MPUMALANGA DEPARTMENT OF EDUCATION

USER ASSET MANAGEMENT PLAN [Infrastructure Plan]

2010/2011 to 2020 / 2021

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CONTENTS

ANNEXURES:

Annexure A: Legislative Mandate
Annexure B: Norms and Standards
Annexure C: Condition Assessment of Provincial Schools [NEIMS 2006]
Annexure D: Incomplete Project List 2004/2008
Annexure E: Unsafe/Mud Schools Project Details
Annexure F: Project List for 2010/2011 and subsequent years

ABBREVIATIONS

ASGISA	Accelerated Shared Growth Initiative South Africa
CBO	Community Based Organisation
cidb	Construction Industries Development Board
DDG	Deputy Director General
DME	Department of Mineral and Energy Affairs
DWAE	Department of Water Affairs and Forestry
EMIS	Educational Management Information System
FET	Further Education and Training
GIAMA	Government Immovable Asset Management Act
GIS	Geographical Information System
HOD	Head of Department
IPG	Infrastructure Provincial Grant
IDIP	Infrastructure Delivery Improvement Programme
IDP	Integrated Development Plan
IPIP	Infrastructure Programme Implementation Plan
IPMP	Infrastructure Programme Management Plan
JIPSA	Joint Initiative on Priority Skills Acquisition
MDoE	Mpumalanga Department of Education
MDPWR&T	Mpumalanga Department of Public Works
MEC	Member of the Executive Committee
MTEF	Medium Term Expenditure Framework
NEIMS	National Education Information System
NCS	New Curriculum Statement
NGO	Non Governmental Organisation
NQF	National Qualifications Framework
NSDP	National Spatial Development Perspective
OST	Operational Support Team
PGDP	Provincial Growth and Development Plan
PPPFA	Preferential Procurement Policy Framework Act
PTAT	Provincial Technical Assistance Team
SADC	South African Development Community
SASA	South African Schools Act
SDA	Service Delivery Agreement
SG	Superintendent General

List of Tables

List of Figures

List of Maps

EXECUTIVE SUMMARY

[a] Introduction

The Infrastructure Plan of the Department of Education, Mpumalanga Province, for the ten year period sets out the policy and implementation framework according to which the infrastructure budget will be utilized to maximize the attainment of educational and other developmental objectives in the Province.

The context for the development of the infrastructure plan is identified as follows:

a] To progressively address the infrastructure needs that are identified based on demographic factors operating in the province and the wider sub-regional context. These include such factors as population growth and decline due to natural population increase and migratory considerations;
[b] To address issues of inequality in infrastructure provision between urban and rural areas and between historically defined white and black areas;
[c] To make as effective use of available infrastructure funding as possible by clarifying the policy and operational criteria according to which infrastructure spending will take place.
[d] Ensuring that the plan developed is supportive of the national and provincial developmental agenda.
[e] Developing rational and sustainable policies and practices with respect to educational asset management within the province.
[f] To give urgent attention to the organizational concerns of the Department, such that the infrastructure plan developed can be implemented progressively within a conducive and supportive environment.

[b] Plan Structure and Methodology

The latest Infrastructure Planning module, as outlined in the cidb Toolkit, is used to provide both structural and content direction to the plan. The plan consists of different sections and supporting appendices that illustrate the public schooling infrastructure challenges experienced in the province; that set the goals, objectives and targets; that describe current infrastructure delivery practices and the extent of outstanding needs that still need attention; the supply gap is recognised and the various strategies of the Department are then presented; the financial implications of the plan are noted ; the organizational aspects are highlighted and, finally, those aspects of the plan that need improvement are examined. Supporting appendices contain addition details of the plan.

[c] The Infrastructure Plan

The province has a total of 1933 public ordinary schools [1230 primary schools, 426 secondary schools and 277 combined schools] providing an education to 1 033 966

learners scattered across the province, but with noticeably higher levels of learner concentration in urban centres and in defined pockets as illustrated in Map 1 in the plan.

Ten infrastructure provisioning challenges are spelt out. These are:

- **Accessibility to schooling opportunities:** The pattern of distribution of schools is such the many learners cannot easily access schools. This problem is especially acute for poor communities.
- **Access to uneven or inequitable schooling opportunities:** The apartheid legacy of inequitable schooling infrastructure provision across the geographical space of the province will take many years to address if the objective of equalizing the provision of educational opportunities is to be achieved.
- **Schools without even the most basic levels of services and facilities:** Schools across the province, but with the highest concentration in poor communities, lack many of the most basic services and facilities required to offer a conducive environment in which effective learning and teaching can take place.
- **Uneven utilsation of the schooling infrastructure provided:** Even given the infrastructure inadequacies of many schools there are instances where they are grossly overcrowded whereas adjoining schools are being poorly used. Complex reasons might be at play to explain this. The net however is that such patterns of use impact on the quality of the learning situation and intervention in managing this situation is indicated.
- **Limited educational infrastructure budgets:** Given the scale of infrastructure backlogs, the level of annual budget allocations will mean that it will take many years of sustained investment to address the challenges. Sensible planning and the progressive roll out of infrastructure projects will be important to optimize the budget funds that are made available.
- **Organisational considerations:** The Department has capacity constraints and a shortage of technical and managerial expertise as regards its ability to plan for and implement effectively its infrastructure obligations. These organisational concerns need attention urgently.
- **Quality of Infrastructure Planning:** Effective implementation requires good planning. This needs to be supported by appropriate data collection, data analysis and sound planning methodologies. The Department must give a higher priority to strengthening its planning capability.
- **Effective Asset Management:** The Department is unable to manage its stock of physical assets without the requisite information to hand. Infrastructure management plans and maintenance interventions require that this is attended to urgently.
- **Effective Management of Service Delivery Agents:** Managing the multiple service delivery agents of the Department, and having to deal with their own organizational inadequacies, is an ongoing aspect of concern. These problems are compounded by the Departments general lack of technical management capacity and experience.
- **Consultant professionalism and contractor capacity:** Just as government is grappling with its own organizational concerns, so too are there concerns about

consultant professionalism in some instances and the levels of performance of the contracting sector.

