

Department of Education



Province of the Eastern Cape

INFRASTRUCTURE PLAN 2005 – 2014

2008/2009 Version – Final



Prepared by:
Directorate Facilities Management

Contact: Mr Duma Ncanywa
Tel: 040 608 4472
Fax: 040 608 4750
E-mail: nobuhle.kupa@edu.ecprov

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GLOSSARY OF ABBREVIATIONS

ABET	Adult Basic Education and Training
CES	Chief Education Specialist
CIDB	Construction Industry Development Board
DBSA	Development Bank of South Africa
DCES	Deputy Chief Education Specialist
DEAET	Department of Economic Affairs, Environment and Tourism
DHLGTA	Department of Housing, Local Government and Traditional Affairs
DMA	Department of Minerals Affairs
DoE	Department of Education
DoRA	Division of Revenue Act
DPW	Department of Public Works
DWAF	Department of Water Affairs and Forestry
EC	Eastern Cape
ECD	Early Childhood Development
EFMS	Education Facilities Management System
EMIS	Education Management Information Services
EPWP	Expanded Public Works Programme
FES	First Education Specialist
FET	Further Education and Training
GET	General Education and Training
HoD	Head of Department
ICT	Information and Communication Technology
IDIP	Infrastructure Delivery Improvement Programme
IDP	Integrated Development Plan
IDT	Independent Development Trust
IPIP	Infrastructure Programme Implementation Plan
IPMP	Infrastructure Programme Management Plan
JBCC	Joint Building Contracts Committee
LAIS	Learner Attainment Improvement Strategy
MEC	Member of Executive Council
MTEF	Medium Term Expenditure Framework
OBE	Outcomes Based Education
PIA	Programme Implementing Agent
PGDP	Provincial Growth and Development Plan
PMT	Programme Management Team
PRP	Physical Resource Planning
PSC	Provincial Steering Committee
PTC	Provincial Technical Committee
RCC	Regional Co-ordinating Committee
SDA	Service Delivery Agreement
SG	Superintendent-General
SGB	School Governing Body
SLA	Service Level Agreement
SNP	School Nutrition Programme
UPS	Uninterrupted Power Supply

CONTENTS

	<u>Page No.</u>
1. EXECUTIVE SUMMARY	1
2. INTRODUCTION	2
2.1 Background.....	2
2.1.1 Purpose of the Infrastructure Plan	2
2.1.2 Orientation.....	3
2.1.3 Strategic Departmental Goals.....	3
2.1.4 Relationship with Other Planning Documents.....	3
2.1.5 Role of Infrastructure Development in Education and its Contribution to Society	4
2.1.6 Constitution of Infrastructural Development: Holistic Approach.....	4
2.1.7 Features of an Ideal School.....	5
2.2 Infrastructure Ownership.....	5
2.2.1 Legislative Mandate.....	5
2.2.2 Scope.....	5
2.2.3 Key Stakeholders	6
2.3 Plan Framework.....	6
2.4 Planning Approach and Methodology.....	7
2.4.1 Process of Formulation.....	7
2.4.2 Proposed Reorganization of the Schooling System in the Eastern Cape and its Potential Impact on Infrastructure Planning and Budgeting	11
2.4.3 Level of Sophistication.....	11
3. LEVELS OF SERVICE	12
3.1 Norms and Standards	12
3.1.1 Classrooms	12
3.1.2 Administration Facilities	12
3.1.3 Specialist Facilities	12
3.1.4 Water Supply and Sanitation	13
3.1.5 Electricity.....	13
3.1.6 External Works	13
3.1.7 Space Norms (to be reviewed in context of proposed ideal school)	14
3.1.8 Life Cycle Costing.....	14
3.2 Current Levels of Service Provision	15
3.3 Desired Levels of Service.....	16
3.3.1 General and Further Education and Training (GET and FET Schools)	16
3.3.2 FET Colleges.....	17
3.3.3 Inclusive Schools (Special Needs).....	17
3.3.4 Curriculum Management and Development (OBE)	17
3.3.5 Adult Basic Education and Training (ABET).....	18
3.3.6 Nutrition Programme	18
3.3.7 Information and Communication Technology (ICT).....	18
3.3.8 Post Provisioning.....	18
3.3.9 HIV/AIDS.....	19
3.3.10 Early Childhood Development (ECD).....	19
3.3.11 Development of Nodal Areas	19
3.3.12 Rationalisation of small schools.....	19
3.3.13 Farm Schools	20

3.3.14 Sportsfields.....	20
3.3.15 District Offices	20
3.3.16 Maintenance.....	21
4. DETERMINATION OF NEEDS	22
4.1 Orientation	22
4.2 Demand Forecasting.....	22
4.2.1 Demographic Profile.....	22
4.3 Demand Projections.....	26
4.4 Demand Management.....	27
5. EXISTING INFRASTRUCTURE	28
5.1 Introduction	28
5.2 Shortages of Facilities (Backlogs)	28
5.3 Upgrading and Repairs	31
5.4 Summary and Spatial Representation	32
6. ASSET MANAGEMENT	37
6.1 Strategic Objectives	37
6.1 Routine Maintenance Plan	38
6.1.1 Maintenance Plan.....	38
6.1.2 Standards and Specifications	38
6.1.3 Summary of Future Costs.....	39
6.2 Renewal/Replacement Plan.....	39
6.2.1 Conventional Building Programme	39
6.2.2 Eradication of Mud and Unsafe Structures	39
6.2.3 Emergency Intervention.....	40
6.2.4 Water and Sanitation	40
6.2.5 Fencing	40
6.2.6 Electrification	40
6.3 Creation/Acquisition Plan	40
6.3.1 Selection Criteria	40
6.3.2 Standards and Specifications	41
6.3.3 Summary of Future Costs.....	41
6.3.4 Disposal Plan	41
6.3.5 Construction and Maintenance Plan	42
6.4 Disasters.....	42
7. FINANCIAL SUMMARY.....	43
7.1 Basis for Estimates/Key Assumptions	43
7.2 Valuation Forecasts/Backlog Implications	43
7.3 Indicative Budgets.....	45
7.4 Funding Strategy.....	45
7.5 Implementation Programme: 2007 - 2010	47
7.5.1 Budget Recovery Plan – 2007/2008	47
7.5.2 Project Management	47
7.5.3 Mud School Eradication.....	Error! Bookmark not defined.
7.5.4 Disaster/Emergency Schools.....	Error! Bookmark not defined.
7.5.5 Water and Sanitation	Error! Bookmark not defined.
7.5.6 Maintenance.....	Error! Bookmark not defined.

7.5.7	Electricity.....	Error! Bookmark not defined.
7.5.8	Fencing	Error! Bookmark not defined.
7.5.9	Overall Summary.....	Error! Bookmark not defined.
7.5.10	Implementation Programme 2008/09.....	Error! Bookmark not defined.
8.	ORGANISATIONAL AND SUPPORT PLAN	49
8.1.	Services Rendered By External Organisations:.....	Error! Bookmark not defined.
8.2	Organisational Arrangements.....	49
8.2.1	Contractual Arrangements.....	49
8.2.2	Implementation Management	51
8.2.3	Roles of the Parties	52
8.3	Human Resource Requirements	53
8.3.1	Required Internal Organisational Structure.....	53
8.3.2	Current Staffing Levels	54
8.3.3	Interim Capacitation.....	55
8.4	Systems and Procedures	57
8.4.1	Accounting/Financial System.....	57
8.4.2	Infrastructure Management System.....	57
8.4.3	Reporting System.....	58
8.5	Financial	58
8.5.1	Salary Budget.....	58
8.5.2	Upgrading and Maintaining EFMS.....	58
8.5.3	Outsourcing.....	58
8.5.4	Other	58
9.	MONITORING AND IMPROVEMENT OF PLAN.....	59
9.1	Performance Measures.....	59
9.2	Monitoring and Review Procedures.....	59
9.3	Improvement Programme.....	59

REFERENCES:

- Reference 1: Division of Revenue Act (Act 1 of 2007)
- Reference 2: South African Schools Act (Act 84 of 1996)
- Reference 3: Eastern Cape Department of Education Strategic Plan 2006/2007
- Reference 4: Design Guidelines for Provision of Physical Facilities (EC DoE 2005)

APPENDICES:

- Appendix 1: Basis & Assumptions for Cost Estimates

ANNEXURES:

- Annexure A: Capex Programme Project List for 2008/09 – 2010/2011

1. EXECUTIVE SUMMARY

In addressing quality teaching and learning, a complete focus needs to be placed on peace, prosperity, and welfare of the global human resources (safety and security; progression and success in life; access and fulfilment of basic needs).

To achieve this outcome, the Department has consciously engaged into the ten pillars of the Learner Attainment Improvement Strategy (LAIS). The enhancement of the ten pillars of LAIS, depends on the integration and successful implementation of the following three critical issues:

- Whole School Evaluation; (nine focal areas for a vibrant and functional school)
- Integrated Quality Management Systems with its twelve performance standards of for quality education; and
- Skills Development – (in implementation, people will identify their areas of weakness, develop Personal Growth Plans, and engage in development programmes that will enhance their job performance).

Although the school is a physical model of the futuristic ideal goal, it may always remain a misfit, when such is not embedded on the ideological thinking of the Government, and anchors its operation on the cornerstone thereof (ensuring that curriculum design, development and delivery propels the aspirations of the Government).

The school, therefore, is an agent of the community that transcends integration of individuals into a socio-economic environment that is user friendly, by incorporating development of diversified industrial skills.

The systems, controls and processes of this plan seek to put together a unified and comprehensive envisaged approach that involves all other Departments, Local Government, Business Sector and Community Based Organisations, to take an active part in integrating their development efforts for enhanced service delivery.

The golden thread in an ideal school is quality teaching and learning, which also demonstrates on the one hand, to be anchored on the theory of economic rent, of which input and yield are directly proportional to the distance travelled to work, and quality time spent on task, on the other. This concept calls for immediate intervention and integration of efforts with the District and Local Municipalities, as well as Business Sector in providing a secured cluster of low cost housing with water and electricity to attract rare and/or scarce skills in the most remote rural areas.

The analogy drawn from the shape of the South African flag, denotes the social strata that is defined by economic ability of three (3) communities:

- One floating behind the concealed Y-junction
- One above the upper funnel
- Another below the bottom funnel

The strategy of the Department of Education calls for an understanding that those living in the mainstream of economy should assist those stuck below the poverty level, struggling for survival.

2. INTRODUCTION

The Eastern Cape Department of Education has an infrastructure stock which comprises 6,302 schools, together with various other facilities such as colleges. These schools, many of which are old mud structure buildings, provide teaching spaces for just over 2,17million learners in the Province.

Over the past twelve years, the Department has made significant inroads into eradicating backlogs and improving physical conditions at schools throughout the Province, at a cost of some R6bn. There are, however, still substantial backlogs to be overcome. It is estimated that the cost of removing the classroom shortage, replacing mud structures, and providing water, sanitation, fencing and telephones to schools will amount to R42,79bn at today's costs. In addition, R4,03bn is required to address renovations, replacement, etc to bring existing schools up to an acceptable standard.

2.1 Background

The challenge for the ten year period to 2014 is to deal with these backlogs in the shortest possible time so that more funds can be allocated to maintenance, thereby ensuring that facilities are conducive to quality teaching and learning. Furthermore, the re-alignment of schools to conform to the national model of first stream Grade R – Grade 7 and a second stream Grade 8 – Grade 12 needs to be accommodated.

This is further complicated by the migration of learners within and out of the province. It is these challenges that the Infrastructure Plan sets out to meet.

The Department's infrastructure programme has also suffered a significant setback with the delays and re-structuring surrounding the audit of the infrastructure unit. The recovery of the infrastructure programme is thus a strong focal area of the 2008/09 version of the Infrastructure Plan.

2.1.1 Purpose of the Infrastructure Plan

This document represents the **first draft** of the **2008/2009 version** of the Eastern Cape Department of Education's Infrastructure Plan 2005 – 2014.

The purpose of the Infrastructure Plan is to set out the Department's philosophy, approach and plan of action for the provision and maintenance of educational infrastructure over the ten-year period 2005 – 2014. In so doing, it seeks to demonstrate responsible and transparent management, while at the same time communicating and justifying its funding requirements.

Based on National, Provincial and Departmental policies and directives, this Plan is intended to reflect a clear strategy for educational infrastructure provision in the Eastern Cape.

This plan is updated annually to ensure its currency for the implementation of the infrastructure programme each year. This is done in August of the preceding year to comply with the Division of Revenue Act (DoRA) (Reference 1).

2.1.2 Orientation

The quality of education depends to a large extent on integrated systems, planning and processes. A consequence of poor infrastructure is an environment that does not promote effective quality teaching and learning.

The primary objective of the Department's infrastructure programme thus is to provide infrastructure that enhances the quality of teaching and the learning environment, and restores the pride and dignity of learners, staff and the communities.

To achieve the expected service levels of Infrastructure Development, the Department has decided to sharpen its focus on infrastructure and to review its implementation strategy. The revised Infrastructure Plan is intended to integrate systems, processes and controls in order to restore good governance, and compliance with legislative requirements.

This document, including other infrastructural development initiatives, will serve as a framework for implementing the delivery strategy that will be used to provide guidance to all participants in the Programme.

2.1.3 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:

- Replacement of mud and other inadequate structures, or provision of alternative accommodation
- Elimination of the backlog in classroom accommodation and other facilities within a reasonable timeframe
- Re-alignment of schools and re-organisation of small schools that are no longer sustainable, or which are under-utilised.
- Improved infrastructure planning, with sharper focus on poorer areas and nodal developments, together with more emphasis on life cycle planning
- Provision of infrastructure that complements and promotes the relevant curriculum, especially regarding outcomes based education
- Promoting the principles of Government policy initiatives (such as the PGDP, EPWP, etc) as far and as effectively as possible
- 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.

2.1.4 Relationship with Other Planning Documents

This Infrastructure Plan defines the infrastructure solutions proposed to support the service delivery requirements as defined in the Department's Strategic Plan. It is thus very closely aligned to the Strategic Plan, but also reflects the objectives of the:

- Departmental Performance Management Plan
- Departmental Operational Plan
- District Municipalities IDPs

All the above documents, in turn reflect the principles and priorities of the PGDP, and this Infrastructure Plan, therefore, embraces these in its strategies and programmes.

The inputs on which this Infrastructure Plan is based are shown graphically and further described in Section 2.4.1.1.

There are a number of internal Facilities Management documents which affect the planning process, and are thus referred to and consulted during the process, most significantly the Design Guidelines for Provision of Physical Facilities (Reference 4).

2.1.5 Role of Infrastructure Development in Education and its Contribution to Society

Infrastructural architecture is a state of the arts that:

- Reflects the social aspect of society
- Defines the futuristic outlook of society, its soulfulness, serenity and spirituality
- Epitomizes the identity of society, and promotes its public image
- Defines the social strata in society, and has a moulding effect in defining one's identity

The management of infrastructure should consider the aspirations of society, and should attract the interest of the external world.

2.1.6 Constitution of Infrastructural Development: Holistic Approach

Education and development mean finding oneself; identifying the environment within which one lives, and the resources that can be utilized to one's benefit. The ultimate goal is about freely integrating communities into the main stream economy of the country.

It goes beyond individual and/or organisational operations to the building of bridges and, establishing sound relations between the stakeholders that perform similar and/or related, including complementary functions, hence the following elements:

- Interdepartmental relations, including District and Local Municipalities
- Schools and office buildings
- Access roads and bridges
- Schools and office furniture
- Provision of accommodation and/or residential facilities

- Safety and security
- Water and electricity
- Tele-communication
- Information and communication technology

2.1.7 Features of an Ideal School

As an agent, working with borrowed tool (the child) from the community, the school:

- is a centre of excellence providing shared facilities for its members and/or cluster of schools or groupings
- consists of structures that cater for a holistic approach in respect of the needs for people development

Its ideal structures must meet the requirements of the curriculum, including:

- the provision of rare and/or scarce skills
- adequate facilities, including breaking through the digital divide

The outlook of an ideal school should restore the dignity, ownership, pride and patriotic spirit of the community itself.

2.2 Infrastructure Ownership

2.2.1 Legislative Mandate

The Department's mandate to provide infrastructure learning is embedded in the South African Schools Act (Reference 2):

- Clause 3(1) states that: "The MEC must ensure that there are enough school places so that every child who lives in his/her Province can attend school ..."
- Clause 12(1) states that: "The MEC must provide public schools for education of learners out of funds appropriated for this purpose by the provincial legislature."

2.2.2 Scope

This Infrastructure Plan covers the planning and management of all fixed physical infrastructure that is the responsibility of the Department of Education (DoE) in the province. This includes all government owned GET schools, FET schools and FET colleges, and provides for all buildings and services (such as water, sanitation and electricity) within the relevant premises.

Although district offices fall under the ambit of the Department of Public Works, these are also included in this Infrastructure Plan to ensure that cognisance is taken of their planning requirements, where there are no shared social needs facilities in a particular cluster.

2.2.3 Key Stakeholders

The Department of Education (DoE) owns this Plan: the senior management whose strategic objectives it must strive to meet, the relevant sections and Districts of the DoE who provide information and whose infrastructure requirements it must reflect, and the Facilities Management unit who is responsible for its implementation.

