracks invoices and payment certificates that have been approved for payment. This gives the directorate an early indication of likely expenditure.

### **6.1.9 Infrastructure Management Systems**

Table 7.1 summarises the information systems currently available. Access to these systems has been partially provided to NW DOE PRFPM staff. However this access is slow and often delays accurate data capturing and report extraction.





<b>Table 7.1: Information Systems Currently Available</b>					
<b>Name/ Description of System</b>	<b>Type of Data Stored</b>	<b>Quality/Reliability of Data</b>	<b>Data Analysis</b>	<b>Physical Location of System</b>	<b>Data Collection Schedule</b>
Walker Financial System	Financial Data	Good; allocation of cost codes needs to be checked	Summary of expenditure; % of budget expended	NW head office	Budgets annually; expenses are captured as they occur
NW Pro-Mis	Project expenditure and progress;  Budget Allocation per project	Good; needs to be correlated to Walker	Identification of project phase	NW Office of the Premier; The web based system is being developed.	Budgets annually; Expenditure and progress recording.
EMIS	Learner statistics, some infrastructure data	Poor; needs to be verified;	Projections; Utilisation	NW DOE: ESS Chief Directorate	Snap survey and SRN;  (Currently NDOE busy with 2006 SRN for infrastructure)
BMMS and Asset Register at NW DPW	Infrastructure description, location, condition, value	Good; Needs to be updated	Projections, Utilisation, Funding requirements, Project prioritisation, Condition analysis	NW Department of Public Works	NW DPW intend completing all condition assessments in 2006

<b>Table 7.1: Information Systems Currently Available</b>					
<b>Name/ Description of System</b>	<b>Type of Data Stored</b>	<b>Quality/Reliability of Data</b>	<b>Data Analysis</b>	<b>Physical Location of System</b>	<b>Data Collection Schedule</b>
IRM	Project expenditure and progress.  Budget Allocation per project.	Good, needs to be correlated to Walker	Identification of project phase to handover stage.	NW TREASURY: The web based system is being developed.	Budgets annually, Expenditure and progress recordings



#### **6.1.10 Information Flow Requirements and Processes**

The following information and data is required during the process of preparing an Infrastructure Plan:

- Strategic goals and objectives of the NW DOE (changes and focus areas);
- Location, description, condition and value typically available from an asset register;
- Performance and utilisation of the infrastructure;
- Staff recruiting and training schedule and budget commitments;
- Infrastructure Budget allocations and potential additional funding sources;
- Trends based on actual historical data;
- Projections based on demographic changes and economic development plans;
- Projections based on estimated demand changes and curriculum changes;
- Technology changes to be implemented in NW DOE.

This information will inform both the demand for infrastructure as well as the supply of infrastructure.

The Infrastructure Plan will be used as a basis for implementing construction and refurbishment cycles in the MTEF period as well as to inform the department of the resource requirements in the future.

Risk analysis for loss of service and physical hazards will also be possible. This analysis can then be monitored and improved as data is collected and analysed.

#### **6.1.11 Standards and Guidelines**

The National DOE's policy to provide a high standard of education, easily accessible to all is the main requirement driving the provision of infrastructure. This requirement can only be implemented on an incremental basis. The Infrastructure Plan will develop realistic targets to be achieved and monitor achievements.

## 7. PLAN IMPROVEMENT AND MONITORING

In order for the Infrastructure Plan to have a useful impact on NW DOE's infrastructure delivery, it needs to be used and improved. The plan should serve as a guide to illustrate how infrastructure will assist the department in meeting its service delivery mandate.

By producing a plan that is based on accurate data and assumptions that reflect the department's vision, all stakeholders will be able to use it meaningfully. Improved data and information should be added on a continuous basis for inclusion in future reviews of the Infrastructure Plan.

### MONITORING AND REVIEW PROCEDURES

The Department through the PRPFM Unit has committed itself to an annual review of the Infrastructure Plan to coincide with the annual budgeting cycle. This will include an evaluation of performance (both of the DoE as well as the DPW over the past year against the Plan. The above process will be facilitated by an active link being established between the Office of the Premier (Project Management) and performance reports which are also be set up. This will make it easy to monitor the effectiveness of the Infrastructure Plan.