The Infrastructure Plan undertakes a SWOT analysis of the Department and its operating environment. Key strengths of the Department include its political and senior management commitment, having a core of willing personnel and established structures, adequate technology and having a data rich environment. Equally, the plan spells out the key weaknesses as being a shortage of a core of effective management personnel, inadequate infrastructure budgets, poor data management, inadequate time spent on planning activities, poor use of technological resources, propensity to adopt untested schemes and weak business systems and processes.

In order to focus the outcomes of the plan national and provincial educational and developmental objectives are reviewed. Nationally, cognisance is taken of AsgiSA and JIPSA as well as key legislative mandates, perhaps the most significant being the South African Schools Act. At the provincial level those aspects of the Provincial Growth and Development Strategy [2004-2014] with relevance to social and human resource development are highlighted. At the Departmental level its Five Year Strategic Plan [2005-2008] spells out the vision, mission and the strategic objectives applicable. Aspects pertaining to Sub Programme 2.6A, dealing with infrastructure specifically, is examined in detail as this creates the framework within which infrastructure school provisioning takes place. Finally, the Departmental infrastructure targets, for all infrastructure types, is detailed.

The plan undertakes a stakeholder analysis identifying not only key constituencies that have an interest in the activities of the Department, but are also impacted by its infrastructure delivery performance.

Section 3 of the plan contains an extensive analysis of the current levels of service in schools in the province. This analysis, extracted from the National Education Information Management System, looks at the availability of services to schools in the first instance. This is followed by examining the availability of ablution facilities, fencing and security aspects, overcrowding in classrooms and access to libraries, laboratories, computer and sporting facilities. The overriding conclusion that is drawn from this analysis is that the scale of infrastructure backlogs is such that only sustained investment by the province over many years will enable the stated infrastructure targets to be met. The solutions will not be quick fixes and it is important that this reality is brought home to those concerned.

Other aspects covered in this section of the plan are the provincially applicable norms and standards concerning public schooling infrastructure. In this regard it is of note that the nationally applicable standards have relevance and are being applied within the province. **Annexure B** of the plan offers a detailed exposition of the applicable norms and standards. Finally, tabular presentations, extracted from the Regional Infrastructure Plans, illustrate the levels of service applicable across the circuits and regions of the province.

Section 4 of the plan examines the need or demand for schooling infrastructure. A review of the demographic trends is undertaken noting, in particular, the strong growth in certain growth nodes and the decline in others. An assessment of the patterns of economic growth and development also illustrate the macro trends operating in the province and the implications for the growth of towns and the depopulation of other areas.

A range of other factors impacting on the demand for schooling infrastructure is discussed including, for example, addressing the regional school imbalances in the Bushbuckridge and Ehlanzeni Regions; responding to the general shortage of secondary schools in the province; addressing earlier stated concerns about the inequitable levels of school provision; implementing the policy of providing nutrition to learners and thus an emphasis on the provision of kitchens; implementing the new curriculum in schools; the policy relating to school hostels; dealing with infrastructure provision within the context of small schools; scholar transport and the impact of this on demand aspects; moveable classrooms and their use to address immediate requirements; addressing concerns related to unsafe and mud schools; responding to changes in settlement patterns; the use of technology in schools and services related issues relating to electricity, water and sanitation.

The demand for infrastructure is best encapsulated in the tables extracted from the Regional Infrastructure Plans showing, per infrastructure type, the needs that exist in the various circuits of the province. Finally, all these regionally expressed needs are brought together in a single table, which in effect represents the quantum of current infrastructure needs that can be said to exist in the province as a whole.

Section 5 of the plan looks critically at the levels of infrastructure investment that have taken place historically since 2003/2004 in the province. This shows that the budgets allocated have grown from some R265 million in 2003/2004 to approximately R420 million in the 2009/2010 period. Also, the analysis shows the varying performance of the Department to spend its budgets. Extending the expenditure analysis further, this section of the plan contains a review of actual infrastructure delivery achieved, as recorded in the records of the Department of Public Works, over the period 2004/2008. The patterns of expenditure favouring new classrooms, toilet provision, the provision of water, school electrification and fencing are noted. Also the extent of maintenance achieved is recorded and again the most notable feature is the maintenance work carried out to some 1366 classrooms over the four year review period.

The analysis of the rate of construction is concerning as it clearly reveals that the province is not delivering at the required rates in order to achieve its stated infrastructure delivery targets. In fact this analysis shows that currently it will take 12 years to address the classroom backlog, 55 years for computer centres, 335 years for libraries to be delivered etc. Indeed, the severity of the challenges facing the province are made all too apparent from this analysis. Finally, in Section 5 of the plan the assessed condition of schools, the whole question of the compilation of asset registers for schools and the

manner in which the 2009/2010 budget of the Department is allocated across a range of different project types is examined.