The key stakeholders in this Plan are:

- The communities, schools, SGBs, organised labour and learners of the province who are the ultimate beneficiaries and users of the infrastructure.
- The Department of Public Works and Implementing Agents whom the DoE engages to deliver the services
- District and Local Municipalities to ensure the integration of planning and service provision
- Other Provincial and National Government Departments, as well as state entities and state owned enterprises, who are also engaged in the delivery of physical infrastructure.
- The business sector and other potential donors who may wish to become involved (or have an interest) in the delivery of infrastructure to schools

2.3 Plan Framework

The format adopted for this Infrastructure Plan is as follows:

- Section 2 gives the background to the Infrastructure Plan, its objectives, scope, format and process of formulation
- Section 3 briefly describes the Department's norms and standards, current levels of infrastructure service provision, and the ideal levels of service
- Section 4 sets out the expected demand for services, based on community needs and demographic profiles and trends, and indicates how this demand is managed
- Section 5 describes the existing infrastructure in terms of physical parameters, capacity (and thus backlogs), condition, spatial distribution and value. It also quantifies the backlogs in new facilities, rehabilitation and maintenance
- Section 6 explains the departments approach to the various elements of infrastructure asset management

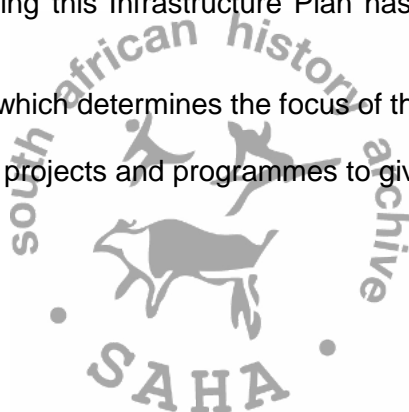
- Section 7 summarises the financial implications of the Plan, as well as the basis for deriving the cost estimates and expenditure projections as set out in the schedules appended to the Plan
- Section 8 describes the organisational and contractual arrangements necessary for the implementation of the Plan. It also refers to the need for any additional capacity requirements, and the implications of not providing for this
- Finally, Section 9 indicates how performance against the Plan will be monitored, as well as how the Plan itself will be updated and amended to improve its accuracy and confidence in it
- In an annexure to the Plan is a schedule of all the proposed projects for the 2008/09-2010/11 MTEF period, together with the scope, cost estimates and projected annual cashflow thereof.

2.4 Planning Approach and Methodology

2.4.1 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



2.4.1.1 Strategic Input

The first component, strategic input, is shown graphically in Figure 2.4.1.1 hereunder:

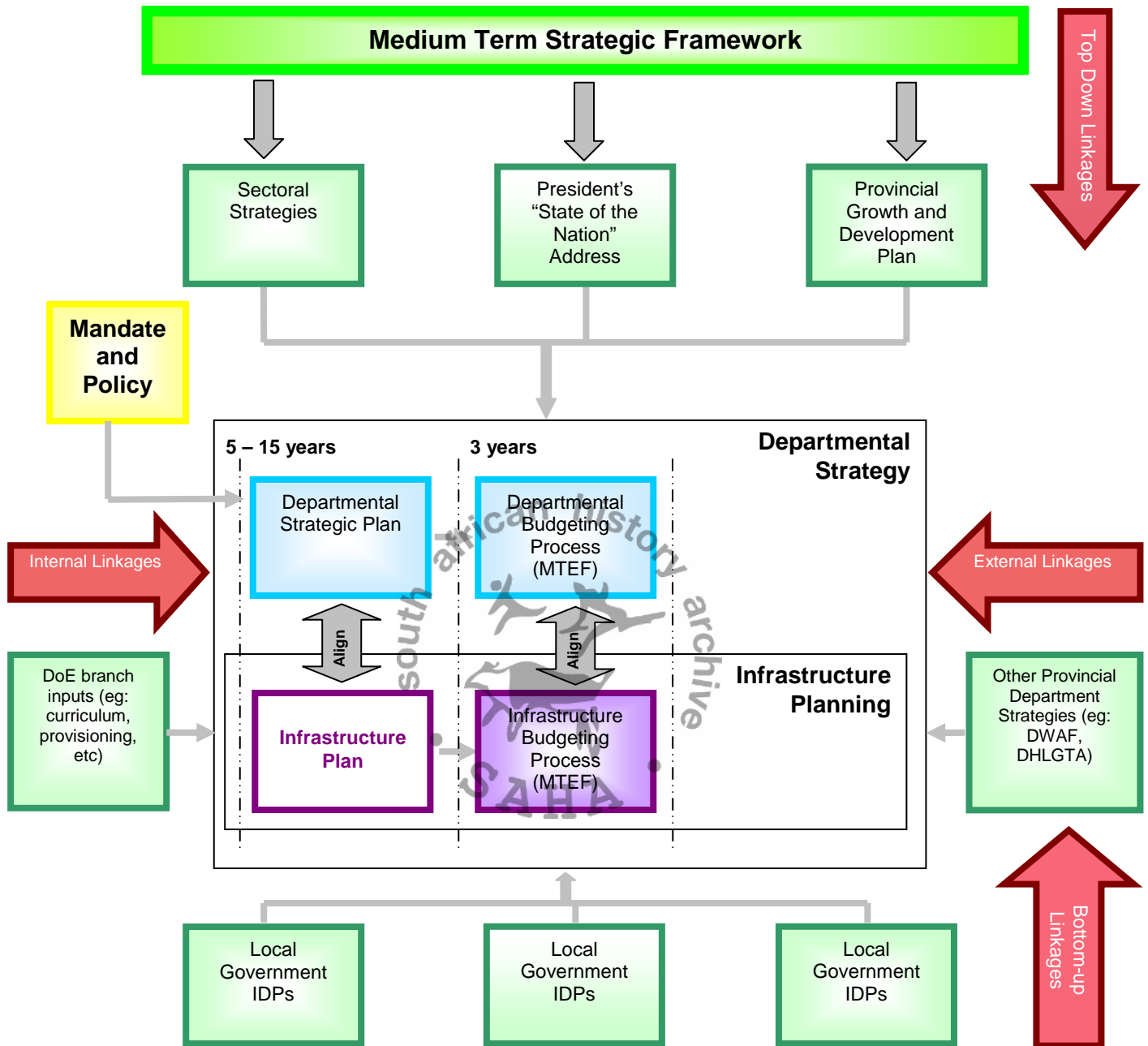


Figure 2.4.1.1: Strategic Input

The main sources of information for the medium term strategic framework are the following:

- President’s State of the Nation Address
- National Department of Education’s Strategic Priorities
- Premier’s State of the Province Address
- Provincial Growth and Development Plan

- Eastern Cape Spatial Development Plan
- Budget Speeches by the National Minister and Provincial MEC for Education
- Eastern Cape Department of Education Strategic Plan

The main external linkages are the strategic plans of other provincial Departments such as Housing, Local Government and Traditional Affairs (DHLGTA), Water Affairs and Forestry (DAAF) and Mineral and Energy Affairs (DMA), Economic Affairs, Environment and Tourism (DEAET), etc.

The internal linkages refer to the necessary co-ordination with other sections within the Department of Education to ensure that physical infrastructure programmes take cognisance of their strategic requirements, such as in the fields of provisioning, curriculum planning, etc.

The main bottom-up linkages are local and district municipality Integrated Development Plans (IDPs), and then obviously the inputs from the Districts on the priorities (see below).

Based on these inputs, and taking into account the physical conditions of the Eastern Cape and school infrastructure, the Department has set itself a number of strategic priorities. These are described in Section 3.3.1 hereof.

2.4.1.2 Project Identification

The second component, project identification, is shown graphically in Figure 2.4.1.2, where it comprises the first three steps.

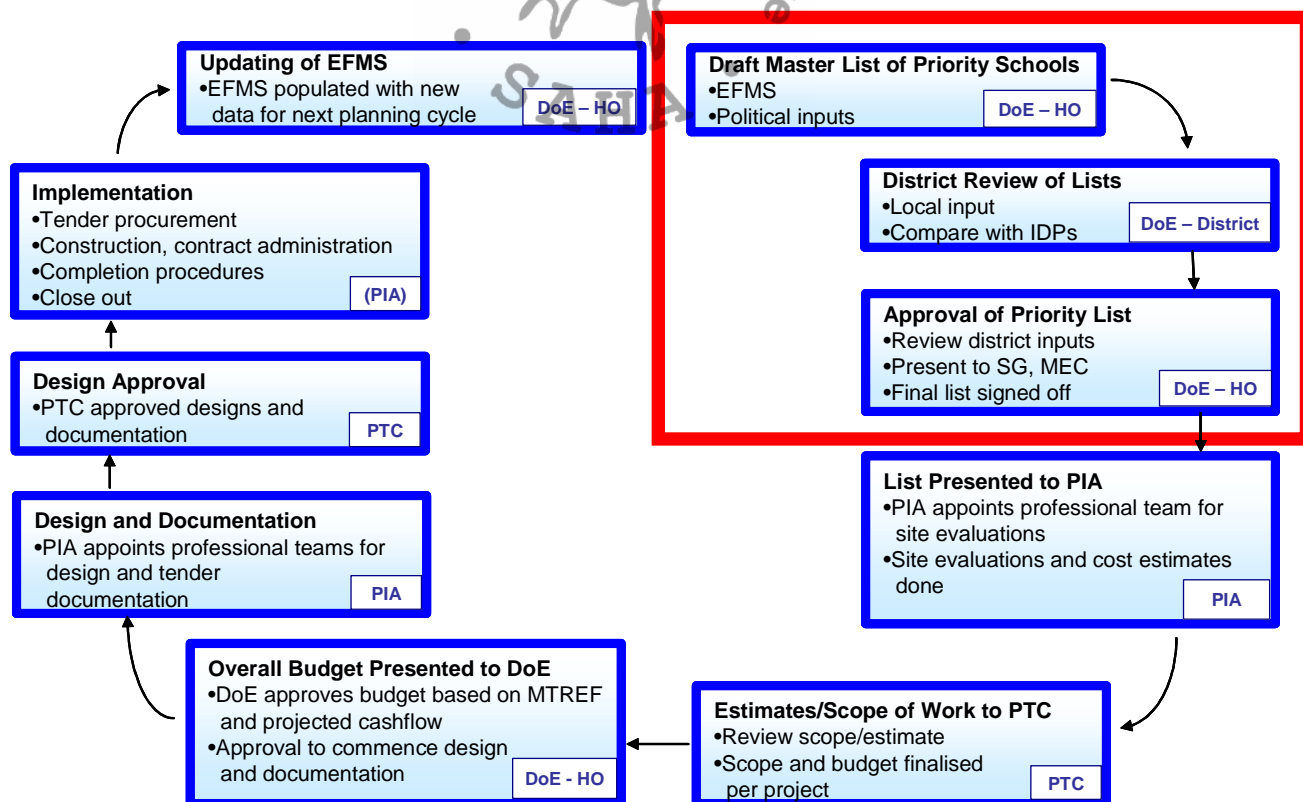


Figure 2.4.1.2: Project Identification

The criteria used for identification and prioritisation of projects are developed from the strategic inputs described earlier in this section. These are discussed in detail in Section 3 of this Plan.

This process referred to in Figure 2.4.1.2 is briefly described hereunder:

- The EFMS Manual sets out criteria for identifying and prioritising facilities to be provided, taking into consideration a Facility Condition Index and a Socio Economic Index. The Facility Condition Index is the ratio of renovation cost to replacement cost. The Socio Economic Index has four main criteria, viz.:
 - Income level
 - Literacy rate
 - Dependency rate
 - Access to water
- The EFMS, or current baseline documentation, is used to identify and prioritise projects on an agreed weighting basis (there are a number of criteria that can be used, the main areas for classroom provision being shortage of classrooms (ie: overcrowding) and condition of existing facilities).
- A District system generated draft priority list is compiled using EFMS and EMIS data, as well as strategic/policy input as described earlier.
- This list is then workshopped with stakeholders in the Districts to confirm the basis for prioritisation and the sources of data.
- The District then finalises its list, ensuring that the provision of facilities is fairly distributed throughout all the circuits. The District Director signs off the list and submits this to Head Office through the responsible Chief Directorate
- The Department then compiles the final list based on the feedback from the Districts.
- The list is then sent to the SG and MEC for final approval, which includes submission to the Standing Committee on Education.

2.4.1.3 Timeframes

The department acknowledges that the process of infrastructure delivery is complex and protracted, and it is therefore necessary to plan well in advance in order to allow sufficient lead time before construction is required to commence. In this regard the Department subscribes to the Infrastructure Alignment Model as approved by Cabinet on 21 February 2007, and commits itself to planning further in advance in order to comply. This model is shown graphically in the figure 2.4.1.3 below:

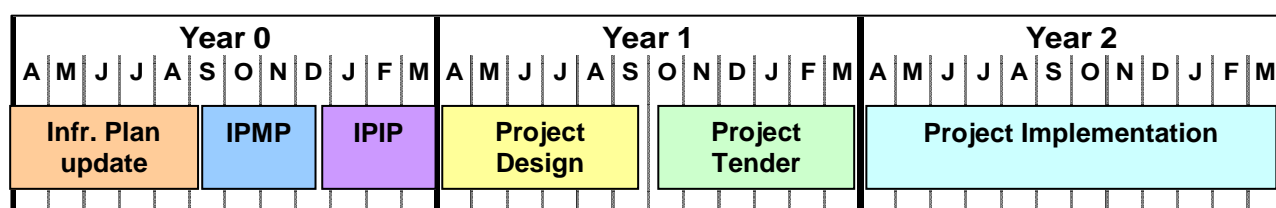


Figure 2.4.1.3

To date the Department has not been in a position to plan 2 year's ahead of delivery, as is now required, but is committed to improving its planning processes as the benefits thereof are clearly evident. To this end, the Department's participation in the IDIP programme will help to enhance procedures and meet this goal.

2.4.2 Proposed Reorganization of the Schooling System in the Eastern Cape and its Potential Impact on Infrastructure Planning and Budgeting

The *Transformation Agenda* highlights the fact that the former Transkei homeland had been the most deprived region in South Africa and had been severely under-resourced prior to 1994, and that post-1994 insufficient effort was made to effect redress in this region.

The EC DoE also inherited an inefficient schooling system from especially the former Transkei Education Department, which consists of primary, combined (junior secondary schools from Grade R to Grade 9) and senior secondary schools (from Grade 10 to 12) and which also resulted in too many small schools.

Realising that it is imperative to incorporate efficiency gains derived from optimal throughput in the education system, there is a need to eliminate the (high) drop out and repetition rates and over- and under-aged learners.

2.4.3 Level of Sophistication

The Dept has developed an own in-house Education Facilities Management System (EFMS), which has been established for:

- Programme management (currently being operationalised)
- Property register
- Facilities planning
- Maintenance planning
- Property management

The EFMS is being reviewed to optimise its utilisation in the reporting and programme management and communication. A procedure will also be put in place for the District offices to utilise the system optimally and keep information up to date. The Department is committed to the establishment of sufficient dedicated capacity at District level.

The National Department of Education commissioned the National Education Information Management System (NEIMS), through which physical asset data must be reconciled with EFMS.

This Plan will be updated accordingly to adjust to Policy development initiatives as they are introduced. Progressive elaboration will also apply to cost estimates contained herein. Currently these reflect prices valid as in July 2007.

3. LEVELS OF SERVICE

3.1 Norms and Standards

To ensure the cost effective and equitable provision of facilities, the Department has over time developed norms and standards (i.e. desired levels of service) for infrastructural provisioning. These have been captured into a Design Manual for School Building in the Eastern Cape, which is available on the Department's website, as summarised hereunder.

3.1.1 Classrooms

These will be provided on the following basis:

- Grade R : To be verified
- Primary schools (Grades 1 – 7) : One classroom for every 40 (forty) learners
- Secondary schools (Grades 8 – 12) : One classroom for every 35 (thirty-five) learners
- Learners with Special Education Needs : 15 learners (to be verified)

The programme provides for refurbishing of existing classrooms, and building new classrooms where necessary, to meet these norms. Mud structure classrooms will, however, be replaced.

3.1.2 Administration Facilities

Norms for provision of administration facilities are as follows:

- Up to seven classrooms: Only a principal's office with store room is provided
- Up to fourteen classrooms: A staffroom is added to the above
- Up to twenty four classrooms: An additional space for a HoD is provided
- For thirty classrooms and more: A maximum of four HoD cubicles are provided
- Sick Bay

3.1.3 Specialist Facilities

Where justifiable in terms of learner numbers and curriculum, the following specialist facilities will be provided at secondary schools:

- Computer laboratory and store room
- Science laboratory (senior secondary only)

- Home economics
- Library/resource centre (note where there is a fully fledged computer laboratory the traditional library space may not be necessary). Refer to content.

3.1.4 Water Supply and Sanitation

All schools will be provided with appropriate facilities for clean drinking water where running water is available and adequate. In the absence of such, rainwater tanks will be provided at a rate of four tanks per block.

All schools are to be provided with adequate sanitation for both learners and educators on the following basis:

- Learners: two toilets per classroom (one male and one female)
- Educators: one toilet per sex per five classrooms
- At least one unisex toilet must be provided for physically challenged users

Where waterborne sanitation is available, this is the preferred option. Where there is no waterborne sanitation, the following options will be considered:

- Ventilated improved pit latrines (preferred, but note that design must take cognisance of groundwater protocols)
- Septic tanks and french drains (soil and groundwater conditions permitting)
- Conservancy tanks (if facilities are available for emptying these regularly)

3.1.5 Electricity

All schools will be electrified where electricity supply is available. Where there is no electricity as yet, but the school is planned for inclusion in the Eskom grid, conduits will be provided and these blanked off at switch and plug points. (If the school is outside the Eskom grid, it will be included in the Department's non-grid electrification programme. This provides for essential electrification such as lighting). Classroom electrification requirements are:

- Two plug points will be provided in each classroom, and one in each office
- Lighting should provide at least 300 lux in all teaching spaces

3.1.6 External Works

Concrete aprons and dish drains should be provided creatively as to divert stormwater away from causing erosion around buildings.

Open air assembly areas or courtyards are to be paved and wind protection walls provided.

Covered walkways must be provided between classroom blocks and other facilities.

Parking area sufficient for at least x vehicles must be provided.

In locations where there are no community sporting facilities available, the school should be provided with a levelled playing area of approximately 500 square meters.

Each school should be provided with two strategically placed flagpoles, and a name plaque or founding stone.

All school properties must be properly fenced off and have lockable gates. Security fencing should be provided around the buildings, including toilets, and stock fencing around the rest of the property. Security fencing should be appropriate and at least 20m from the classrooms.

At least 1% of the building cost should be allowed for landscaping and planting of indigenous trees.

3.1.7 Space Norms (to be reviewed in context of proposed ideal school)

Classrooms:	50 m ²
Computer laboratory:	60 m ²
Computer storeroom:	15 m ²
Science laboratory:	60 m ²
Home economics:	60 m ²
Library/resource centre:	60 m ²
Principal's office:	15 m ²
Kitchenette:	8 m ²
HoD cubicle:	8 m ²
Records room:	0,5 m ² per classroom, minimum of 9 m ²
Staffroom:	1,5 m ² per classroom, minimum of 15 m ²
Reception classroom:	60 m ²
Hall	Instructional hall (2 classrooms with foldable partition), as well as Assembly hall at all schools with enrolment more than 500,

3.1.8 Life Cycle Costing

It is important to note that life cycle costing is an important factor in the determination of standards and levels of service. The entire life cycle costs need to be carried through to the expenditure projections in this Plan. For reference it is noted that life cycle costs comprise the following:

- Feasibility study
- Design and procurement
- Construction
- Commissioning
- Maintenance

- Rehabilitation
- Disposal (where applicable)

3.2 Current Levels of Service Provision

The current levels of service show a huge deviation from the existing Departmental norms and standards. This is particularly so in the eastern half of the Province where rural schools in the former homeland areas predominate.