### IMPROVEMENT PROGRAMME

Improvement is based on incremental improvements, focussed on the most important outstanding issue

The following are considered to be the most important areas for improvement of the Infrastructure Plan:

- Develop an Infrastructure Policy;
- Improve the quality and consistency of the data available;
- Link infrastructure planning to local municipality IDP's;
- Improve and integrate infrastructure asset data systems (BMMS, asset register, condition assessments, valuation procedures);
- Integrate information systems (EMIS, NW Pro-Mis, Walker, data analysis, GIS, procedures)
- Formalise EIA procedures and requirements
- External Auditing
- Benchmarking against international best practices
- Interviews with stakeholders
- Monitoring of performance reports

The following are considered to be important for the delivery of infrastructure:

- Improve human resources capacity (fill posts, conduct infrastructure management training)
- Draft Service Delivery Procedures (operations, maintenance, refurbishment, prioritisation)
- Implement organisational procedures (SLAs, Programme Plans, Standardised contracts, implementing agents' roles).

After each review additional and new issues for improvement will become relevant and should be addressed.

### **MONITORING AND IMPROVEMENT PLAN (TO BE REVIEWED)**

Following the auditor general report in the management letter 2006/07, the following items are now given first priority to be improved. This process is ongoing.

- Tender Register Reconciliation with the Project Lists.
- Asset Register Management
- Update of the Building Register and reconciliation with financial Statements.

### **PERFORMANCE MEASURES**

The following Performance Measures will be constantly applied for improvement

- Quality of Infrastructure Planning will be improved by empowering planners through Training and IDIP best practises.
- Three Professional Assistants will be appointed by Treasury to assist in better Infrastructure Planning and Delivery. Posts have been advertised.
- Office of the Premier (Project Management) will from time to time assess these Plans and will recommend best practises.
- Planners will be accredited with Planning Modules to improve on the quality.

## **GAP BETWEEN CURRENT AND DESIRED MANAGEMENT PRACTICE**

An improvement programme should include targets and milestones for each of these improvement areas. The milestones should be achievable within the timeframes bearing in mind the available resources and the existing work load of the PRFPM directorate.

Figure 8.1 illustrates a propose gap analysis chart, showing current and desired states of practice and the targeted improvement for 07/08.

## **RESPONSIBILITIES FOR REVIEW**

The PRFPM Directorate should be responsible for the Infrastructure Plan. Use of external resources will be co-ordinated by the directorate. One of the initial tasks will be to allocate responsibilities within the directorate for monitoring and collating new data for inclusion in future reviews of the Infrastructure Plan..



Figure 8.1: Gap Analysis Chart

Area of focus		Corporate Objectives		Levels of Service		Knowledge of Assets		Accounting and Costing		Creation and Disposal of Assets		Asset Management Plan	
Attribute	Score	Infrastructure Policy	Quality and Consistency of Data	Defined Level of Service	Current LOS	Condition of Assets	Utilisation	Operational Costs	Maintenance Costs	Project Identification Procedures	Life Cycle Costing	Demand Projections & Forecasts	Operations & Maintenance Procedures
Excellence	100												
	95												
	90												
	85												
	80												
Competence	75												
	70												
	65												
	60												
	55												
Systematic Approach	50												
	45												
	40												
Awareness	35												
	30												
Innocence	25												
	20												
Appropriate Score		100	80	80	80	80	80	80	80	80	80	80	80
Current Score		20	40	60	50	40	40	50	20	35	20	30	35
Gap		80	40	20	30	40	40	30	60	45	60	50	45
Weighting		5	5	4	3	4	3	2	2	2	2	4	3
Weighted Gap (W x G)		400	200	80	90	160	120	60	120	90	120	200	135
Current Priority		1	2	7	6	3	5	8	5	6	5	2	4
Target for 2006/07		100	60	80	80	80	80	65	45	55	50	50	55

Source : International Infrastructure Management Manual Version 1.0 (adapted)

## 8. REFERENCES AND APPENDICES

### REFERENCES

#### 8.1.1 International Infrastructure Management Manual Version 2.0 (2002)

Association of Local Government Engineering New Zealand Inc. and the Institute of Public Works of Australia. Published by Association of Local Government Engineering NZ Inc. National Asset Management Steering Committee Group, New Zealand.