This last aspect is reviewed some detail below:

A budget of R419,2 was approved for infrastructure expenditure in 2009/2010. However, owing to various project accruals that had to be taken account of owing to the extent of expenditure achieved in 2008/2009, the actual budget that could be planned to be utilized amounted to R324,7m. In the light of this, and allowing a contingency amount of R10m in the case of contract disputes arising, has enabled the Department to make the following project allocations:

2009/2010 Infrastructure Delivery Programme

Project Type	**Budget Allocated [Rm]**	**Implementing Agent**
Incomplete projects 2004/2008	R108,0	MDPWR&T
Singita Projects	R83,0	MDPWR&T
Unsafe Structures [Mud Schools]	R29,8	MDPWR&T
Special Schools	R29,0	MDPWR&T
Septic tanks [Mataffin Schools]	R1,2	MDoE
New School Projects	R71,0	MDPWR&T
Roofing [Gert Sibande Schools]	R9,0	MDPWR&T
Kitchens	R2,5	MDPWR&T
Grade R provision	R2,6	MDPWR&T
ADDITIONAL ITEMS		
Contract dispute provision	R10,0	
Organisational support [4%]	R16,7	

[a] **Incomplete Projects: Appendix D** provides details of all the Incomplete Projects and their current budgeted values to complete them. In brief, incomplete projects can be summarized as follows:

- 04/05 Projects: 8 in total [value R4,9m]
- 05/06 Projects: 10 in total [value R9,4m]
- 06/07 Projects: 23 in total [value R57,6m]
- 07/08 Projects: 80 in total [value R1,238bn]
- 08/09 Projects: 28 in total [value R4,7m]

[b] Singita Projects: These are projects identified as being necessary in the Bushbuckridge area to repair schools that have experienced storm and other damage, as well as to provide a range of other facilities. In short, there are 25 of these projects with a total estimated contract value of R111m. Financial provision in the 2010/2011 financial year of an amount of R28m will be necessary to complete the projects identified.

[c] Unsafe Structures/Mud Schools: These are schools identified in the province that have been mostly constructed by the communities themselves and that require to be comprehensively rebuilt to accord with National Building Regulations [NBR]. A overview of these batch of schools is as follows:

- School projects are broken down into Priority 1 and Priority 2 projects;
- Priority 1 [14 projects] have a value of R38,3m;
- Priority 2 [6 projects] have a value of R13,6m;
- 18 of 20 projects are located in the Gert Sibande Region;
- R29,8m has been set aside to fund these projects in 2009/2010
- The balance of the funding required for the completion of this project will be included in the 2010/2011 financial year.

Appendix E contains the details and project values of these schools.

[d] Special Schools: These are schools built to address the needs of learners with special needs. There are a total of four projects falling into this category, valued at R29 million.

[e] Septic Tanks- Mataffin Schools: Provision has been made for this item until the schools concerned have been constructed, one of which, the Cyril Clarke Secondary School, will be constructed, substantially, during the 2009/2010 financial year.

[f] New School Projects: In this regard a total of eight schools with a total project value of R71m. Three projects will commence construction this financial year [Cyril Clarke Secondary, Kunjuliwe and Magudu School] with all the others being in the planning and design phase. It is of note that in the case of the Cyril Clarke School that a donation of R7, 5m from the Vodacom Foundation has been secured.

[g] Roofing: A number of schools in the Gert Sibande region have been identified as needing urgent roof repairs and that unless the roofs concerned are attended to much more significant damage to the schools concerned will result. Effectively these can be considered as preventative maintenance projects.

[h] Kitchens: In this instance a total of R2, 5m has been budgeted to provide kitchens in four schools. Kitchens are considered a priority to support the objectives of the Schools Nutrition Programme.

[i] Grade R Provision: Here a total of 70 Grade R Centres have been identified and a budget of R37 000 each has been made available to proceed with planning and design activities in the 2009/2010 financial year.

Section 6 of the infrastructure plan focuses on issues relating to asset management. Regarding the acquisition of new infrastructure, the need to respond to the delivery targets set is underlined, as is the manner in which decisions are taken to identify new infrastructure requirements. Here the importance of inputs from school principals, circuit managers and physical resource planners is highlighted.

Policies with respect to routine maintenance and planned maintenance are explained, including the commitment of the Department, made previously, that such maintenance should receive a total of 10% of the annual budget allocation. However this section of the plan recognises that until such time that the Department is able to complete the finalization of its asset registers, it remains impossible for it to finalise its Infrastructure Maintenance Plan. The steps that have been taken to appoint a service provider to complete the asset registers in the 2009/10 period are, however, noted. As regards the Department's infrastructure renewal and replacement plan, it is also noted that it is unable to develop its plans in this regard until the current condition of buildings is assessed as part of the asset register preparation exercise. Finally, certain schools due for disposal are noted.

Section 7 of the document reviews the all important financial aspects. Here it is noted that funding for schooling infrastructure is made available via Equitable Share allocations and via the Infrastructure Provincial Grant. The value of the MTEF allocations for the period 2009-2015 are presented. The budget available for the 2010/2011 period is R 441,1 million, an increase of some R25 million over the previous financial year.

The analysis of financial requirements illustrates that approximately R 1,5 bn is required to complete historically identified projects for the years 2004-2008, inclusive of an amount of R123,1 million that is needed to be set aside to complete 2009/2010 project commitments. In addition to this, the analysis shows that if one takes account of all the other components of the backlog, as identified in the Regional Resource Plans, there is a further requirement of some R 5,1 bn required.

Discussing the implications of the financial analysis the following points are noted:

- Assuming the current R400-R500million commitment to school infrastructure in the province, this suggests at least a 13-16 year time period to address existing school infrastructure needs;
- In reality, because one is dealing with an expanding school population the time period to address needs will take longer than this;
- Also given that the above costing exercise has used present day construction values, the R 6,5bn price tag estimated will also increase over the delivery period of the infrastructure;
- The magnitude of the challenge identified above underscores, critically, the need for long term [20 year] infrastructure planning and not short term thinking;
- The scale of need and the ability to achieve the delivery targets set by the Department emphasizes the importance of efforts to optimize the number of schools in the province relative to the learner population. In short, there are simply too many small schools with cost per learner ratios that are not making the most optimum use of available budgets in the province;
- Careful thought is required so as to identify savings in the entire Department of Education budget so that additional resources can be mobilized to address infrastructure needs; and

- Infrastructure delivery must be accorded greater importance in the overall budget allocations of the province for without this, and the corresponding attention being given to the province's ability to spend additional budgets made available, the performance of the overall public schooling system in the province will not meet the expectations demanded of it.