An analysis has been undertaken whereby the number of facilities in each District has been compared with the number of learners, in terms of which the undersupply has been quantified. This is summarised in Table 3.2.1 below. This table calculates the capacity of the facilities at each school in the District and compares this with the enrolment at that particular school. The undersupply is expressed as a percentage, which is effectively the number of students that can be accommodated divided by the total number of pupils per District, but calculated on a school by school basis.

District	Sum of Enrolment Total	Learners	Learners without minimum norm Toilets	Learners without minimum norm Resource Centre (Library)	Learners without minimum norm Computer Lab	Learners without minimum norm Science Laboratory	Learners Without Electricity	Learners Not Piped Water	Learners Schools without Fencing
BUTTERWORTH	111,731	28,951	24,187	81,291	82,703	12,673	27,386	86,531	76,133
COFIMVABA	79,931	22,332	14,169	57,778	54,023	7,561	21,044	63,938	58,289
CRADOCK	25,937	5,124	1,455	13,002	18,387	1,402	1,689	5,181	10,762
DUTYWA	116,589	42,826	27,377	93,195	91,015	9,582	32,201	100,837	83,638
EAST LONDON	135,079	28,345	17,019	67,966	91,846	16,355	11,559	20,569	49,950
FORT BEAUFORT	46,062	5,643	5,742	21,060	20,306	3,252	4,320	16,587	28,610
GRAAFF-REINET	25,948	3,900	1,958	7,198	16,057	167	557	2,367	12,676
GRAHAMSTOWN	27,266	3,246	2,429	12,900	15,901	1,338	610	2,081	8,206
KING WILLIAMS TOWN	111,460	18,806	13,650	60,683	63,663	10,202	8,687	34,139	64,756
LADY FRERE	44,452	9,901	4,775	27,002	27,534	4,521	10,034	26,200	29,696
LIBODE	178,436	85,315	49,196	156,804	154,829	19,402	50,250	147,307	121,148
LUSIKISIKI	166,675	85,512	52,174	141,445	141,087	18,820	70,049	145,603	115,325
MALUTI	76,861	32,722	20,942	60,204	61,377	9,876	16,302	45,993	50,776
MBIZANA	117,380	65,514	19,767	102,605	101,951	14,020	48,659	108,559	82,603
MT FLETCHER	54,289	18,099	9,360	38,083	37,593	6,407	17,064	41,738	35,382
MT FRERE	85,414	33,362	12,477	68,513	69,553	10,277	33,715	57,251	55,702
MTHATA	157,233	70,016	37,529	131,202	131,422	19,949	30,813	114,858	87,414
NGCOBO	79,309	31,593	23,960	59,726	59,529	7,076	20,837	57,979	51,455
PORT ELIZABETH	172,869	28,079	12,340	73,347	106,884	14,657	1,107	12,524	76,997
QUEENSTOWN	62,771	14,981	6,650	36,884	40,204	5,291	4,673	17,966	29,068
QUMBU	80,245	29,180	19,896	60,851	61,011	8,295	25,890	68,311	49,914
STERKSPRUIT	64,095	15,297	10,096	42,409	43,314	7,262	5,027	24,482	39,762
UITENHAGE	82,083	16,206	8,818	35,820	49,156	4,964	2,123	7,897	30,571
Grand Total	2,102,115	694,950	395,959	1,449,968	1,539,445	213,049	444,596	1,208,849	1,248,833
Percentage of learners with sub minimum access to facilities		33%	19%	69%	73%	10%	21%	58%	59%

From the table above it is clear that the levels of undersupply are substantial. Even very basic infrastructure like classrooms and waster & sanitation is woefully inadequate.

3.3 Desired Levels of Service

The strategic priorities of the Department are based on the policies and guidelines described in Section 3.1, as applied to the physical conditions of the Province and its schools.

The Department's strategic priorities are the following:

- Replacement of mud structures and unsafe schools
- Elimination of classroom and other backlogs (ie: shortage of facilities)
- Adequate water supply and sanitation at all schools
- Shortage of specialist facilities (eg: laboratories, libraries, e-learning facilities)
- Learning areas for children with special needs, ie: special schools and appropriate facilities at normal schools
- Re- alignment of school grades and re-organisation of small and under-utilised schools, especially farm schools, and the concomitant issues of hostels and transport
- Development of nodal areas, and provision of education infrastructure for such areas
- Scholar transport
- Utilisation of old government buildings
- Life cycle planning with growing emphasis on maintenance of infrastructure

While the increasingly technological world is calling for e-learning facilities and science laboratories, there are still thousands of learners being taught in mud structures and other unsafe environments.

3.3.1 General and Further Education and Training (GET and FET Schools)

The Department is moving away from the current practice of providing only classrooms and/or facilities without equipment, to the entire concept of an ideal school.

Central to an ideal school are landscaping and greening which form part of all the components described below.

An ideal layout will define the flow of activities taking place in a teaching and learning environment, setting out the requirements of the following constituent components:

- instructional classroom space, with administration block

- multi-media centre with assembly / instructional hall & technology unit
- sports and recreational grounds
- school garden

The details and costing hereof are being determined, and will be presented at a later stage. Currently the Department is prioritising classroom and administration space, and will progressively realise the ideal requirements in a phased approach.

3.3.2 FET Colleges

To attain the desired increased enrolment of 100 000 students by 2014, there is a growing need to go beyond the re-capitalisation process of FET Colleges to staff development in order to uphold the vision and sustainability of these institutions.

A sharper focus from these institutions must be on alleviation of poverty and unemployment in the neighbouring communities, through portable skills transfer. Amongst the benefits thereof is the diversified production of goods and services (e.g. school furniture) to be used by the Department.

3.3.3 Inclusive Schools (Special Needs)

In terms of White Paper 6 (Building an Inclusive Education and Training System), the Department is committed to providing infrastructure that is functionally and inclusively upgraded to address physical barriers to learning in schools.

These include:

- Accessible entrances for wheelchairs, as well as ramps
- Textured floors to assist blind learners identify specific learning areas
- Adequate lighting and colour contrasts to assist partially sighted learners
- Height of work surfaces and size of classrooms to facilitate use by learners in wheelchairs
- Apply the Full Service School Specification in infrastructural design

In addressing the critical needs of inclusive education the Department is currently in a pilot phase of a National Programme that will seek to address the concept of a full-service school, which must be taken forward by the Department.

3.3.4 Curriculum Management and Development (OBE)

The establishment of cluster centres of excellence.

3.3.5 Adult Basic Education and Training (ABET)

For the identification and provisioning of infrastructural facilities, FET Colleges are central – in line with poverty and unemployment alleviation.

FET colleges must be encouraged form strong links with technical high schools to act as satellite ABET campuses in their catchment areas.

In areas not covered by FET colleges and technical schools, there is a need to identify facilities resembling the concept of an ideal school and / or centres of excellence in order to break through the digital divide.

3.3.6 Nutrition Programme

In line with the concept of an ideal school, the Department of Education will:

- link up with Departments of Agriculture, Health and Social Development for establishing food gardens for sustainability of the School Nutrition Programme
- establish in all primary schools a covered eating area with storage, preparation area (initially a kitchenette) and water facilities (hand and dish washing)
- create space for document management and database, since the administration of the SNP involves an immense amount of paperwork

3.3.7 Information and Communication Technology (ICT)

In line with the concept of an ideal school, the Department will provide a computer network, air conditioning, and uninterrupted power supply (UPS) in all schools for connectivity and ICT training.

For good governance and administration all District offices' systems must be reviewed for upgrading and provisioning of reliable similar connectivity, including consideration of installing stand-by generators.

End users must be trained in this regard.

3.3.8 Post Provisioning

The Department will:

- fix up the scholar transport distribution system to benefit only deserving learners wherein the learner walks a distance of more than 5km each day without any closer school provided
- ensure the regulation of admission of learners to schools to avert negative impact on neighbouring schools and diseconomies of scale in terms of sound management and administration, since there must be a reasonable number of staff under a manager (span of control)

- put on hold all classroom additions, subject to review in 2010, except in highly industrialized/urbanized areas, so as to deal with mud and inadequate structures
- halt renovations of all recently built schools past 7 years, as they should maintain upkeep as per NSF budget allocation
- merge under capacity schools and integrate their management with that of overcrowded ones to relieve pressure thereon
- develop schools towards an ideal model, by adding components of centres of excellence
- consider systematic relief of pressure on overcrowded and under capacity schools, and tap on scholar transport, whenever necessary

3.3.9 HIV/AIDS

Infrastructure needs to accommodate HIV/AIDS strategies are unlikely to require any additional facilities over and above those provided for school nutrition, and the provision of a sick bay as part of the administration block.

3.3.10 Early Childhood Development (ECD)

White Paper 5 requires that all primary schools have a Grade R facility attached by 2014. The Department would like to achieve this by accelerating delivery up to 1,000 (Confirm with Mrs Nongogo) schools per year.

The Department is currently phasing in Grade R facilities at all primary schools, and Grade R facilities form part of all infrastructure plans.

3.3.11 Development of Nodal Areas

In line with stated Government policy, the Department gives particular consideration to provision of educational facilities in the designated nodal areas, so as to ensure their adequacy to meet population needs.

This is taken into account during prioritisation exercises, whilst at the same time giving due consideration to demographic trends. Refer to the attached prioritised list of projects.

3.3.12 Rationalisation of small schools

There is a close link between rationalisation of schools and post provisioning.

The Eastern Cape is characterised by a prevalence of small schools (less than 120 learners), mainly due to the uneven topography which also handicaps accessibility, with the number of educators not meeting the requirements of the curriculum for effective teaching and learning.

This is, however, a complex process requiring complete transformation in the following areas:

- Realignment of schools
- Establishment of uniform standards
- Better management and administration (GET and FET bands)
- Proper implementation of norms and standards
- Effective governance, monitoring and control
- Effective curriculum implementation and provisioning

In the interim the Department will only provide mobile structures where needed in such schools, restricting admissions up to Grade 3, and merge under capacity schools and integrate their management with that of overcrowded ones to relieve pressure thereon.

3.3.13 Farm Schools

The Department must enter into Section 14 agreements with farm owners.

The Department is committed to providing mobile structures at such schools where the need exists.

3.3.14 Sportsfields

In line with concept of an ideal school, the Department will:

- establish sportsfields at all schools according their sizes and type
- link up with Local Government; Arts, Sports & Culture; and DWAF for development of recreational facilities, as well as Environmental & Economic Affairs for the promotion of greening and horticulture
- provide sports facilities progressively on the basis of determined District priorities, but taking cognisance of site conditions and budget availability since the construction of such is a costly exercise

3.3.15 District Offices

District offices fall under the ambit of the Department of Public Works wherein facilities are shared by the social needs cluster departments, and this is the case in only 6 of the 23 Districts.

Wherein such facilities are free standing, the user department carries the full cost, as is the case with 7 of the remaining that have reasonable facilities, while the rest need urgent attention.

Almost 20 of the Districts have vacancy rates currently standing at more than 50%, after the recent adjustment thereof from the previous average of 68%, thus putting pressure on the provision of office space.

For good governance and proper administration, document management and safe record keeping, as well as learner assessment records are at serious risk due to absence of proper registries and strong rooms.

District offices' systems must be reviewed for upgrading and provisioning of reliable similar connectivity, including consideration of installing stand-by generators.

3.3.16 Maintenance

The Department acknowledges that, to maintain the value of its physical assets, it needs to budget sufficient funds for this purpose. Industry norms indicate that an annual budget of 2% of the replacement value of the building should be made available for its maintenance. The replacement value of the Department's building assets is currently estimated at R34,4bn. This would imply an annual maintenance budget requirement of R688m, which is the same order of magnitude as the entire capex budget.

Clearly this is a situation that needs to be addressed urgently. However, in the light of the existing backlogs, it is difficult to justify the commitment of such substantial amounts to maintenance. The Department will therefore:

- Halt renovations of all recently built schools during the past 7 years, as they should maintain upkeep, as per NSF budget allocation
- Cut down on major renovations and increase maintenance to 10% of the total budget, and prioritize 10 schools per Financial Year for continuous upkeep of all facilities

4. DETERMINATION OF NEEDS

4.1 Orientation

It is important that this section of the Infrastructure Plan is read in the context of the situation in the Eastern Cape. There is, however, internal migration from rural to urban areas. In almost all cases, the provision of infrastructure has been about replacement or additions to existing schools.

The factors influencing demand are identified as follows:

- Quality of infrastructure versus effective teaching and learning
- Migration trends versus nodal points of developments
- Industrial development versus population dynamics
- Rationalisation of schools versus availability of educators
- Government policy development initiatives

4.2 Demand Forecasting

4.2.1 Demographic Profile

4.2.1.1 Total Population

According to the 2001 Population Census, of the 44.8 million people living in South Africa, 14% or some 6.4 million lived in the Eastern Cape. This represents a significant decrease in the relative share of the South African population accounted for by the Eastern Cape in 1996, which was 15.5%. Overall, the population of the Eastern Cape grew by just 134000 from 1996 to 2001, an increase of 2.1%.

The demand for education has remained relatively stable during this period and there is unlikely to be a need to build new schools to meet new demographic demand. (This does not detract from an ongoing need to address existing backlogs and, in some cases, to build new schools to improve access to education). A challenge for the education system is to improve access to schooling, more especially to secondary and further education and training facilities for the high number of non-urban learners.

The estimated distribution of total population by education district for the period 1996 and 2001 is shown in the table below.

DISTRICT	1996	2001	% GROWTH (1996 – 2001)
Bizana	235,520	245,419	4.2%
Butterworth	288,660	287,770	-0.3%
Cofimvaba	207,432	194,245	-6.4%
Cradock	92,972	92,916	-0.1%
East London	540,188	562,111	4.1%
Engcobo	199,218	202,422	1.6%
Fort Beaufort	167,871	153,478	-8.6%
Graaff-Reinet	109,711	109,146	-0.5%
Grahamstown	123,637	130,021	5.2%
Idutywa	243,744	253,379	4.0%
King Williams Town	413,410	407,532	-1.4%
Lady Frere	125,243	115,935	-7.4%
Libode	407,298	427,397	4.9%
Lusikisiki	369,517	391,766	6.0%
Maluti	164,751	147,104	-10.7%
Mt Fletcher	134,635	137,581	2.2%
Mr Frere	214,006	228,999	7.0%
Port Elizabeth	769,639	799,821	3.9%
Queenstown	198,169	204,784	3.3%
Qumbu	194,392	196,674	1.2%
Sterkspruit	191,999	203,775	6.1%
Uitenhage	336,062	355,024	5.6%
Mthatha	394,626	415,227	5.2%

Table 4.2.1: Distribution of Total Population by Education District

Table 4.2.1 shows population growth that occurred between the two censuses by district for the period 1996 to 2001. This is an important indicator of future demand for schooling and points to the need for new school construction and, in cases of population decline, for rationalisation.

It is important to note that many of the identified high-growth districts are located in more peripheral parts of the Province, which traditionally have been under-served in terms of education. Many are facing severe physical infrastructure backlogs and this presents additional challenges for the Department, especially if a legacy of poor provision is coincident with rising demand for education due to population growth.

4.2.1.2 Population for School-going Age (7 – 18 years)

The Eastern Cape has one of the most “youthful” populations of all the Provinces. Nearly half of its population (47%) are below the age of 19 (see figure 4.1.2 below). By way of comparison, this figure is only 30% in Gauteng. This means that the demand for education will remain high. In the case of the Eastern Cape 15% of the population had yet to enter school in 2001.

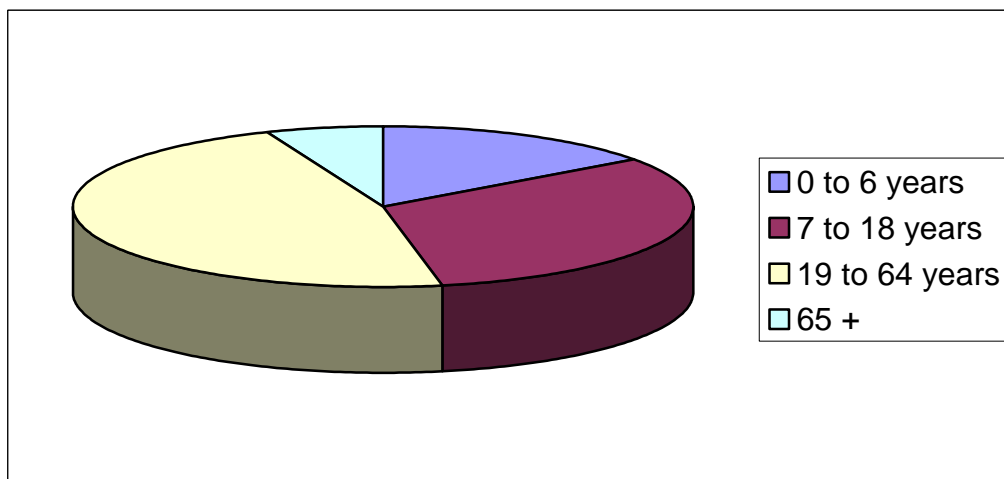


Figure 4.2.2: Distribution of Population by Age Group

An alternative way of looking at the school-going population is in terms of what proportion of the total district population they represent (see table 4.2.2 below). Districts with relatively high proportions of 7 to 18 year olds indicate growing demand for education and future pressure on existing school facilities. They also indicate areas with high numbers of dependents.