#### 8.1.2 Toolkit Version 4.0 (2006)

Prepared by the CIDB and the National Treasury as part of the IDIP

9.1.3. Division of Revenue Act. Act 1 of 2007

9.1.4. South African Schools Act. Act 84 of 1996

9.1.5. North West Department of Education 5 Year Strategic and Performance Plan(2005/06-2009/10)

### APPENDICES

#### A: Glossary:

The glossary is copied from the International Infrastructure Management Manual. In later versions of the Infrastructure Plan additional terms will be added that refer specifically to the NW DOE.

#### B: Project List for 08/09 – 20/17 Financial Years for the NW DOE.

The project list for future years (2008/2009 – 2016/17 as well as the repair backlog and required infrastructure will be prepared. Currently Project Lists shown in this Plan are of the following years according to the MTEF Allocations.

METF Allocations	Project Lists provided	Budgets		Projects align to the Budgets
		New Buildings	Maintenance	
<b>2008/09</b>	Yes	170, 000	70,000	<b>Yes</b>
<b>2009/10</b>	Yes	250, 609	75, 000	<b>Yes</b>
<b>2020/11</b>	Yes	303, 515	80, 000	<b>Yes</b>
		<b>724, 124</b>	<b>225 000</b>	

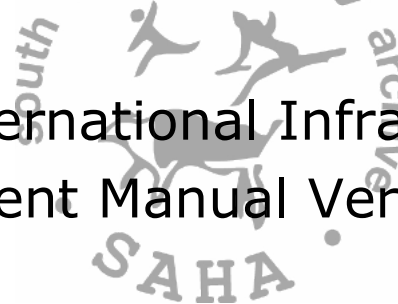





# Annexure A:

## GLOSSARY

(From International Infrastructure  
Management Manual Version 2.0)



# Annexure A: Project Lists for the 08/09, 09/10 & 10/11 Financial Years.



Annexure C:

Project List for  
the 08/09  
Financial Year.  
Shown in the  
IRM Report

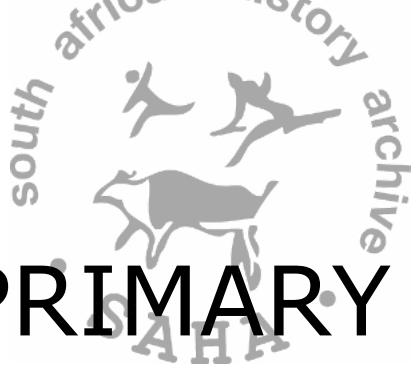


# Annexure D:

Project List for  
the 09/10  
Financial Year.  
Shown in the  
IRM Report.

# ANNEXURE: E

## LOCALITY MAPS

- 
- (i) PRIMARY  
SCHOOLS
  - (ii) FARM SCHOOLS
  - (iii) COMBINED  
SCHOOLS

# (iv) SECONDARY

## SCHOOLS

### (v) INTERMEDIA TE

### (vi) SCHOOLS





**ANNEXURE: F**

**BMMS AND**

**COSITING OF**

**SCHOOLS IN**

**FOUR REGIONS.**

- (i) BOPHIRIMA**
- (ii) CENTRAL**
- (iii) SOUTHERN**


# (iv) BOJANALA

## ANNEXURE: G

The logo for the South African History Archive (SAHA) is a circular emblem. It features a central illustration of a person on a horse, with two other figures in the background. The text "south african history archive" is written in a circular path around the central image. Below the main title, the acronym "SAHA" is visible.

# SCHOOLS IN THE NW DOE.

# ANNEXURE: H



# REGISTRATION OF 08/09 EDUCATION INFRASTRUCTURE PROJECTS ON LOCAL MUNICIPALITIES' INTERGRATED

# DEVELOPMENT PLANS (IDP)