The financial section of the plan presents the proposed allocation of the 2010/2011 budget. This is presented below, together with supporting notes.

Budget Item	**Budget Allocation**
2010/2011 Infrastructure Budget	R 441 071 000
DORA support @ 4%	R 17 642 840
Available for Infrastructure Spend	**R 423 429 160**
Carry Over 2010/2011 Commitments	
Singita schools	R 28,000 000
Unsafe/Mud Structures	R 22,100 000
New School Projects - Cyril Clarke - Magudu - Kunjuliwe - John Mdluli - Khulifunde	R 73,000 000
Sub- Total	**R 123 100 000**
New Commitments	**R 300 329 160**
Reactive maintenance [5% of budget]	R 21 171 458
Planned maintenance [5% of budget]	R 21 171 458
Incomplete projects	R 75 237 000
Water/Sanitation [Water x 100/Sanitation x500]	R 47 500 000
Electrification [50 schools]	R 10 000 000
Fencing [50 schools]	R 12 500 000
Grade R [40 schools]	R 12 000 000
Science laboratories [20 schools]	R 14 000 000
Computer Centres [20 schools]	R 12 000 000
Libraries [20 schools]	R 14 000 000
Hospitality Studies [20 schools]	R 16 000 000
Kitchens [20 schools]	R 15 000 000
Classrooms [60]	R 18 000 000
Admin buildings [4]	R 5 000 000
Halls [3]	R 6 750 000
Sub- total	**R 300 329 160**
GRAND TOTAL	**R 423 429 160 [100% of budget]**

In presenting the above proposed allocation of the 2010/2011 infrastructure budget the following are noted:

[a] Provision for Existing Projects: The necessary funding is allocated to continue with and complete projects currently underway and for which funding must be committed.

[b] Restoration of maintenance budgets: After an under allocation of these budgets for a number of financial years their restoration will now allow critical maintenance tasks to be addressed.

[c] Emphasis on health and safety considerations as a key priority: The provision of water, sanitation, electrification and fencing are all accorded a high priority in the allocation of the budget. The targeting of 100 schools for water, the construction of 500 toilets and the electrification and fencing of 50 schools each is considerably above funding allocations in previous financial years. This is because without the essential aspects being met the quality of the schooling experience can be seriously affected.

[d] Grade R Centres: The allocation provides funding for 40 such centres in recognition that special attention must be given to assist those with remedial needs in order to extend educational opportunities to those requiring special coaching.

[e] Provision of Specialised Teaching Spaces: The allocation takes account of the need to expand the provision of these in order to enrich the learning experience afforded learners and to offer them the chance to acquire particular competencies. In each instance 20 additional laboratories, libraries, computer centres and facilities for hospitality studies are provided for in the proposed allocation.

[f] Kitchens: The provision of funding for additional kitchens gives support to the Department's policy in this regard.

[g] Classrooms and Incomplete Projects: The allocations in respect of these will enable 60 new classrooms and three new schools to be provided for, representing a further 60 classrooms in total.

[h] Administration buildings and school halls: Although funds have been allocated for these purposes these allocations are given lesser importance.

Following the assessment of the financial aspects, the infrastructure plan addresses the all important organization and support plan elements.

This section of the report recognizes that it is the department itself, using its human resources, procedures, processes and systems, that will deliver on the infrastructure plan it has developed. Consequently, this section describes the organizational structure and functional relationships that are responsible for infrastructure delivery. Gaps and

organizational weaknesses are highlighted in order to concentrate management attention on these aspects.

The final section of the plan is concerned with how the plan, as presented, can be improved. A number of concerns are noted and this is followed up by suggestions as to the manner in which the concerns raised can be addressed.

SECTION 1: Context and Structure of Plan

1.0 CONTEXT

The Infrastructure Plan of the Department of Education, Mpumalanga Province, for the ten year period sets out the policy and implementation framework according to which the infrastructure budget will be utilized to maximize the attainment of educational and other developmental objectives in the Province.

This ten year infrastructure plan, while being predominantly a strategic document offers also policy and operational guidelines to enable the Department and its Regional structures to respond to actual infrastructure needs and the manner in which it will prioritise the use the educational budget to support the achievement of national and provincial objectives. This plan will, in turn, need to be backed up by three and one year operational plans.

1.1 KEY ISSUES

In this plan the key educational infrastructure provisioning issues considered to be:

[a] To progressively address the infrastructure needs that are identified based on demographic factors operating in the province and the wider sub-regional context. These include such factors as population growth and decline due to natural population increase and migratory considerations;
[b] To address issues of inequality in infrastructure provision between urban and rural areas and between historically white and black areas;
[c] To make as effective use of available infrastructure funding as possible by clarifying the policy and operational criteria according to which infrastructure spending will take place.
[d] Ensuring that the plan developed is supportive of the national and provincial developmental agenda.
[e] Developing rational and sustainable policies and practices with respect to educational asset management within the province.
[f] To give urgent attention to the organizational concerns of the Department such that the infrastructure plan developed can be implemented progressively within a conducive and supportive environment.
[g] To identify the organizational and operational risks involved with infrastructure spending and then to devise mitigation actions where feasible.

1.2. STRUCTURE OF INFRASTRUCTURE PLAN

The plan prepared is structured according to Template 2T01 as devised and circulated by the cidb. In summary this document thus consists of:

- **Executive Summary**
- **Section 1: Context and Structure of Report**

- **Section 2: Introduction to Infrastructure Plan**

  This section of the plan provides an overview to the province and notes, in greater detail, the educational infrastructure challenges facing the province. Also an organizational analysis of the department is presented in the form of a SWOT analysis to set the groundwork for later in the plan when organizational issues are again dealt with.