District	Total Population aged 7 – 18 (1996)	Total Population aged 7-18 (2001)	% of Total Population aged 7 – 18 (2001)
Bizana	83,468	92,999	38%
Butterworth	101,192	104,111	36%
Cofimvaba	77,959	74,838	39%
Cradock	27,714	27,475	30%
East London	134,018	139,771	25%
Engcobo	71,951	75,672	37%
Fort Beaufort	50,690	45,181	29%
Graaff-Reinet	31,605	29,227	27%
Grahamstown	31,070	32,351	25%
Idutywa	86,421	94,026	37%
King Williams Town	127,742	122,661	30%
Lady Frere	47,505	43,719	38%
Libode	140,424	159,824	37%
Lusikisiki	125,537	143,811	37%
Maluti	58,580	53,203	36%
Mt Fletcher	49,486	51,021	37%
Mr Frere	76,287	84,640	37%

District	Total Population aged 7 – 18 (1996)	Total Population aged 7-18 (2001)	% of Total Population aged 7 – 18 (2001)
Port Elizabeth	175,990	185,302	23%
Queenstown	60,379	63,064	31%
Qumbu	69,066	73,625	37%
Sterkspruit	65,868	66,917	33%
Uitenhage	81,990	84,979	24%
Mthatha	129,593	144,364	35%
Umzimkulu	56,003	64,910	37%
TOTAL	1,960,538	2,057,691	32%

Distribution of Total Population by Education District

4.2.1.3 Socio-economic Deprivation

Since communities play a vital part in supporting the provision of education, it is important to review the socio-economic environment in which those communities exist. In order to undertake a comparison, a socio-economic deprivation index has been calculated (reference 3) for education districts by combining various social and economic criteria from the 2001 Census.

The following criteria were used to create the index:

- Functional literacy – percentage of the adult population that has attained at least Grade 6 schooling, divided by the total number of adults (age 20 and above)
- Per capita income – total annual income divided by the total population
- Percentage of households with electricity (supplied by Eskom or a local municipality)

Education districts with the highest score, or those identified to be the most disadvantaged in terms of the criteria used, are typically characterised by:

- High unemployment
- Large numbers of dependents
- Low levels of literacy
- Small proportions of the population with tertiary education
- Low levels of basic household services such as electricity and piped water

Each criterion was ranked from worst to best, given equal weight and combined into a single standardised index ranging from 4 (most poor) to 0 (least poor). It is important to note that the score measures relative rather than absolute disadvantage within the Eastern Cape, and compares the performance of districts to one another and not to a defined national benchmark.

The results are shown graphically in figure 4.1.3. From this it is evident that the poorer districts are also those with high proportions of 7 to 18 year olds in relation to their total populations, and hence many dependents. Districts such as these should be targeted for greater development assistance.

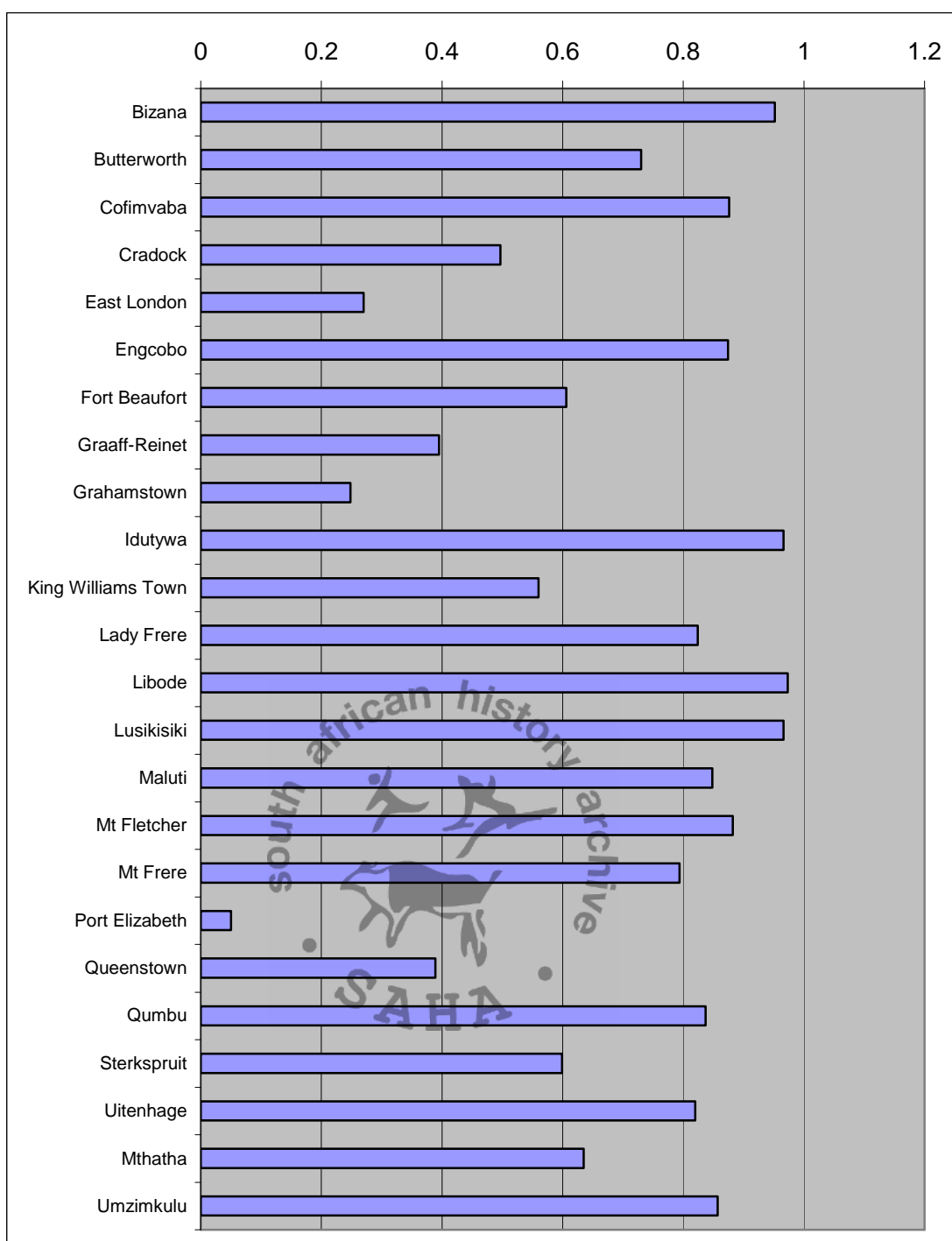


Figure 4.1.3: Comparative Socio-economic Deprivation (1996 Census)

4.3 Demand Projections

In the light of population migration and urbanisation trends it is difficult to predict the demand for education facilities in any particular area with confidence. The Department is considering various options for analysing demographic tendencies, but in the interim uses two available indicators:

- Enrolment history at a particular school or group of schools
- Changes in census data (per enumerator area) from 1996 to 2001

In addition to these two indicators, planning officials take into account all the other factors bulleted in Section 4.2 above before allocating accommodation to any particular school.

The planning module, which forms part of the EFMS, is a powerful tool for planning new facilities and can identify hotspots. This has the functionality of projecting in which areas increased demand for facilities can be expected.

This whole aspect of demand projection will be elaborated on in more detail in future updates of this Infrastructure Plan.

4.4 Demand Management

The Department recognises that there are often possibilities of finding non-infrastructure solutions to apparent infrastructure shortages, and that these need to be fully explored and exploited before investing in further infrastructure. Those being examined at present are the following:

- Re-alignment and rationalisation of schools, as discussed earlier herein
- Provision of hostels or restitution of existing hostels (as part of the above process)
- Provision of scholar transport – also as part of the rationalisation process – where this is the more cost effective means of providing quality education
- The advent of e-learning and its roll out will also affect the requirements for classroom and specialist facilities, and this will be taken into account as well.

These and other relevant aspects will be carefully monitored throughout before any infrastructure is built that could possibly be avoided. The current procedure is to map the utilisation of facilities at all adjacent schools before additional accommodation is provided at any particular school. This is to ensure that no facilities are built as a result of an artificial need created by, for example, one school being more attractive / popular than an adjacent school.

However, despite any demand management efforts by the Department, there is still a huge need for additional facilities, and here the Department has looked outside of Government for additional resources. There has been a concerted effort by both government and the business community through the Nelson Mandela Foundation, the Eastern Cape Education Development Trust as well as foreign donors such as the Japanese Government and the European Union to assist the Department to deal with the classroom backlog. Approximately R2bn has been spent through this collective effort over the past ten years which has resulted in significant improvements in the learning environment of our schools.

5. EXISTING INFRASTRUCTURE

5.1 Introduction

The Department currently has 6,302 schools (5,421 GET and 881 FET) in the Province, which serve approximately 2,178 million learners. These are accommodated in 54,501 classrooms in the above schools. The condition of these facilities is set out in Table 5.1 below. (Note this includes all facilities (ie: colleges, pre-schools, etc) and not just schools.)

Condition	Number	%
Very Weak (mud)	939	12.5
Weak	3,148	41.9
In Need of Repair	2,207	29.4
Good Condition	963	12.8
New Building	52	0.7
Being Upgraded	201	2.7
No Response	0	0
TOTAL	7,510	100

Table: 5.1: Condition of Capital Stock (April 2005)

These categories are to be re-defined according to the condition, status and level of service provided by the structure. The above information is now outdated, and is no longer captured in the format shown above.

An analysis of the existing facilities has been undertaken at an individual school level and compared with the current norms and standards. This analysis considered three aspects which are required to be addressed to ensure that schools are brought to an acceptable level for affective education in terms of the Department's norms and standards, viz:

- Shortages of facilities (backlogs)
- Repairs/renovations to existing facilities
- Replacement (herein referred to as **upgrading** of existing facilities that are no longer serviceable or of an unacceptable standard (ie: mud structures)

This analysis has been based on existing records in the EFMS and EMIS databases which have the relevant data. These records amount to 6,072 schools, which differs from the total of 6,302 schools stated. The balance constitutes small schools for which reliable data is not yet available. This is being addressed, but will not have a significant effect on the figures quoted herein.

5.2 Shortages of Facilities (Backlogs)

Based on the prevailing norms, an analysis has been made of the number of learners with insufficient access to the desired level of service. This is shown in Table 5.2a below.

District	Sum of Enrolment Total	Learners	Learners without minimum norm Toilets	Learners without minimum norm Resource Centre (Library)	Learners without minimum norm Computer Lab	Learners without minimum norm Science Laboratory	Learners Without Electricity	Learners Not Piped Water	Learners Schools Without Fencing
BUTTERWORTH	111,731	28,951	24,187	81,291	82,703	12,673	27,386	86,531	76,133
COFIMVABA	79,931	22,332	14,169	57,778	54,023	7,561	21,044	63,933	58,289
CRADOCK	25,937	5,124	1,455	13,002	18,387	1,102	1,689	5,181	10,762
DUTYWA	116,589	42,826	27,377	93,195	91,015	9,582	32,201	100,837	83,638
EAST LONDON	135,079	28,345	17,019	67,966	91,846	16,355	11,559	20,569	49,950
FORT BEAUFORT	46,062	5,643	5,742	21,060	20,306	3,252	4,320	16,587	28,610
GRAAFF-REINET	25,948	3,900	1,958	7,198	16,057	167	557	2,367	12,676
GRAHAMSTOWN	27,266	3,246	2,429	12,900	15,901	1,338	610	2,037	8,206
KING WILLIAMS TOWN	111,460	18,806	13,650	60,683	63,663	10,202	8,687	34,139	64,756
LADY FRERE	44,452	9,901	4,775	27,002	27,534	4,521	10,034	26,200	29,696
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LUSIKISIKI	166,675	85,512	52,174	141,445	141,087	18,820	70,049	145,603	115,325
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MT FLETCHER	54,289	18,099	9,360	38,083	37,593	6,407	17,064	41,738	35,382
MT FRERE	85,414	33,362	12,477	68,513	69,653	10,277	33,715	57,251	55,702
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PORT ELIZABETH	172,869	28,079	12,340	73,347	106,884	14,657	1,107	12,524	76,997
QUEENSTOWN	62,771	14,981	6,650	36,884	40,204	5,291	4,673	17,966	29,068
QUMBU	80,245	29,180	19,896	60,851	61,011	8,295	25,890	68,311	49,914
STERKSPRUIT	64,095	15,297	10,096	42,409	43,314	7,262	5,027	24,482	39,762
UITENHAGE	82,083	16,206	8,818	35,820	49,156	4,964	2,123	7,897	30,571
Grand Total	2,102,115	694,950	395,959	1,449,968	1,539,445	213,049	444,596	1,208,849	1,248,833
Percentage of learners with sub minimum access to facilities		33%	19%	69%	73%	10%	21%	58%	59%

Table 5.2a: Access to Facilities

When this backlog is quantified using prevailing building costs, it yields results that are frightening as shown in Table 5.2b below, ie: R42,8bnbn in total.

District	Schools	Classroom Backlog (60 m sq)	Estimated Classroom Backlog Cost	Toilets Backlog (qty)	Estimated Toilet Backlog Cost	Resource Centre (Library) Backlog	Resource Centre (Library) Backlog Cost	Computer Laboratory Backlog	Computer Laboratory Backlog Cost	Science Laboratory Backlog	Science Laboratory Backlog Cost	Office Space Backlog	Office Space Backlog Cost	Total Backlog Building sqm (New Works)
BUTTERWORTH	389	762	225,622,256	3492	115,715,795	228	132,525,836	254	132,909,564	65	34,012,290	30,485	202,312,931	119,125
COFIMVABA	279	585	173,213,937	2183	71,451,750	166	96,978,632	176	92,094,816	45	23,546,970	18,426	122,286,877	84,001
CRADOCK	94	136	40,268,539	549	21,163,769	35	20,442,258	56	29,302,896	7	3,662,862	3,536	23,467,469	19,351
DUTYWA	349	1112	329,254,526	3864	124,310,968	244	142,572,543	277	144,944,682	48	25,116,768	28,989	192,387,985	140,519
EAST LONDON	308	758	224,437,888	3693	148,340,373	144	85,117,936	245	128,200,170	98	51,280,068	12,500	82,959,405	95,905
FORT BEAUFORT	260	147	43,525,553	1875	71,225,432	56	32,582,030	66	34,535,556	19	9,942,054	12,984	86,166,181	32,849
GRAAFF-REINET	98	104	30,793,589	705	28,765,165	15	8,896,522	46	24,070,236	1	523,266	3,494	23,186,080	14,534
GRAHAMSTOWN	84	88	26,056,114	674	27,279,600	22	12,942,112	44	23,023,704	8	4,186,128	2,880	19,112,572	13,915
KING WILLIAMS TOWN	460	506	149,822,653	3642	137,236,921	165	96,420,482	197	103,083,402	62	32,442,492	24,133	160,158,293	87,738
LADY FRERE	164	253	74,911,327	1101	38,238,403	76	44,198,535	88	46,047,408	31	16,221,246	11,093	73,621,793	41,533
LIBODE	416	2207	653,475,485	5982	194,009,990	338	197,375,935	462	241,748,892	108	56,512,728	37,356	247,911,934	240,816
LUSIKISIKI	348	2219	657,028,592	5708	181,793,644	287	167,410,236	413	216,108,858	91	47,617,206	31,370	208,189,587	226,305
MALLUTI	231	855	253,158,831	2627	92,008,021	145	84,455,132	182	95,234,412	58	30,349,428	18,693	124,053,524	100,098
MBIZANA	211	1694	501,580,187	3778	118,722,657	179	105,420,657	272	142,328,352	65	34,012,290	17,696	117,440,875	159,721
MT FLETCHER	190	474	140,347,703	1700	55,358,983	90	52,814,982	103	53,896,398	33	17,267,778	13,479	89,456,577	59,689
MT FRERE	246	875	259,080,675	2388	81,769,025	176	103,188,055	207	108,316,062	47	24,593,502	19,309	128,143,624	105,649
MTHATA	337	1824	540,072,173	4888	162,745,066	279	163,886,911	367	192,038,622	101	52,849,866	23,527	156,139,868	191,557
NGCOBO	224	826	244,572,157	2557	85,420,824	142	82,920,219	180	94,187,880	39	20,407,374	18,149	120,443,246	96,019
PORT ELIZABETH	253	750	222,069,150	4091	169,655,593	104	61,640,735	257	134,479,362	88	46,047,408	6,266	41,585,223	85,976
QUEENSTOWN	177	395	116,956,419	1739	66,392,666	76	44,721,801	106	55,466,196	31	16,221,246	8,071	53,562,187	48,456
QUMBU	252	757	224,141,795	2583	83,310,743	164	94,920,452	186	97,327,476	46	24,070,236	19,527	129,593,708	95,952
STERKSPRUIT	184	388	117,844,696	2063	77,472,291	85	50,059,114	123	64,361,718	38	19,884,108	11,564	76,746,276	54,694
UITENHAGE	169	429	127,023,554	2067	85,766,272	63	37,291,424	126	65,931,516	28	14,651,448	4,843	32,138,109	47,478
Grand Total	5723	18154	5,375,257,799	63899	2,238,153,950	3279	1,918,781,538	4433	2,319,638,178	1157	605,418,762	378,369	2,511,064,322	2,161,880

Note: The 6,072 schools exclude Early Childhood Development (ECD) schools

Table 5.2b: Backlog Costs

5.3 Upgrading and Repairs

The figures quoted earlier are to eliminate shortages (backlogs) in facilities. However, there are a large number of schools that require either extensive repair (renovations) or upgrading (replacement) before they can be considered acceptable educational facilities. The costs of such repairs or upgrading are set out in Table 5.3 below, together with the backlog costs.