  The policy framework and the high level strategic goals circumscribing the provision of educational infrastructure are then reviewed, notably JIPSA, the National Spatial Development Perspective, the Provincial Growth and Development Strategy, the Five Year Strategic Plan of the province and the applicable Annual Performance Plan. Where it is relevant material is also extracted from the previous Infrastructure Plan of the department. In all of the above instances the purpose of this assessment is to ensure that educational infrastructure provision takes cognizance of national and provincial goals and objectives and that they responded to them in an appropriate manner in the Infrastructure Plan.

  This section also makes reference to the legislative mandates impacting upon educational infrastructure provision and to identifying educational stakeholders. This latter aspect is of particular importance as these stakeholders are in essence the customers and partners of the department and understanding their needs and concerns is considered of particular value.

  Other aspects contained in this section include the nature of data and information available in the preparation of this plan and the planning approach and methodology followed.

- **Section 3: Levels of Service**

  This section describes the norms and standards applicable to infrastructure provision in the province. This is followed by an assessment of the current levels of service that have been achieved and the identification of the most critical infrastructure gaps that still need attention.

- **Section 4: Demand or Need Determination**

  The need for educational infrastructure is determined by a range of factors. These include, for example, demographic trends and population movements, patterns of economic growth and development, policy imperatives to address regionally expressed service level inequalities, changes and differing curricula emphasizes that require new or different infrastructure requirements, technology considerations and the quality of teaching and learner support given the impact that this has on the fluctuating numbers of pupils attracted to particularly “township” schools in the province.

To respond to changing need or demand factors, that express themselves differently over time and in geographical space, a demand management plan is required. Key concerns of this plan will be reviewed.

Section 5: Existing Infrastructure

This section of the report looks at what exists from an infrastructure point of view in the province. It looks at the quantum of schools; their distribution in the province, per region and educational circuit; the essential characteristics of schools and their condition.

Further to the above, this section of the plan examines the infrastructure delivery achieved by the Department over the last number of years as well as examining the current infrastructure delivery per project type.

Note: It is acknowledged that the Infrastructure Plan should contain information on infrastructure valuations. No determinations in this regard have been completed within the province. This is an aspect requiring attention in the future.

Section 6: Asset Management

The policies of the Department with respect to its creation/acquisition of infrastructure, routine maintenance, renewal or replacement and its disposal plan are reviewed in this section of the plan.

Note: The Department has not completed all processes involved in the preparation of asset registers nor has it developed an asset management plan in any detail. The finalization of these registers is recognized to be critical to the drafting of a credible asset management plan. The attention being given to these concerns will be noted.

Section 7: Financial Considerations

This section of the plan looks at costs of infrastructure provision in the province taking into account the need for new and additional facilities, for upgrading facilities, to address backlogs identified and for maintenance purposes. The availability of infrastructure funding historically and over the MTEF period will be examined. This analysis will illustrate the funding gap that exists and the need for the development of funding strategies.

Importantly, this section of the plan contains the proposed infrastructure delivery budget allocation, as well as containing a justification for the choices made. It is noted that in future years the Head Office of the Department will take responsibility for the timely release of these funding allocation guidelines so that

the Regional Offices of the Department are offered the necessary guidance in the selection of those projects that best fit the policy and overall provisioning objectives of the Department in the province.

Section 8: Organisational and Support Plan

This section of the report recognizes that it is the department itself, using its human resources, procedures, processes and systems, that will deliver on the infrastructure plan it has developed. Consequently, this section describes the organizational structure and functional relationships that are responsible for infrastructure delivery. Gaps and organizational weaknesses are highlighted in order to concentrate management attention on these aspects. Certain actions to strengthen organization performance are also highlighted.

Section 9: Plan Improvement

It is acknowledged at the outset that there are indeed a number of aspects of the infrastructure plan that are not up to standard and that will require additional work. These aspects, although in part they have been hinted at in the discussion above, will be addressed in more detail. The steps and the timetable involved in addressing the shortfalls identified discussed in this section of the documentation.

Section 10: Appendices

Consistent use is made of appendices to limit the length of the main report and to maintain the integrity of the plan developed. Appendices are indexed in the text of the plan.

1.3 PLAN METHODOLOGY

The diagram below, extracted from the cidb Toolkit, summarises the planning approach adopted in the preparation of the infrastructure plan.

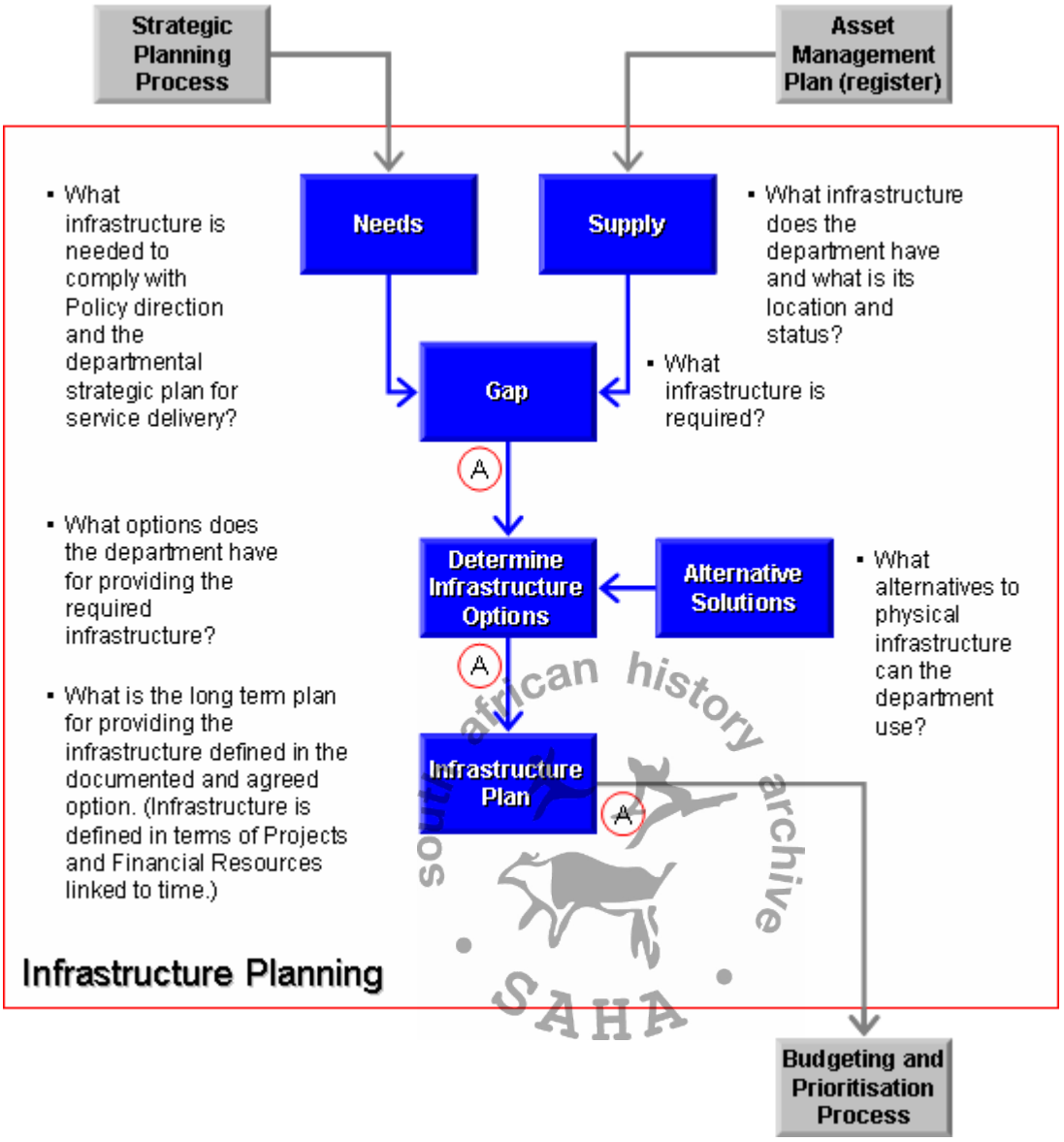


Figure 1. Infrastructure Planning Process

SECTION 2: Introduction to Infrastructure Plan

2.0 OVERVIEW OF MPUMALANGA PROVINCE

Mpumalanga Province, meaning “the place of the rising sun” lies in the north-eastern region of South Africa, with Nelspruit the capital being situated approximately 350km due east of Johannesburg. The province occupies 6,5% of the surface area of the country and according to the mid 2008 estimates it has a population of 3,59 million persons, comprising 7,4% of South Africa’s total population.

Of critical significance is that 46,8% of the province’s population is within the 0-19 years age cohorts. The represents a total of 1,68 million persons thereby emphasizing the concentration of the province’s population within the age brackets typically at school, or about to enter the schooling cycle. These figures attest to the magnitude of the public schooling infrastructure challenge.

From an educational perspective the following figures [extracted from NEIMS 2008 update] are provided to illustrate the context within which school infrastructure provision takes place:

- Total Number of Learners: 1 033 966
- Total number of public schools 1933
- Total Number of Educators: 30 338
- Educator to Learner Ratio: 1: 34,03 [average]

Table 1: NUMBER OF ORDINARY PUBLIC SCHOOLS [Source: NEIMS 2008]

School Type	Number of Schools	Number of Learners
PRIMARY	1230	551195
SECONDARY	426	322669
COMBINED	277	160102
TOTAL	**1933**	**1 033 966**

Table 2: DISTRIBUTION OF ORDINARY PUBLIC SCHOOLS BY SIZE OF SCHOOL [Source: NEIMS 2008]

	Number of Learners in School						
SCHOOL TYPE	**1-30 %**	**31-50 %**	**51-120 %**	**121-240 %**	**241-720 %**	**720-900 %**	**plus 900 %**
PRIMARY	8	5	13	10	41	9	13
SECONDARY	0	0	0	4	47	17	32
COMBINED	0	1	5	13	51	12	18

The above table illustrates that 36% of primary schools contain fewer than 240 learners, while only 4% of secondary schools can be regarded as small schools. Conversely, 49% or half the number of secondary schools are large schools, containing over 720 learners or more. Significantly, fully 32% of secondary schools are considered in terms of the *National Minimum Norms and Standards for School Infrastructure* to be what is termed mega schools being over 900 or more learners.

Another characteristic of the above distribution of primary schools is that the ultra micro, the micro and the small schools with up to 120 learners and having up to a total of, typically 3 teachers, represents a total of 320 schools in the province, many of them being located in rural areas and farming communities. These schools have their own unique management issues, not least at times their questionable viability. They do none the less perform a critical role in providing educational opportunities accessible to their own communities.

Overleaf is a map of the province illustrating the division of the province into three regions, being Nkangala, Gert Sibande and Ehlanzeni, which also incorporates the large urban concentration of Bushbuckridge. In each of the three regions the respective circuits are shown, as well as the distribution of all public schools.

What is of note across the province is the predominantly fairly even distribution of schools, and this is important in strengthening the physical accessibility of schooling opportunities. This aside, there is a clear concentration on schools in poorer communities, many of which were settled originally and grew significantly in the pre-1994 era in which distorted settlement patterns and the development of non-viable communities was driven by the apartheid ideology. These areas include for example, in the western portions of the Nkangala Region and the Bushbuckridge area stretching south, in defined pockets, to the Nelspruit area.