District	Total Backlog Cost	Total Repair Cost (Adjusted)	Total Upgrade Cost (Adjusted)	Total	Total Replacement Cost (Adjusted)
BUTTERWORTH	2,455,904,159	96,508,007	170,554,511	2,722,966,677	1,421,776,487
COFIMVABA	1,663,078,098	52,385,701	104,364,597	1,819,828,397	1,026,520,143
CRADOCK	550,871,658	69,468,670	4,679,656	625,019,983	1,080,137,543
DUTYWA	2,406,269,556	67,644,813	174,789,078	2,648,703,447	1,222,354,407
EAST LONDON	2,858,887,439	112,064,002	41,481,015	3,012,432,456	3,158,707,871
FORT BEAUFORT	1,160,282,042	126,300,108	47,711,100	1,334,293,250	1,614,023,912
GRAAFF-REINET	574,946,753	46,935,534	2,005,643	623,887,930	1,430,663,908
GRAHAMSTOWN	631,208,636	71,716,402	11,653,201	714,578,239	1,228,010,047
KING WILLIAMS TOWN	2,596,789,271	123,220,026	87,890,096	2,807,899,394	2,439,987,425
LADY FRERE	950,832,543	53,253,448	41,722,765	1,045,808,757	815,450,247
LIBODE	3,375,394,455	56,663,094	199,617,816	3,631,675,365	1,273,040,764
LUSIKISIKI	3,008,925,366	76,485,163	326,078,427	3,411,488,956	1,565,472,913
IMALUTI	1,551,651,395	69,917,368	98,218,960	1,719,787,723	806,478,360
MBIZANA	2,024,245,538	55,858,155	72,340,451	2,152,444,144	740,944,770
MT FLETCHER	1,104,741,862	38,290,887	83,355,591	1,226,388,340	701,551,649
MT FRERE	1,682,915,981	45,327,573	143,045,951	1,871,289,505	745,207,896
MTHATHA	3,120,536,710	56,125,680	170,499,233	3,347,161,623	1,693,228,455
NGCOBO	1,553,362,072	49,700,177	85,922,214	1,688,984,463	870,612,602
PORT ELIZABETH	3,544,019,140	346,616,389	8,844,422	3,899,479,951	4,982,309,109
QUEENSTOWN	1,323,770,759	69,620,588	30,291,392	1,423,682,739	1,450,905,787
QUMBU	1,626,647,128	81,360,631	127,605,281	1,835,613,040	754,811,200
STERKSPRUIT	1,372,268,195	88,969,753	47,072,206	1,508,310,155	1,243,032,107
UITENHAGE	1,650,637,551	89,362,977	6,273,125	1,746,273,652	2,166,392,306
Grand Total	42,788,186,309	1,943,795,146	2,086,016,729	46,817,998,184	34,431,619,909

Table 5.3: Cost Estimates

This table shows that the total repair cost amounts to R1,94bn and the total upgrading (replacement) cost to R2,09bn. When these are added to the cost of eliminating backlogs, the total amounts to R46,82bn.

The definitions of these categories and the basis for calculation are explained briefly below:

➤ **Repair Cost**

This cost is based on the condition rating of the building. This comes from the EFMS database, the data of which was captured during condition assessments that were undertaken in 2003. A value for reinstatement (per square meter) is attached to each condition rating, and this is then multiplied by the area of the building to determine the repair cost. These values reflect July 2007 costs.

➤ **Upgrade Cost**

In this case, "upgrading" refers to the replacement of the existing facility where its condition is such that it is no longer considered functional or economically repairable, eg: mud structure schools/classrooms. Also included herein are the costs of providing services such as electricity, water supply or fencing if these are not provided at an existing facility. The cost of such upgrading is also based on July 2007 cost estimates.

➤ **Backlog Cost**

As stated earlier, the backlog cost is based on providing facilities in accordance with the norms and standards contained herein. These costs are based on July 2007 estimates.

➤ **Replacement Cost**

The replacement cost is shown merely to give the reader an indication of the Department's current building stock value. This is the present day cost of replacing the existing buildings in its current asset list.

This figure does not represent the current asset value in market terms, but is of value in determining budgetary requirements for annual maintenance.

5.4 Summary and Spatial Representation

The total backlog, repair and upgrading cost to ensure the adequacy of all GET and FET schools (R46,82bn, as stated above) is shown graphically among the districts in Figure 5.4 below.

Note that these are shown in different colours to distinguish the categories above, viz:

- Backlog cost
- Repair cost
- Upgrade cost

The high repair costs in densely populated areas such as Port Elizabeth are as a result of the large amount of infrastructure there.

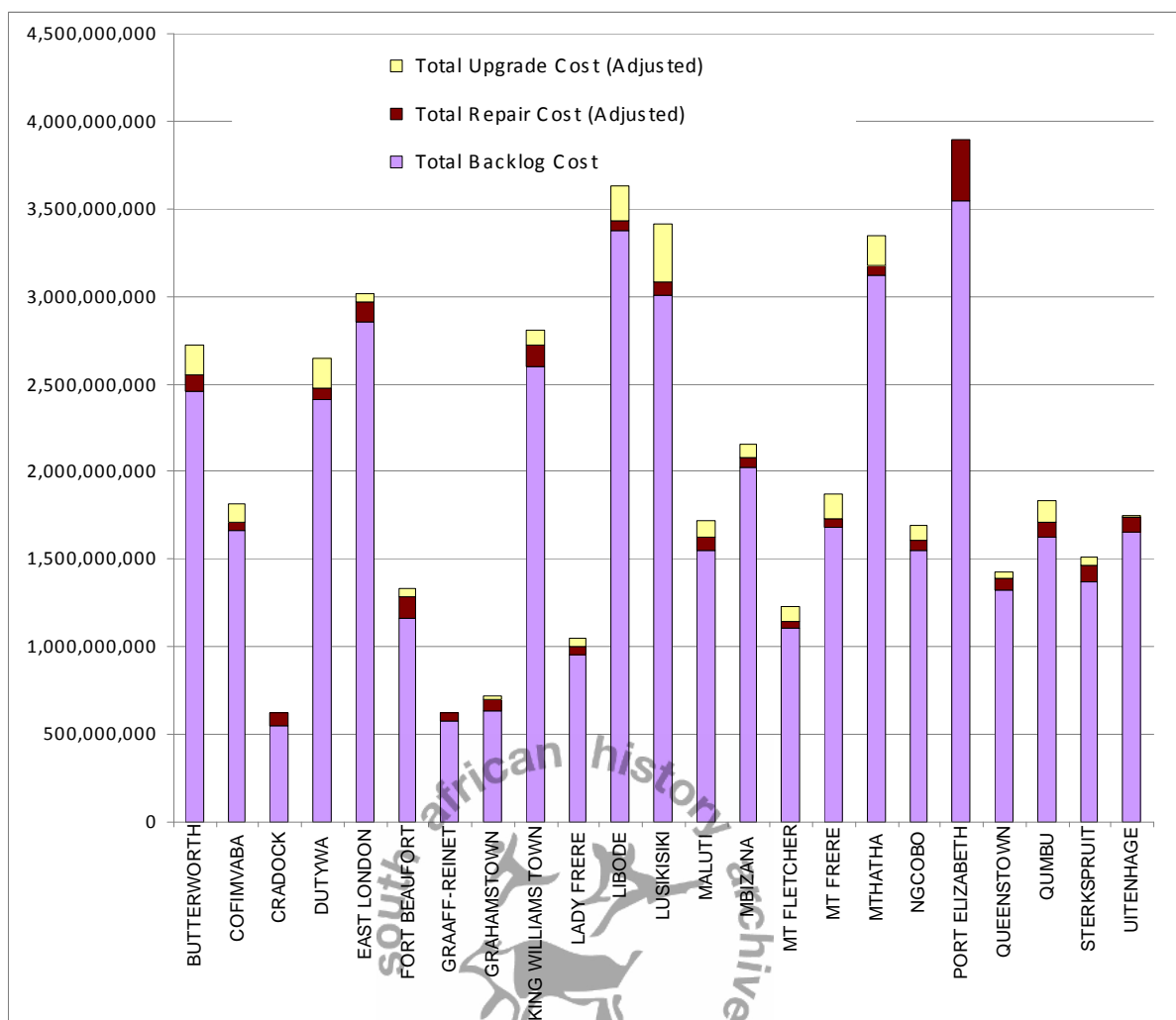


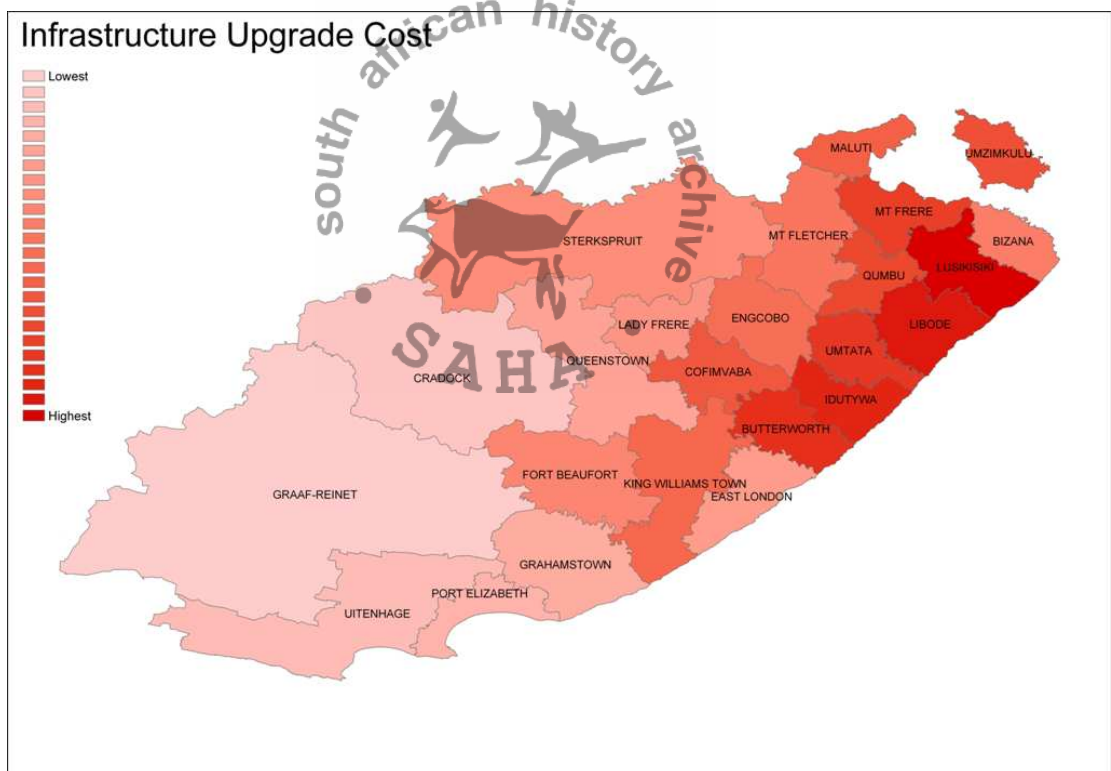
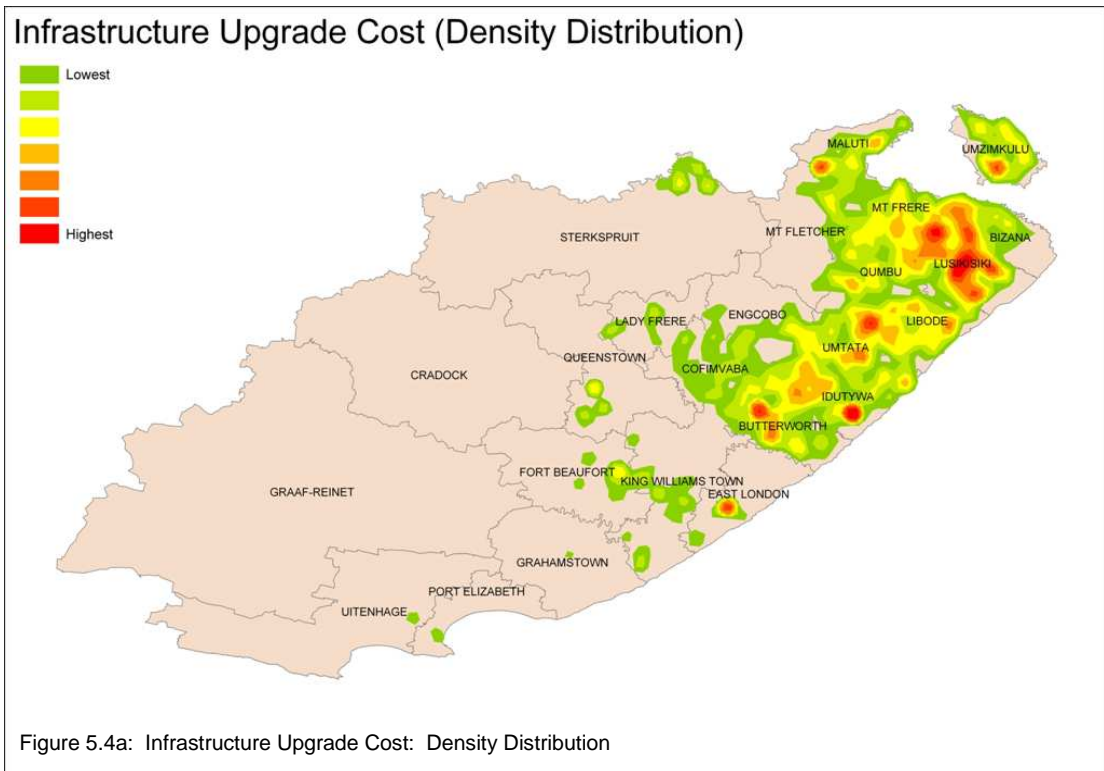
Figure 5.4: Total Costs

The various components of eliminating these shortcomings are shown spatially on the following pages. These give a good indication of where the hot spots are. For each of these components (as defined earlier herein) viz:

- Backlog elimination
- Repair/reinstatement
- Upgrading/replacement

The information is shown spatially as well in the maps on the following pages. These maps illustrate two aspects:

- **Density Distribution**
This is the relative density of the particular need in question, and gives a good indication of where available funds can most effectively be utilised within an area
- **District Comparison**
This gives an indication of the relative need within a district (compared to other districts) for funding to address a particular aspect



Infrastructure Backlog Cost (Density Distribution)