2.1 EDUCATIONAL INFRASTRUCTURE PROVISIONING CHALLENGES

At the outset of the province's public schooling infrastructure plan it is considered useful to assess the key issues and challenges facing the province. These are noted below, not in any specific order of priority, but to illustrate the extensive and wide ranging concerns that need to be addressed.

[a] Accessibility to schooling opportunities: Notwithstanding the earlier observation regarding the pattern of distribution of schools across the province, there are still many instances where the national minimum norm of school learners not having a walking distances greater than 6km to and from places of schooling is not achieved.

[b] Access to uneven or inequitable schooling facilities: It is a truism that the previous apartheid policies resulted in the provision of schools and associated facilities that have not provided all learners with the opportunities to access the same levels of educational infrastructure provision. The disparities are most starkly represented by the levels of infrastructure provisioning typically found at former model C schools and those situated within "township" environments, or within small villages and rurally based communities. The objective of equalizing the provision of educational opportunities in this regard will take the Department many years of concerted investment to achieve.

[c] Provision of schooling without even the most basic of services and facilities being available: As will be apparent from the detailed analysis of services and facilities provided at schools across the province later in the infrastructure plan, significant numbers of schools lack even the most basic of requirements. These range from a ready supply of water, access to electricity, toilet facilities and sufficient classrooms on the one level to no science laboratories, computer facilities and libraries to enrich the educational experienced offered and to create real opportunities for learners to achieve their potentials. Equally, in many instances the most basic administrative spaces and equipment is lacking making the tasks of teachers difficult and often frustrating.

[d] Uneven utilisation of schooling facilities offered: Statistics from around the province make it clear that while in some schools there are adequate teachers and school facilities relative to the number of learners, in other instances there are severe shortages and backlogs, even within a relatively small geographical area. While historical reasons may be partly the underlying factor for this, there are inter and intra regional factors at work too. A key challenge for the Department is to analyse more effectively the host of data sources available to it to better inform effective infrastructure management decisions.

[e] Limited educational infrastructure budgets: While the infrastructure demands on the province are significant, the effective use of the available funds would be aided substantially by holistic planning. It appears that there are a significant number of unviable schools in the province. By greater attention to effective resource utilisation the available budget could be better utilized.

[f] Organisational Considerations: For some years now the capacity and levels of expertise within the Department to plan and implement its infrastructure plan has been compromised. This is still the case in that at both Regional and at the Head Office there is a general shortage of technical expertise and what capacity exists is invariably stretched very thinly. Urgent attention needs to be given to strengthening the levels of technical personnel within the Department.

[g] Approach to Infrastructure Panning: The importance of dedicated and sustained planning of the infrastructure delivery function has not received the attention it requires to become more effective. The reasons for this include inadequate management appreciation of the value of good planning, shortages of personnel qualified and experience in this function, the use of poor planning methodologies, the ineffective collection, capturing and analysis of data, weak management of the planning function and the difficulties of managing the activities of multiple service delivery agents.

[h] Effective Asset Management: Not surprisingly the Department is not able to manage its schooling and other educational assets effectively at the present time. While certain steps have been taken to begin work on the preparation of asset registers there is no overall asset management plan in place. The result of this is a noticeable lack of budget allocations to undertake routine and preventative maintenance actions and the growing backlog that develops. The importance of infrastructure maintenance cannot be emphasized too highly and the Department will need to find ways of funding this priority on a continual basis in the coming years.

[i] Effective management of Service Delivery Agents: The Department utilizes the services of four key service delivery agents at present. These include the Department of Public Works in the province, Aurecon to manage the repair of storm damaged schools in the Bushbuckridge area, the Department of Water Affairs and Forestry concerned with school water and sanitation projects and, lastly, the Department of Minerals and Energy involved with school electrification.

Managing these delivery agents effectively given the technical management problems faced by the Department itself, and dealing with the delivery capacity issues of the service delivery agents themselves is demanding. The Department too has also chosen to manage certain identified projects which has its own challenges.

[j] Consultant Professionalism and Contractor Capacity: The Department is operating in a less than perfect word wherein certain consultants and contractors do not deliver the quality of service expected of them. This is an operational reality that one has to work within.

2.2 DEPARTMENT OF EDUCATION SWOT ANALYSIS

The preceding section of the Infrastructure Plan represents a statement of the problem. This section constitutes a strategic review of the Department itself to identify the organizational strengths and weaknesses and the environmental opportunities and threats.

STRENGTHS

- MEC and Exco commitment
- Data rich environment
- A core of willing personnel
- Adequate technology
- Established organizational structure [eg. districts and circuits]
- Willingness to embrace new ideas

WEAKNESSES

- Shortage of a core of effective management personnel
- An inadequate infrastructure budget relative to provincial needs
- Poor data management and analysis in support of effective planning activities
- Insufficient time spent on infrastructure planning activities
- Ineffective systems [business processes, delegations, policies etc]
- A poor work ethic amongst some officials
- Poor use of technological resources
- Ineffective utilisation of organizational resources
- Consistent under performance
- Propensity to adopting untested schemes
- Lack of prioritized planning against acceptable criteria

OPPORTUNITIES

- Improved and strengthened relationships with service delivery agents
- Greater emphasis being given to the importance of the planning function in the structuring of government
- Effective use of IDIP/OST resources
- Willingness of external role players to support the Department's vision
- Seizing the challenge of developing a million young minds
- A well managed communication and public relations campaign
- Forming partnerships with the business sector to mobilize funding and technology

THREATS

- Community disaffection as a result of poor delivery record
- Politicization of the work force
- Economic downturn
- Corruption, fraud and vested interests

2.3 VISIONS GOALS and OBJECTIVES

The next section of the Infrastructure Plan serves to position this document in the context of both national and provincial developmental and educational goals and objectives that are of relevance to the challenges of infrastructure provision.