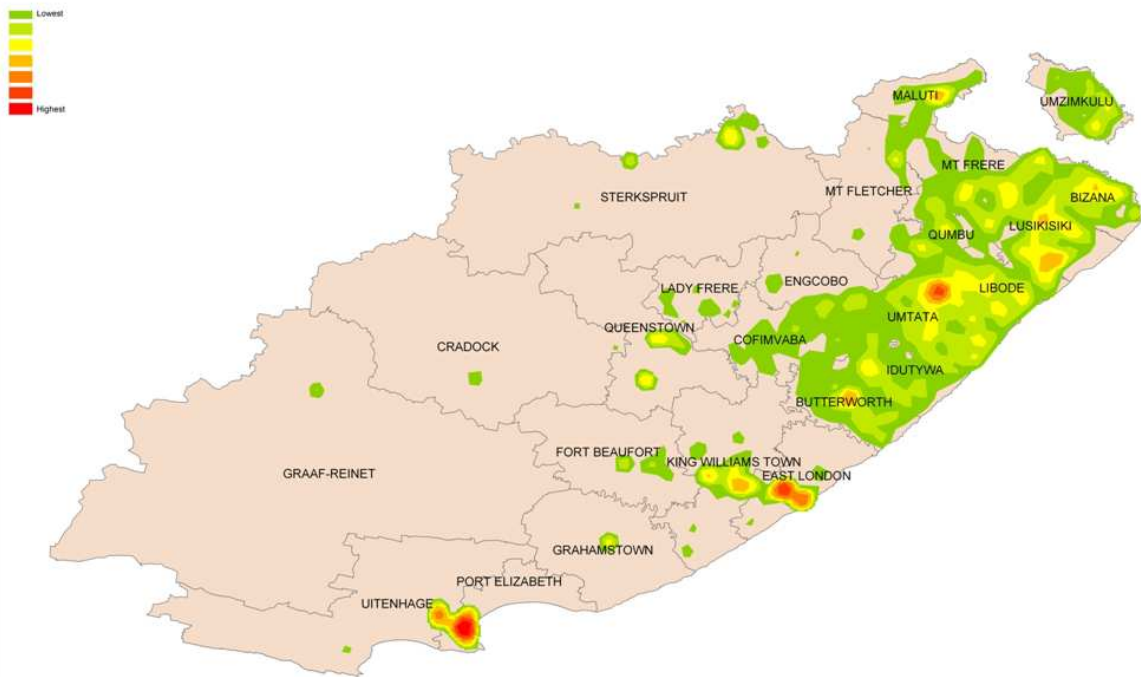


Figure 5.4c: Infrastructure Backlog Cost: Density Distribution

Infrastructure Backlog Cost

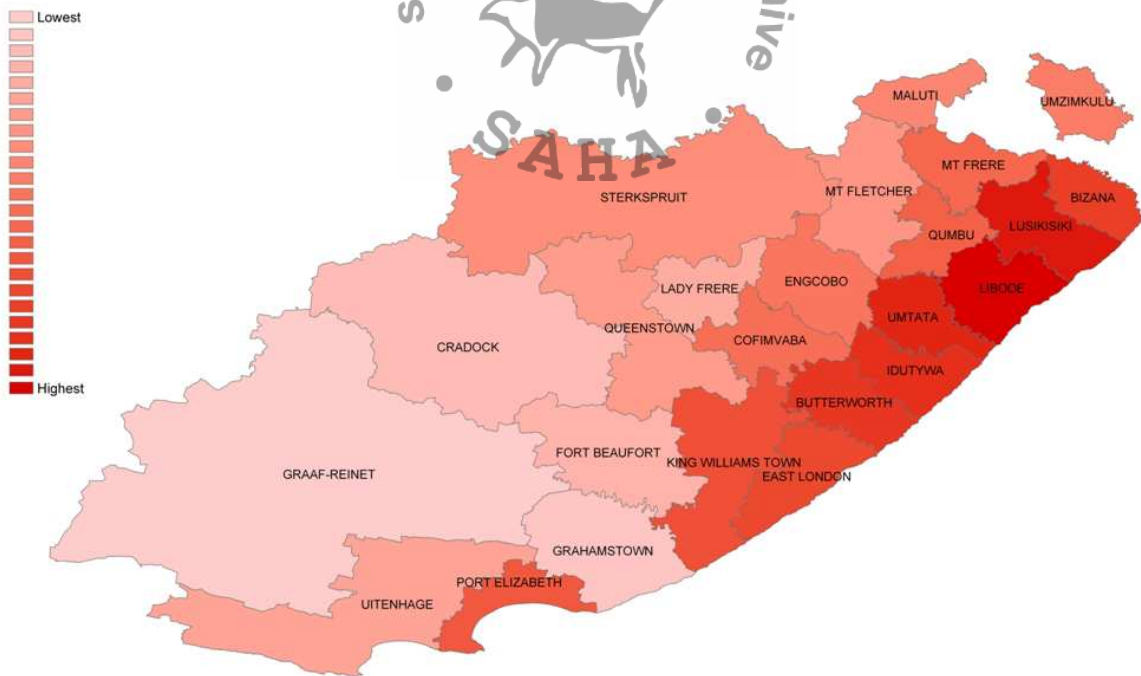
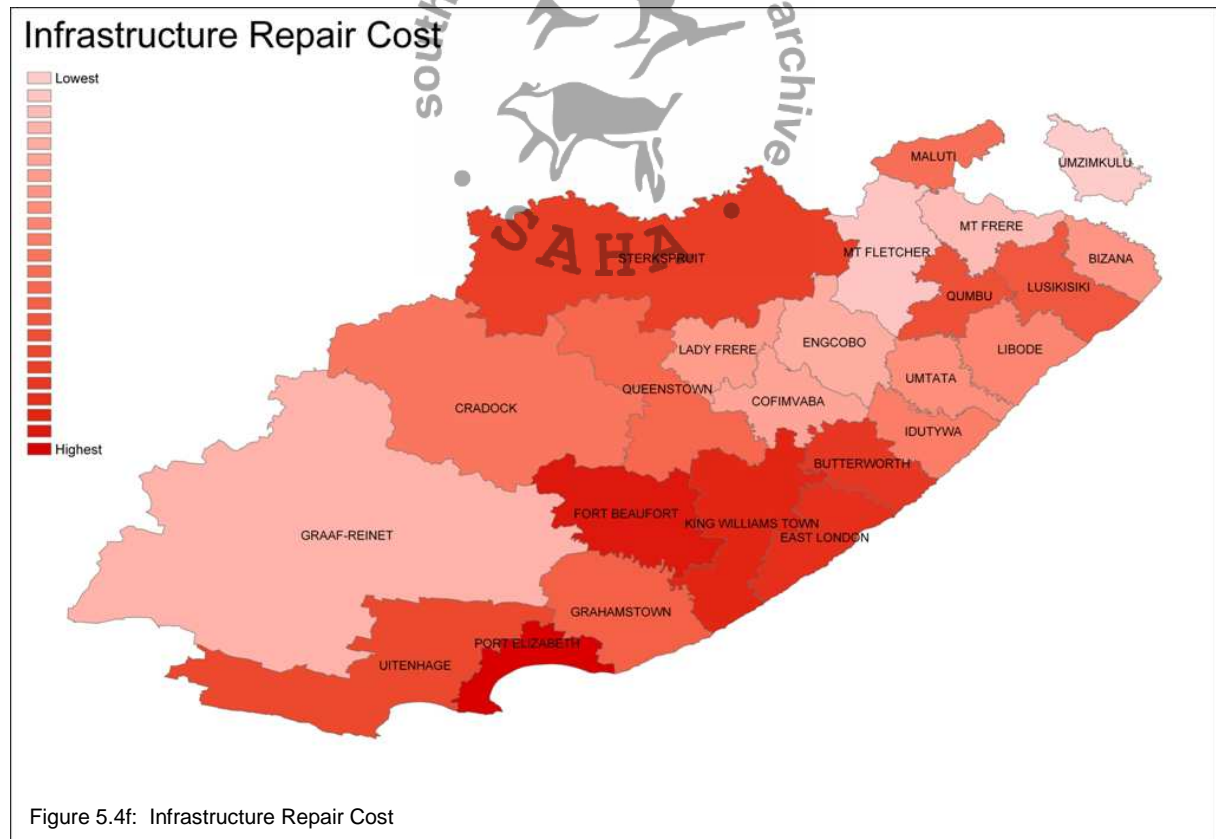
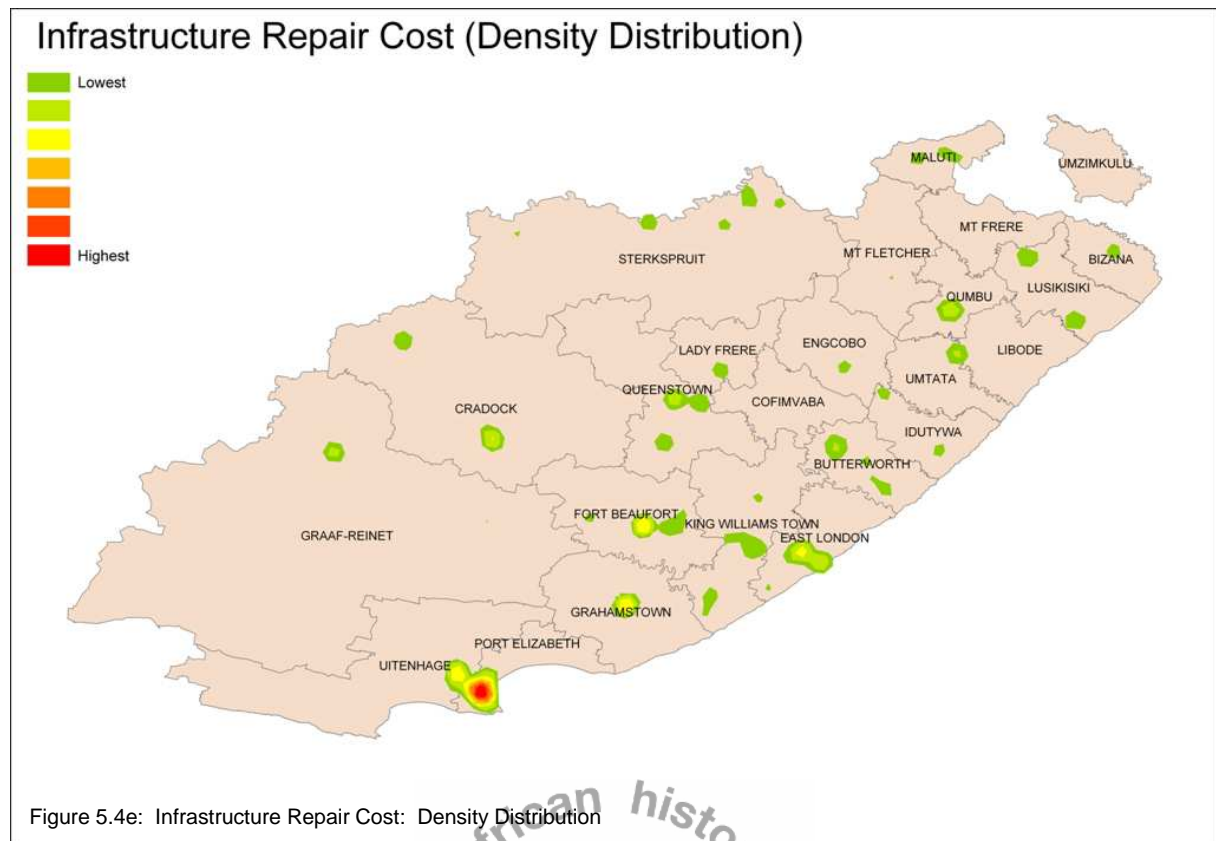


Figure 5.4d: Infrastructure Backlog Cost



6. ASSET MANAGEMENT

6.1 Strategic Objectives

In order to attain /achieve our vision, the Department has commitment to its mission as follows:

1. Eradicate all mud structures (schools with no brick and mortar), by the end of 2008/9 financial year.
2. Eradicate all inadequate structures (major renovations and replacement of temporary structures by 2010), and relocate those in good use to Farm and/or Small Schools, and utilize them as relief in cases of emergency.
3. Establish Cluster Multi-Media Centres for the improvement of provisioning of rare and/or scarce skills:
 - 3.1. comprising of an instructional hall with a foldable partition; Science and Computer laboratories; library; and technological/audio-visual unit, by 2014
 - 3.2. identifying and equipping progressively, facilities outlined in Paragraph 4.3.3.1. above, in existing and/or newly built schools, moving from the concept of Dinaledi Project
 - 3.3. attach a similar District Model to the Municipal Multi- Purpose Hall, by 2010
4. Provide water and sanitation, and electricity to all schools by 2009.
5. Provide 5% of total funding, each year, progressively for continuous maintenance of schools, as top-up where maintenance costs exceed provision in terms of norms and standards.
6. Forge links for strong collaboration and co-operation between:
 - The Department of Arts and Culture, as well as District and Local Municipality for the establishment of reasonable Zonal Sporting facilities by 2010
 - Local Government and Business Sector for the establishment of Cluster residential facilities in deep rural areas, to maximize the theory of economic rent, in terms of quality and effective teaching and learning
 - Departments of Health, Agriculture, Water Affairs and Forestry, and Social development for the establishment of food gardens for sustainability of School Nutrition Programme
 - Department of Transport, Public Works and Local Government for provisioning of suitable transport system and road networks and bridges, for effective scholar transport, wherein no viable schools can be established by 2009

- Supply Chain Management for strengthening the system of Asset Record Management for effective, regular upkeep and/or updating of asset registers; (acquisition, maintenance, losses and disposals, as well as vandalism).

6.1 Routine Maintenance Plan

6.1.1 Maintenance Plan

To date routine maintenance has been fairly limited, as the emphasis of the infrastructure programme has been on eliminating historical backlogs and replacing uninhabitable buildings, such as mud structures.

Typically the annual routine (day to day) maintenance budget has been in the order of R50 – R80m. This is about 0,2% of the replacement value of the current asset stock, which is well below the industry norm of 2%.

Maintenance funds are transferred directly to the schools to which they are allocated (Section 21 schools) or to the District office to procure services on their behalf (Section 20 schools).

The Department:

- is systematically improving the quality of information on which routine maintenance is based. The EMIS and EFMS support this function
- intends increasing this portion of the infrastructure budget systematically but significantly in the medium term, and also to put a separate maintenance programme in place, using developing contractors and local expertise as far as possible
- will maintain a secure off-site records room for all relevant asset related documentation, in addition to operational files kept in the offices of the Facilities Management unit.

6.1.2 Standards and Specifications

Schools are expected to maintain their buildings to the same standards as that of the original construction, which should be according to the Department's design standards and specifications as determined in consultation with the DPW. These are available from the Department's Facilities Management unit.

District offices are accountable for the maintenance of their schools. Where any technical support is required, the local DPW office should be consulted. Currently the capacity of the DPW in the regions is also limited, and this requires attention.

6.1.3 Summary of Future Costs

According to the industry norm of 2% of replacement cost as an annual maintenance budget, the Department would be expected to allocate R688m to routine maintenance this year and increase this annually in line with escalation and new infrastructure being built.

In the light of current capacity levels, the Department plans to increase its maintenance budget gradually by allocating an additional R108m next year (10% of 2008/09 infrastructure budget) and increasing this progressively each year until the required level is reached.

6.2 Renewal/Replacement Plan

6.2.1 Conventional Building Programme

This programme addresses the shortage of educational facilities (mainly classrooms) **together with the refurbishment of existing facilities where necessary**. The necessary facilities required are provided in accordance with the norms and standards and levels of service as described previously. All the required facilities as determined are provided during a single intervention (ie: preferably not phased), the intention being that the Department should not need to return to any particular school until the medium to long term.

The main focus of the conventional programme is on the eradication of mud structures and the replacement of other inadequate and/or unsafe structures.

The Department's current policy is to split FET and GET schools in accordance with the national model for re-alignment, and this approach will be followed with all new schools that are built.

6.2.2 Eradication of Mud and Unsafe Structures

All new structures to be provided will be built according to the requirements of an ideal school.

The mud structure crisis situation will be addressed concurrently with the finalisation of the projects under way. This programme will provide for a master plan on each site on the basis of an ideal school. Initially only basic facilities will be constructed, with the balance of the facilities following incrementally.

The split in funds among this and the foregoing will vary, but initially it is foreseen that a significant portion of the available budget will go to this programme.

The conventional and the mud structure programmes are the Department's major infrastructure interventions, and normally comprise approximately 70% of the annual budget.

6.2.3 Emergency Intervention

Emergencies are defined as situations arising from failure of infrastructure, resulting in conditions which threaten lives or cause misery.

The S-G or delegated official can invoke emergency procurement procedures to deal with crises which occur and are acknowledged as emergencies.

6.2.4 Water and Sanitation

The Department is attempting to address the backlog in sanitation and water supply at schools, and has a dedicated programme for this. This is dealt with on an area basis, prioritising areas of greatest need first (especially areas that are prone to cholera outbreaks).

The Department collaborates closely with DWAF to plan and co-ordinate water supply and sanitation programmes to schools and clinics.

6.2.5 Fencing

There is a programme for fencing of school buildings and sportsfields. Stock fencing is provided around the perimeter, with security fencing around the buildings.

6.2.6 Electrification

All schools will be electrified where electricity supply is available. Where there is no electricity as yet, but the school is planned for inclusion in the Eskom grid, conduits will be provided and these blanked off at switch and plug points. (If the school is outside the Eskom grid, it will be included in the Department's non-grid electrification programme. This provides for essential electrification such as lighting).

The Department will meet with Eskom Electrification Planning Management (Schools) and determine the number of schools that will be electrified by Eskom. This will establish the schools electrification programme and promote alignment between this and the DoE infrastructure programme.

Ultimately all schools are to be electrified. In areas where grid electrification is not planned, non-grid electricity will be provided. There is a small but continuous process in place to upgrade non-grid electrification.

6.3 Creation/Acquisition Plan

6.3.1 Selection Criteria

Although overwhelming majority of infrastructure projects are extensions, replacement and/or upgrading on existing sites, the Department does provide new schools in areas where increasing population density demands this.

Site identification is based on proximity of demand and availability of sites.

- Establish the location of the schools property register
- Determine where it should be located
- Create property file for each school and locate within register
- Review the process of establishing a new school
- Consult with DPW with regard to the acquisition of property

The EFMS is used as a tool to identify highest priorities in terms of weighted criteria as described earlier herein. The two main criteria for the provision of new facilities, or upgrading / replacement of facilities are the following:

- Shortages of accommodation/facilities (ie overcrowding/backlogs)
- Condition of existing facilities (particularly if these are considered unsafe or unsuitable for tuition)

6.3.2 Standards and Specifications

The standards and specifications for the provision of new facilities, and for the upgrading / replacement of existing facilities are all set out in the Department's Design Manual (Reference 4), and are as described earlier herein.

6.3.3 Summary of Future Costs

The estimated present day costs of eliminating all the backlogs, upgrading / replacement, and repairs to an acceptable standard are set out elsewhere in this Plan. The projected costs of addressing all the projects on the project list for the current MTEF period are set out in Annexure A of this Plan.

6.3.4 Disposal Plan

The Department seldom disposes of any of its physical assets, but the cases that do occur are briefly described below.

Where the Department replaces a dilapidated or unsafe structure, the said structure is required to be demolished to prevent any harmful accidents. Where the structure is still sound (but unsuitable for tuition purposes) the SGB is given the option of retaining the structure for storage or other purposes, at their own risk and cost.

In certain, though rare, cases the Department owns property which it may decide it no longer needs. In such cases:

- properties no longer needed are handed over to the DPW
- properties may be sold off once the necessary approval has been obtained from the Provincial Exco

- disposal process is handled by the DPW
- DoE property register must be updated accordingly
- disposal procedure must be reviewed and updated

6.3.5 Construction and Maintenance Plan

The Department's construction programme is set out in detail in Section 7.5 of this Infrastructure Plan, and therefore not repeated here. There it can be seen that, while there is a broad range of project sizes, the predominance is smaller projects which target the replacement of mud structures with basic facilities. The size of these projects also facilitates the awarding of contracts as the largest number of contractors in the province is also in the lower CIDB gradings.

The Department subscribes to the EPWP objectives, and has a dedicated EPWP programme where emerging contractors are trained and developed.

The Department has taken a conscious decision to increase its commitment to the maintenance of its assets, and this is reflected in its budgetary allocation to this component (see Section 7.5). A strategy for planned maintenance is also being developed, and a programme for dealing with the day-to-day maintenance requirements of schools is being put in place.

6.4 Disasters

Major disasters (such as tornado or snow damage) on a wide scale are addressed on the basis of emergency intervention. Once a disaster has formally declared, funds can be sourced from a special provincial allocation.

The Department collaborates closely with the relevant Municipality who will have established a disaster management team.

The Department needs to formulate policy or directive in this regard, if such does not yet exist.

7. FINANCIAL SUMMARY

7.1 Basis for Estimates/Key Assumptions

All cost projections contained herein are based on March 2007 estimates, and have not been escalated. This is consistent with Treasury guidelines for infrastructure planning.

The assumptions and basis for estimates is included in Appendix 1.

7.2 Valuation Forecasts/Backlog Implications

As set out in Section 2 of this Plan, the present day cost of eliminating backlogs and bringing all buildings up to the required standard, as per the Department's norms, amounts to R42,79bn. In addition, the present day cost of upgrading mud structures, etc (R2,09bn) and the maintenance (repair) backlog (R1,94bn) must be added to this figure. An annual allowance for ongoing maintenance also needs to be made.

In order to consider funding options for completing all this outstanding work, a number of scenarios will need to be considered. To illustrate the magnitude of the challenge, the following scenario for eliminating backlogs and addressing current and outstanding work is set out below:

- | | |
|---|----------|
| ➤ Eliminate backlogs in facilities as per norms | 10 years |
| ➤ Upgrade (ie: replace unacceptable structures) | 6 years |
| ➤ Repair existing buildings to serviceable standards | 5 years |
| ➤ Percentage of replacement cost of asset to be allocated annually to ongoing maintenance | 2% |
| ➤ Annual escalation of building costs | 5% |

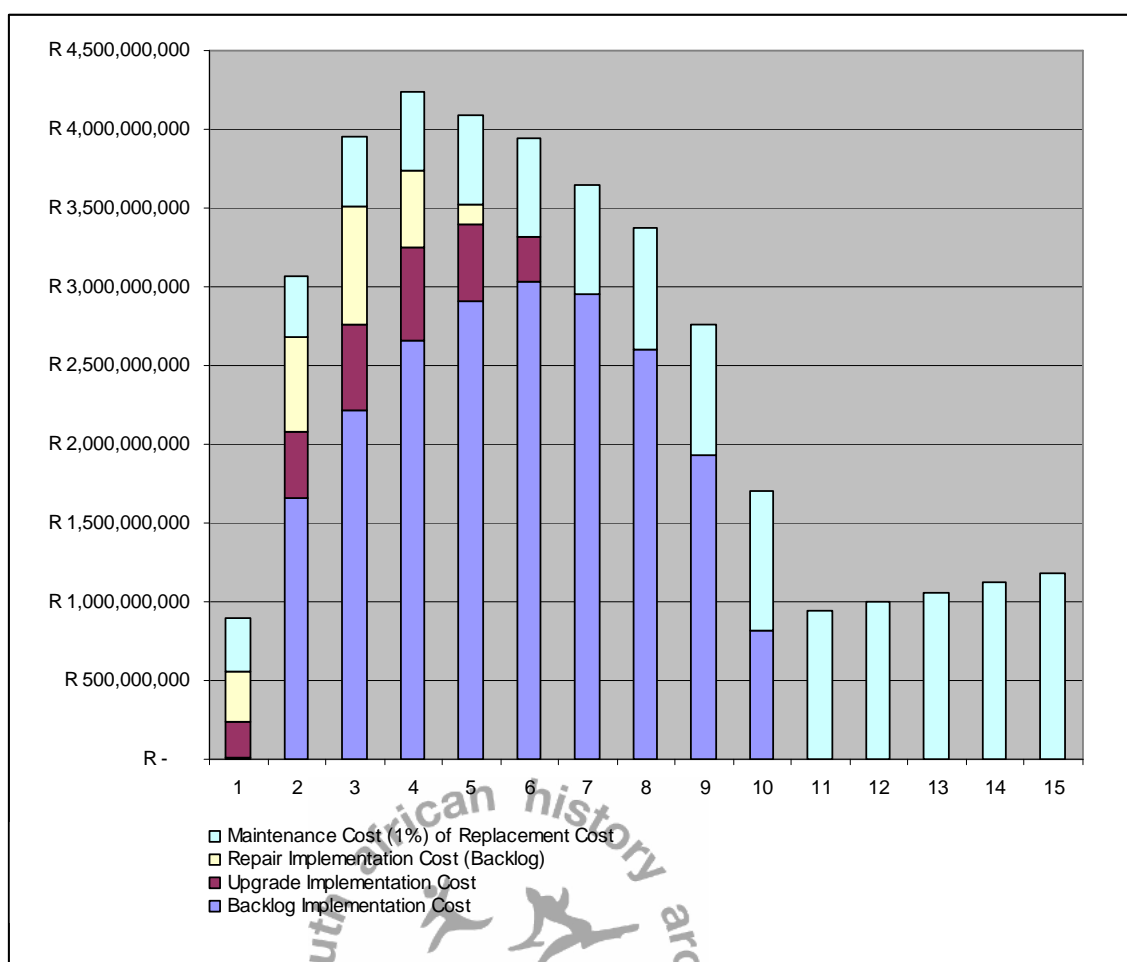


Figure 7.2: Budget Implications

The implications of the above scenario are shown graphically in Figure 7.2. This reflects a maximum annual budget of R4bn in Year 4 and a total 10 year budget requirement of approximately R40bn.

Clearly this is not achievable in the current circumstances where indicative annual budgets are in the order of R800 – R1,2bn. Significant policy decisions therefore need to be taken around this issue, viz:

- Levels of service
- Target dates
- Budgetary allocation
- Sourcing of funds

However, one also needs to look outside the Department before embarking on any sudden major budgetary increase. The capacity of the industry needs to expand to deal with additional requirements - an aspect that needs to be explored with, for example, the Construction Industry Development Board (CIDB).

As important, too, is the issue of sustainability. To this end, the Department needs to ensure that its funding base is consistent, and that there are no sudden deviations in its implementation programme that can have a negative effect on the industry – especially the emerging sector thereof.

7.3 Indicative Budgets

The indicative budgets for the current MTEF period are given below:

- 2008/2009 R1,027bn
- 2009/2010 R1,299bn
- 2010/2011 R1,515bn

Despite being a significant improvement on previous years, these budgets are still wholly insufficient to begin addressing backlogs as described earlier therein. This issue needs to be addressed in the funding strategy below.

7.4 Funding Strategy

The background to the Department's funding strategy for infrastructure is illustrated in figure 7.4 below. This shows the budget requirement for the next ten years (as determined in Section 7.2) together with expected annual capex budgets projected from current levels of funding (ie: increasing by approximately 6% per annum).

As stated earlier herein, the possibilities are fairly limited, viz:

- Increase the annual budget to meet the needs at the agreed levels of service
- Lower the levels of service to reduce financial requirements to budget levels
- Extend the period within which backlogs are to be eliminated (However at current funding levels this is impossible if adequate funds are still to be made available for maintenance).

The final strategy will probably have to be a combination of all 3 of the possibilities listed above. However, the only alternative that will find acceptance within the affected communities of the province is the first one, namely increasing the funding base. It is therefore earnestly recommended that the management of the Department lobby strongly for redress funding to eliminate backlogs, and look to central Government support for accessing foreign donor funding to assist in this regard.

In particular it is maintenance funding that must be made more accessible to ensure the physical learning environment is adequately maintained, and potential donors are given peace of mind that any investment they may make will be properly cared for.

The graph (Figure 7.4) on the next page shows the implications of not meeting the funding requirements to eliminate the existing backlogs over the proposed 10 year period as described in Section 7.2. The total funding requirements to eliminate the existing backlogs over a 10 year period are compared with the expected capital works budgets over the same period, and the cumulative effect of the shortfall each year is illustrated graphically.

The graph in figure 7.4 clearly shows the huge discrepancy between budget requirements to meet declared norms and standards and the expected availability of funding, as well as the cumulative effect of the resulting annual shortfall in funding. It is this tension that needs to be carefully managed by the Department.

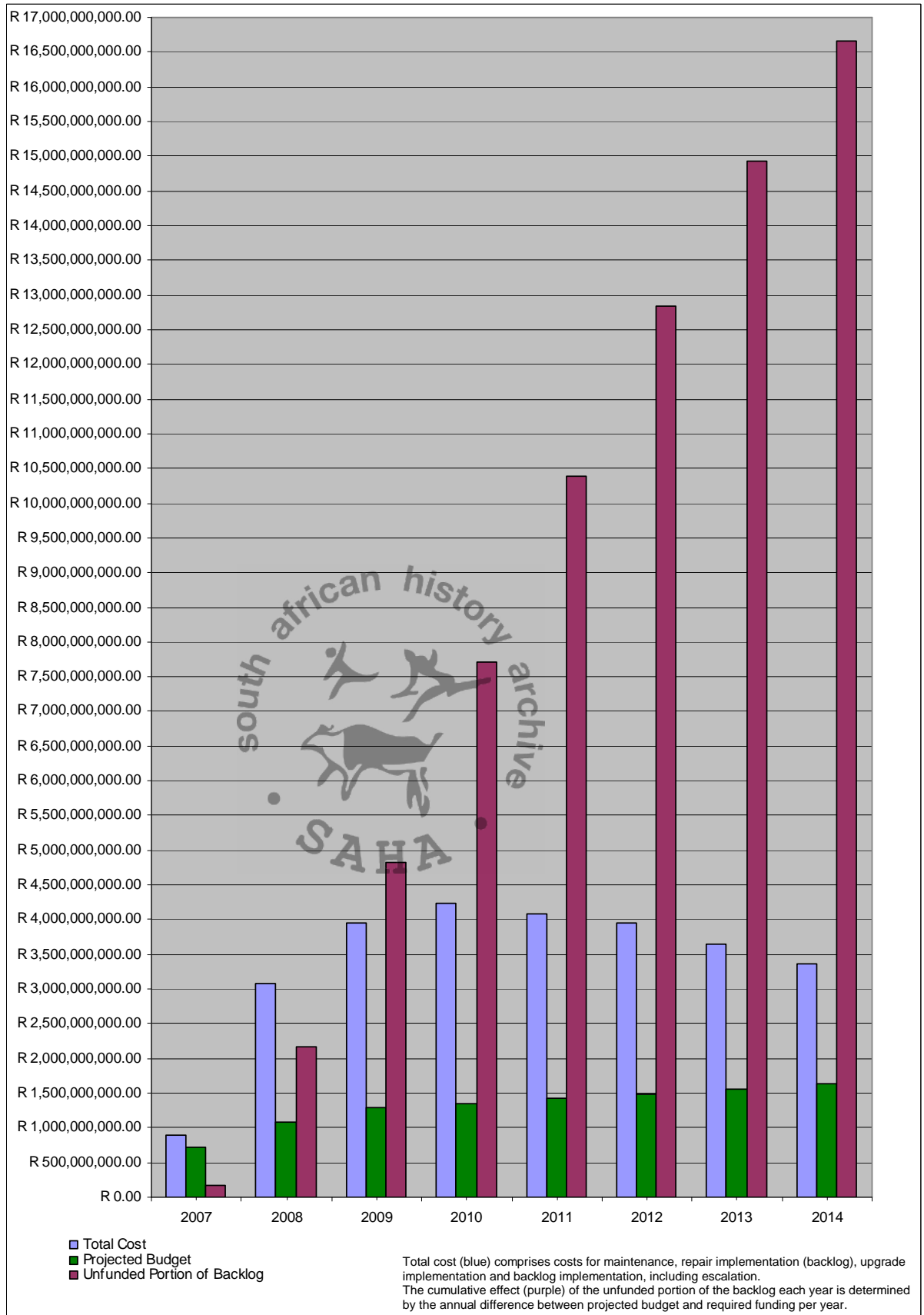


Figure 7.4: Required vs Projected Capex Budgets

7.5 Implementation Programme: 2008/09 financial year

7.5.1. Budget Summary

The total infrastructure budget for 2008/09 amounts to R1 027 931 000. This has been allocated amongst the Departmental programmes as shown in the table below.

Programme	Budget allocation
Prgme 1: Head Office & District Offices	R43 000 000
Prgme 2: GET & FET Schools	R617 431 000
Prgme 4: Special Education	R188 500 000
Prgme 5: FET Colleges	R86 500 000
Prgme 7: Early Childhood Development	R50 000 000
Prgme 8: Learner Assessment centres	R42 500 000

7.5.2 Infrastructure Programmes

Programme 1: Head office & District office development (R43m)

The Department is providing additional office space at 16 District offices in the coming year, as well as at its Head Office. There is also alteration work to be done at the Education Leadership Institute in Stirling.

Programme 2: GET and FET Schools (R617m)

This is by far the largest programme and comprises a number of initiatives, the major one being the eradication of mud structures. These are set out below:

Sub-programme	No of projects	Value (R '000)
RIP Phase 1	30	R18 922
RIP Phase 2	27	R18 642
RIP Phase 3	47	R30 764
RIP Phase 4	35	R28 971
RIP Phase 5	116	R20 000
EPWP IDT	1	R8 336
EPWP Coega phase 2	51	R20 369
New model schools	12	R30 000
IDT Phase 3	282	R399 890
Premier's intervention	210	R50 000
Fencing	205	R26 803
Non-grid maintenance	31	R5 000
Vodacom co-funding	1	R5 000
Emergency repairs	115	R100 000
Maintenance of GET schools		R37 887
Maintenance of FET schools		R25 258

Programme 4: Specialised Education (R188m)

The major commitment under this programme is to the ongoing construction at the Special Youth Care Centre in Bhisho. Additions and / or alterations are also being done to 15 special schools.

Programme 5: FET Colleges (R86m)

Additions and alterations are being carried out at 7 colleges in the 2008/09 financial year. Further work at the other colleges is programmed for the outer years.

Programme 7: Early Childhood Development (R50m)

The Department plans to add an ECD centre to 100 existing primary schools in the 2008/09 financial year, with a further 400 planned for the outer years.

Programme 8: Learner Assessment (R42m)

All expenditure under this item in 2008/09 is at the provincial Learner Assessment Centre in Zwelitsha. Facilities at the District offices are planned for the outer years.



8. ORGANISATIONAL AND SUPPORT PLAN

This section is being revised to reflect new management and co-ordination arrangements being developed in accordance with the delivery model as approved by the Executive Council in March 2008. It will, however, not differ materially from the description contained herein.

8.1. Services Rendered By External Organisations

A number of external support agencies are assisting the Department's infrastructure unit, in an effort to improve delivery capacity. These include a dedicated Technical Task Team appointed by the Department, three project managers provided by the Development Bank of Southern Africa, and the Provincial Technical Assistance Team appointed through the Infrastructure Delivery Improvement Programme (IDIP).

8.2 Organisational Arrangements

8.2.1 Contractual Arrangements

The organisational/contractual arrangements for the implementation of the Department's infrastructure programme are shown diagrammatically in Figure 8.2.1.

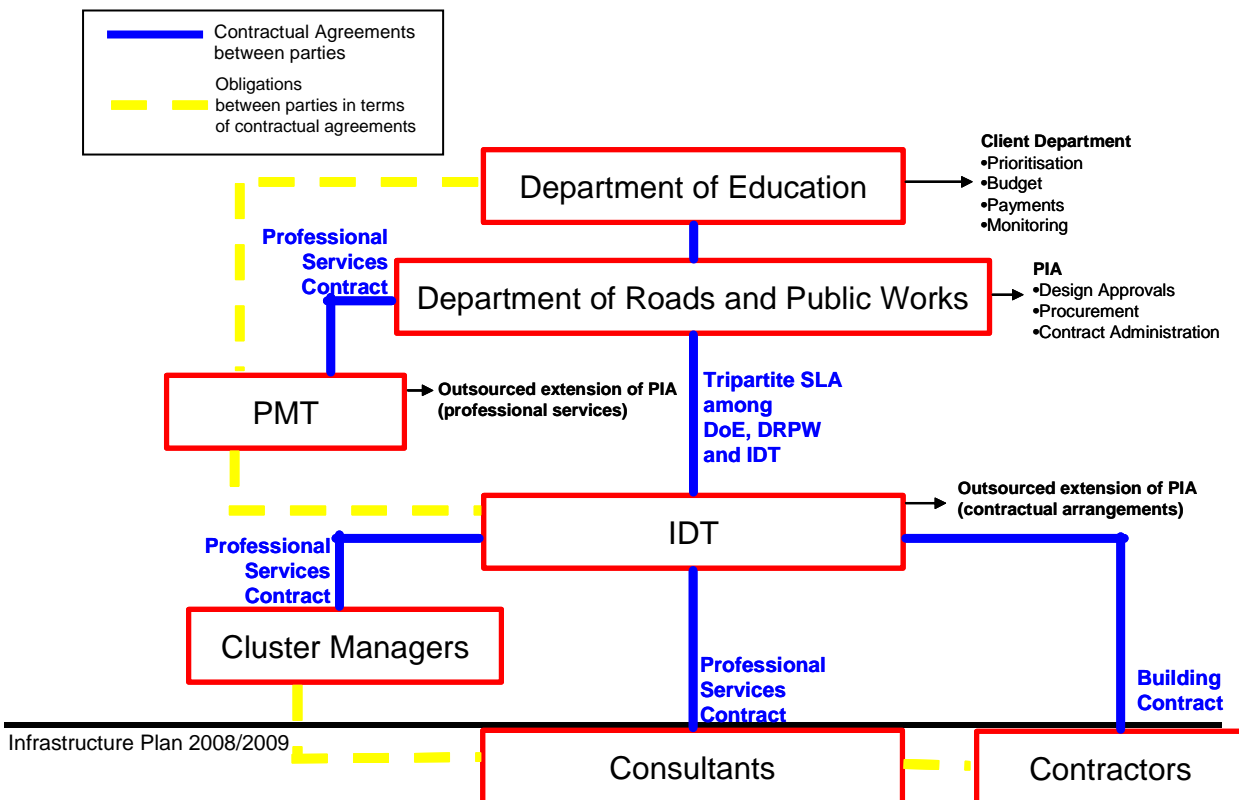


Figure 8.2.1: Organisational/Contractual Arrangements



8.2.2 Implementation Management

The delivery mechanism is inherent in the structure described above. While the Department of Public Works has sub-contracted most of its implementation functions to the IDT, the Department of Education is still responsible for:

- Planning
- Monitoring/delivery

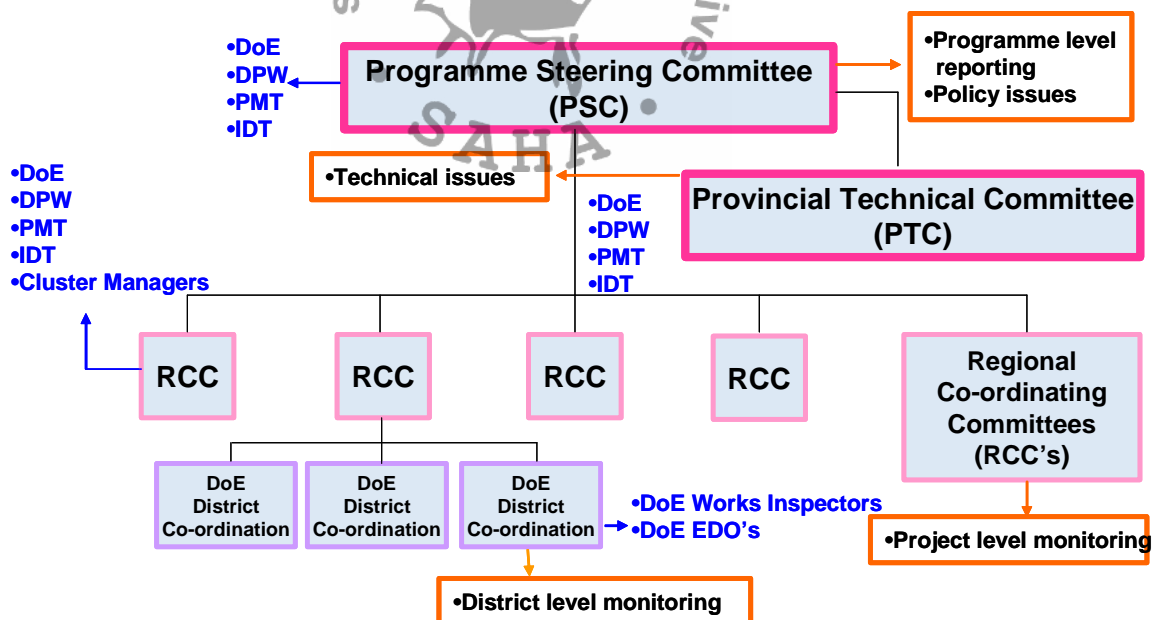
The Eastern Cape Department of Education manages the latter functions through chiefly three structures, viz:

- Provincial Steering Committee
- Provincial Technical Committee
- Regional Co-ordinating Committees

The planning function is undertaken by the Eastern Cape Department of Education, and is based on information contained in its Education Facilities Management System (EFMS). This is also coupled to the Department's asset management function.

Both the planning (and asset management) and delivery management functions require sufficiently skilled personnel at both provincial and district level. These personnel requirements are described in Section 7.2.

The programme implementation is managed by the following structure:



➤ **Provincial Steering Committee (PSC)**

Representation: Senior Management of Department of Education,
Department of Public Works and IDT

Functions: Overall management of programme
Decision making body on all major issues affecting
programme (eg: scope, budget, etc)

Meeting Frequency: Quarterly

➤ **Provincial Technical Committee**

Representation: Line function managers of Department of Education,
Department of Public Works and IDT

Functions: Day to day decision making
Formulation of recommendations to the PSC
Reviewing of all technical issues referred by RCCs
Pro-active technical product evaluations

Meeting Frequency: Monthly

➤ **Regional Co-ordinating Committees (RCCs)**

Representation: IDT management, consultants (Principal Agents/Cluster
Mangers), Department of Education district
representatives and Department of Public Works
regional representatives

Functions: Progress and quality monitoring

Meeting Frequency: Monthly

8.2.3 Roles of the Parties

➤ **Department of Education: (Client department)**

Infrastructure planning

- Project identification
- Prioritisation
- Budgeting
- Conceptualisation

Delivery management

- SLA management
- Payments
- Monitoring and evaluation
- Handovers

Asset management

- Facilities management
- Property management
- Electricity and telecommunications

Infrastructure systems management

- EFMS maintenance
- Data management
- Systems management

➤ **Department of Public Works (and agents): Programme Implementing Agent (PIA)**

Design and procurement

- Appointment of consultants
- Design approvals
- Tender procurement

Construction

- Contract administration
- Payment recommendations
- Reporting
- Variations
- Commissioning

Note that the PIA is expected to comply with all the requirements of the CIDB Act, and also promote the principles of the EPWP.

The IDT has entered into a tripartite Service Level Agreement (SLA) with the DPW and the DoE to act as PIA. The IDT in turn contracts consultants and contractors for the specific projects. This SLA makes provision for dealing with default by any other parties, but will be strengthened in 2006/2007 to enable the DoE to deal more firmly with under-performance by the PIA before it gets to the stage where dispute resolution is required.

The DPW has contracted a consortium of professionals (called the PMT) to assist it with budgeting, reporting and co-ordination.

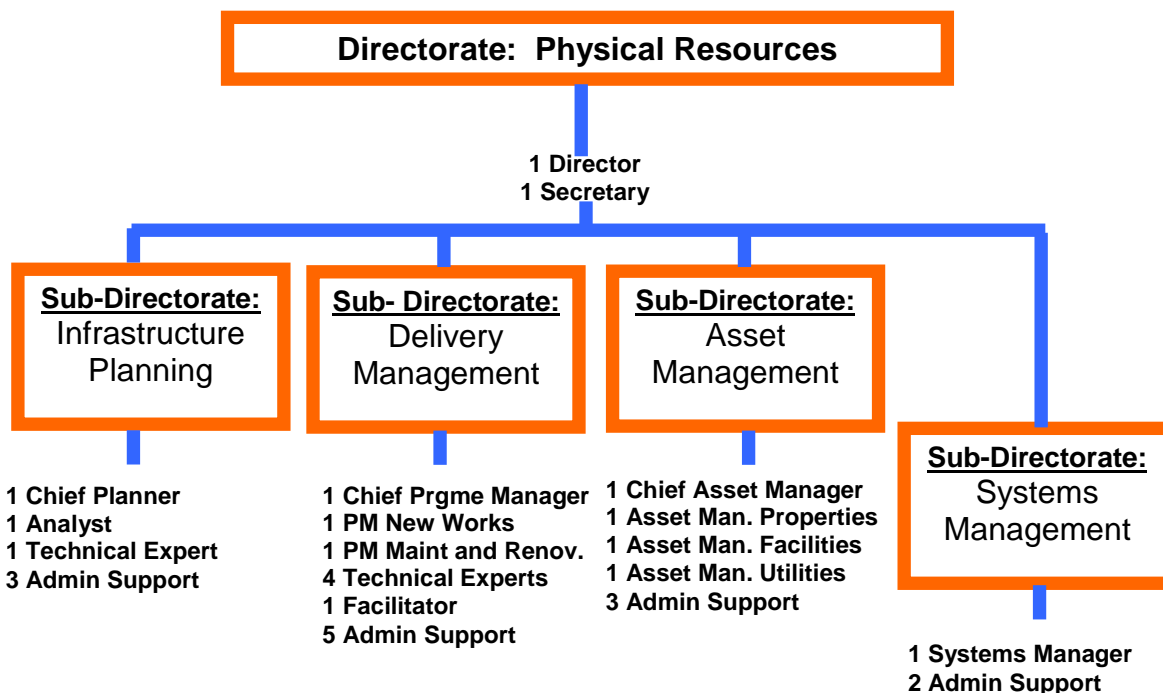
8.3 Human Resource Requirements

To Reviewed in Line with Requirements of the Organisation

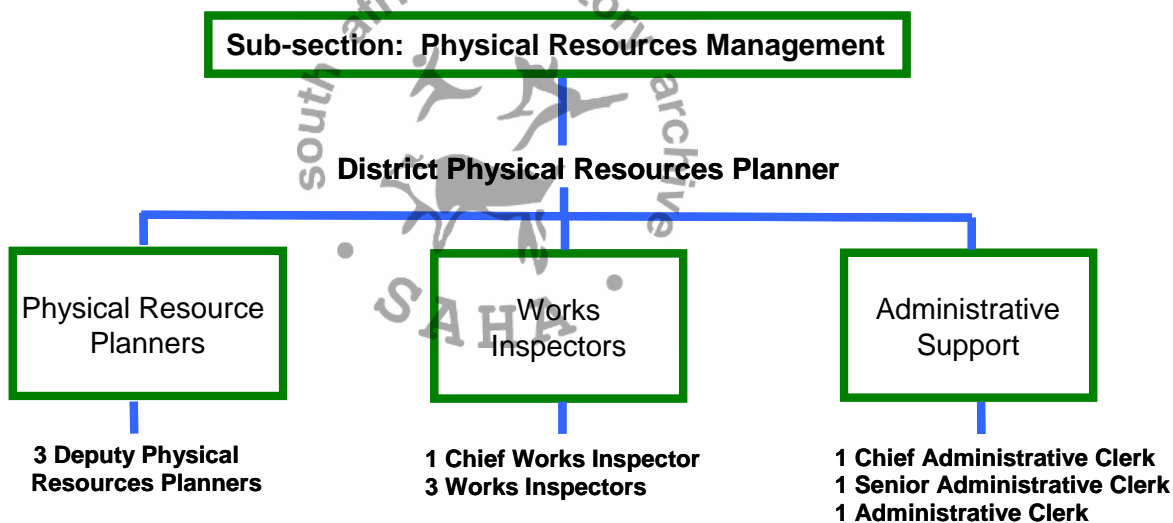
8.3.1 Required Internal Organisational Structure

The required structure for the Department of Education to manage a programme of this magnitude, and on such an extensive scale as the physical environment of the Eastern Cape demands, is set out below:

Provincial Level



District Level



The implications of this structure can be summarised as follows:

- Required staff complement 255
- Estimated annual salary requirement R29m

8.3.2 Current Staffing Levels

The current organogramme is shown below, together with an indication of the posts that are presently filled.

Provincial Level

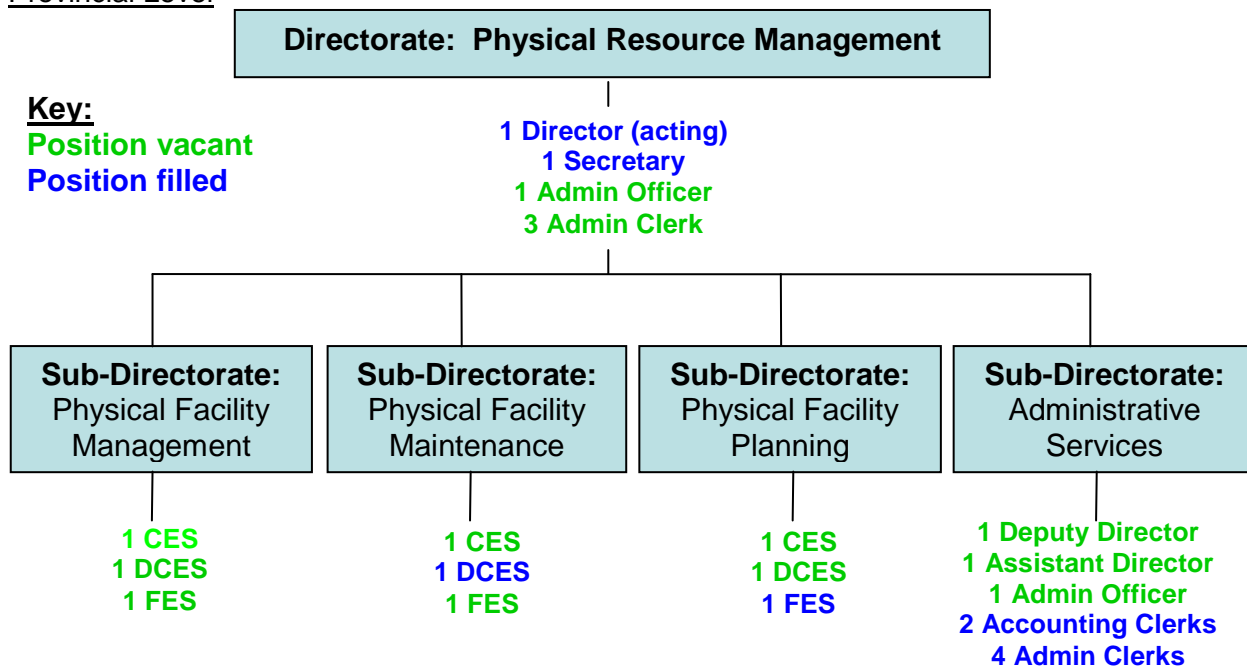
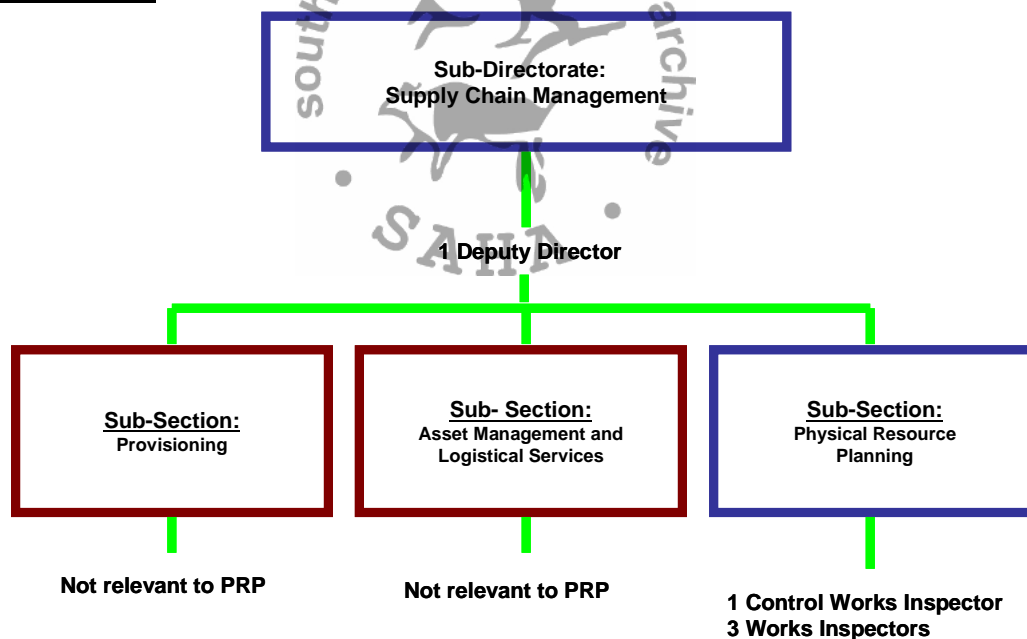


Figure 8.2.2: Organogramme for Directorate: Physical Resources Planning

Clearly the unit is severely understaffed, and therefore does not function along the lines indicated at provincial level.

District Level



Very few, if any, of the Physical Resource Planning posts are filled at district level. In fact the Department has only four Control Works Inspectors in the entire Province.

8.3.3 Interim Capacitation

The Department acknowledges that its Physical Resource Planning units (provincial and district) are badly understaffed. It also acknowledges that, given the ruling

budget restrictions and other constraints, this situation will not be turned around in the short to medium term. Other arrangements therefore need to be made to enable the Department (through the PRP units) to perform its planning and delivery management functions. These are briefly described below:

1. Education Facilities Management System (EFMS)

This is a powerful database system which the Department can utilise to support planning, delivery management, maintenance and asset management. There are, however, three aspects thereof which need to be addressed urgently if it is to provide this functionality at an effective level of sophistication:

(a) Additional Modules

There are modules of the EFMS which were not provided initially (programmed for Phase 2), and which now need to be installed. An application for funding in this regard has been submitted to the DBSA.

(b) Updating of Data

The effectiveness of the EFMS is only as good as the quality and relevance of its data. Resources and a process need to be put in place to ensure that the data is updated regularly. This is addressed later herein.

(c) Skills Enhancement

PRP personnel, both at provincial and district levels, need to be sufficiently enskilled to capture information and draw informative reports from it. This training and mentorship process is also included in the funding application to DBSA mentioned above.

(d) Outsourcing

There are certain seasonal planning activities for which it is not cost effective for the Department to employ personnel. These will be outsourced to specialists when necessary.

2. Dedicated District Personnel

In the districts which do not have PRP personnel (ie: Works Inspectors) this function is performed by a variety of persons. Hence no one person acquires the necessary skills to support the function. Similarly training programmes for district PRP personnel tend to be inconsistently or poorly attended. Whilst it is understood that district offices are also understaffed, it is crucial that a dedicated person be allocated to the PRP function by the district Managers. A process to establish dedicated persons at district offices is under way, but may be restricted by availability of personnel.

3. Functions and Skills

Within the Provincial unit, and while understaffed, the allocation of functions to dedicated personnel is important. This will also go a long way towards avoiding crisis management. It is then also important that the allocated personnel (both on provincial and district levels) be enskilled to perform these

functions through training programmes. This will also assist them in outsourcing effectively.

4. Outsourcing

The most effective short term solution (and possibly also long term) to human resource shortages, is to outsource the requisite functions to suitably skilled organisations or individuals. This will have cost implications, which will need to be carried by the capex budget, but can be very cost effective if managed correctly. This solution has been utilised in the past, and ways to improve efficiency and cost effectiveness are being explored.

5. Systems and Procedures

Effective and efficient procedures and systems are critical if planning and delivery management is to be performed in an understaffed environment. Through the IDIP programme, it is hoped that sufficient support will be provided to ensure that these are adequately put in place.

In particular, a comprehensive Procedures Manual needs to be drafted which will ensure that all roleplayers understand the processes involved, and their functions therein.

6. Infrastructure Plan

The establishment of a comprehensive Infrastructure Plan approved by all the stakeholders is essential for efficient management and succession planning. The completion and finalisation of this Plan will therefore also strengthen the PRP unit's functioning.

8.4 Systems and Procedures

8.4.1 Accounting/Financial System

This system is in place and is working efficiently. There are no undue delays in payments to suppliers.

8.4.2 Infrastructure Management System

There is an Education Facilities Management System (EFMS) in place. It does have shortcomings that are being addressed (see previous section), viz:

- Additional modules
- Updating of data
- Training and mentoring

Once fully operational, the EFMS will provide all the planning and delivery management information requirements of the unit.

8.4.3 Reporting System

The PRP unit is in the process of integrating and the various reporting requirements placed on it into a single system which will be captured in the EFMS.

Systems are also to be put in place to facilitate updating of information for the Infrastructure Plan on an annual basis.

8.5 Financial

The financial implications of the organisational and support requirements over the next ten years as set out herein are as follows (note that these are based on the downscaled interim capacitation plan as set out in Section 8.2.3):

8.5.1 Salary Budget

The current salary budget of the PRP Unit is R1,148m per annum. This will need to increase significantly in future to the projected personnel complement.

8.5.2 Upgrading and Maintaining EFMS

The cost of upgrading and maintaining the data on the EFMS, together with training and mentorship of personnel, is estimated at R4,5m over a two year period.

8.5.3 Outsourcing

The specific functions to be outsourced are still being determined to ensure efficiency and cost effectiveness. In the past this has been as much as R10m per annum which also includes a number of DPW functions.

8.5.4 Other

There are a number of other costs to be allowed for, such as seasonal outsourcing of specialist planning support, training and technical development, computer upgrading and maintenance, etc. These costs are still being determined as part of the proposed Capacitation Plan.

9. MONITORING AND IMPROVEMENT OF PLAN

9.1 Performance Measures

The Department sees the performance of this Plan not only in the achievements of the commitments set out herein, but also in the extent to which it reflects the realistic aspirations of the Department and, more especially, the extent to which it is acknowledged by all stakeholders as a comprehensive and reliable source of information on the entire Department's plan for infrastructure delivery and management in the short, medium and long term.

Performance measures are still to be set, but these will be designed to reflect the intentions expressed in the paragraph above.

9.2 Monitoring and Review Procedures

The Department, through the PRP 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 and IDT) over the past year against the Plan, using the various performance indicators as described earlier herein.

The above process will be facilitated by an active link being established between the EFMS and performance reports which are also being set up. This will make it easy to monitor the effectiveness of the Infrastructure Plan.

9.3 Improvement Programme

This is the first edition of the Infrastructure Plan 2005 – 2014, and it is envisaged that significant improvements will be effected as infrastructure delivery proceeds and information systems are enhanced.

The improvement programme will be based on the following activities which will be undertaken annually, and incorporation thereof will form part of the annual review process:

- Interviews with stakeholders
- Monitoring of performance reports
- Benchmarking against international best practices
- External auditing
- Rigorous annual reviews



REFERENCES

REFERENCES

- Reference 1: Division of Revenue Act: Act 1 of 2007
- Reference 2: South African Schools Act: Act 84 of 1996
- Reference 3: Eastern Cape Department of Education Strategic Plan 2006/2007
- Reference 4: Design Guidelines for Provision of Physical Infrastructure:
EC DoE 2005





ANNEXURE A:
Capex Programme Project List for 2008/2011