The documentation that will be reviewed is:

- AsgiSA and JIPSA
- National Spatial Development Perspective
- Provincial Growth and Development Strategy
- Medium Term Strategic Framework 2009-2014
- Department of Education Strategic Plan 2010-2015
- Infrastructure delivery targets [IPMP 2009/10]

2.3.1 AsgiSA and JIPSA

AsgiSA was originally launched in 2006 with the mandate to identify constraints in the economy and to propose interventions to increase the capacity for growth in South Africa to a sustainable 6% per year in the long term and to address challenges being experienced by the Second Economy.

Of critical importance AsgiSA recognized the essential link in achieving a much more rapid and sustained economic growth trajectory through investment in infrastructure, education and skills acquisition as key priorities.

JIPSA [The Joint Initiative on Priority Skills Acquisition] on the other hand grew out of AsgiSA when it was realized that a number of specific targeted interventions were required to address the skills shortage. Where this is relevant from an educational infrastructure point of view is that JIPSA noted that it was unable to achieve its ambitious targets unless there was a commitment, “to build a strong foundation in public schooling”.

Building such a strong foundation identified a range of actions that were essential. Those of direct relevance and with infrastructure implications for the province include:

- Strengthening the capabilities of the poorest schools;
- Encouraging knowledge acquisition in the foundation phase; and
- Improving mathematics and science capabilities.

2.3.2 National Spatial Development Perspective [NSDP]

Consideration of the NSDP, a strategic approach to guide investment within an analysis of the spatial economy, has been driven from the Office of the Presidency over the past couple of years. Its consideration may be considered to be an unusual document to review for inclusion in an educational infrastructure plan.

The NSDP underlines the importance of addressing "spatial challenges" to address development issues. In this regard the NSDP identifies the following characteristics of communities in South Africa:

Macro-level

- Concentrated areas of high economic activity, high population densities and levels of poverty
- Low economic activity, lack of significant diversification, high levels of poverty.

Micro-level

- Legacy of local apartheid dualism [townships and suburbs]
- Service delivery backlogs
- Spatial fragmentation
- Social and economic exclusion of settlements on the fringes of cities and towns.

In addressing the development challenges identified Principle 5 of NSDP draws the following conclusion:

"In order to overcome the spatial distortions of apartheid, future settlement and economic development opportunities should be channeled into activity corridors and nodes that are adjacent to or link the main growth centres. Infrastructure investment should primarily support localities that will become major growth nodes in South Africa and the SADC region to create regional gateways to the global economy".

and

In meeting the challenges of the future a key requirement is to have a, "functionally linked network of service nodes to facilitate access to …health, **education**, welfare, financial and other service nodes".

The point being made above is that the provision of social infrastructure [including educational infrastructure] in a resource challenged environment, and in one needing to address historical spatial distortions, requires that infrastructure investment is planned and takes place on a integrated basis in support of optimal settlement development. Applying this thinking to the province it is argued that it would be important for the relevant government department to drive the formulation of a provincial spatial

development strategy, that district and municipal IDP's are prepared in support of such a strategy and that both, in turn, are aligned with the provincial PGDS.

From an educational infrastructure perspective, the same logic needs to apply as outlined in the NSDP. Firstly, educational investment takes place within a spatial context. Secondly, the investment in schools needs to take place within the context of a provincial spatial development plan that optimizes the investment of all kinds of infrastructures that support national and provincial development agendas, as well as contributing to addressing spatial distortion legacies. Thirdly, from an educational perspective specifically, the need for, the placement of such facilities and, indeed, the rationalization of existing public schooling infrastructure must be given greater attention within the province.

Such an approach, it is argued, it critical in the province in order to optimize the use of the available infrastructure budget in order to address the extensive backlogs that exist.

NOTE: The need for a provincial spatial development strategy is identified by the Infrastructure Plan. The responsibility for the preparation of such a plan should, it is argued, be the responsibility of the Office of the Premier in the province. For the preparation of such a plan this department should take responsibility for the centralised review and analysis of relevant demographic, socio-economic and development indicator information, for use, in turn, by all provincial departments in their planning and infrastructure investment activities.

2.3.3 Provincial Growth and Development Strategy 2004-2014

The Executive Summary of the PGDS notes that, "The PGDS is intended to provide a much broader level approach to growth and development in the Province and sectors will be required to develop their own implementation plans that will directly achieve the targets of the PGDS".

What then are these targets?

Six priority areas for intervention are identified being:

- Economic development
- Social development infrastructure
- Social development
- Sustainable environmental development
- Good governance
- Human resource development.

From the point of view of educational infrastructure provisioning Key Priority Area 6: Human Resource Development identifies a "strategic thrust" as being to, "Improve access to and ensure quality education". The following targets are identified in this regard which impact on the Infrastructure Plan:

Programmes	Performance indicator	Targets	Responsibility
2. Promote Early Childhood Development (ECD) programmes.	✓ Increase in the number of pre-primary educational facilities.	✓ Access to a pre-primary educational facility is within at least a 5-10 km radius throughout the Province.	✓ Department of Education.
4. Promote a culture of educational management, teaching and learning excellence.	✓ Promote a secure and conducive environment for teaching and learning.	✓ At least 70% of schools should be secured/fenced by the end of 2006/2007 Financial Year.	✓ Department of Education. ✓ Department of Safety and Security.
5. Inclusive Education.	✓ Increased number of educators trained in Inclusive Education principles. ✓ Improved mainstreaming of Inclusive Education in all schools.	✓ All schools make provision for access to learners with disability by the end of 2014.	✓ Department of Education. ✓ Office of the Premier.

These three targets only emphasise certain aspects requiring infrastructure responses. Infrastructure delivery is also implicit in several of the other programmes of the Department, being for example:

- Promoting a culture of educational management, teaching and learning excellence.
- Improving the skills base in order to promote economic empowerment and job creation.

2.3.4 Medium Term Strategic Framework 2009-2014

This framework represents the developmental priorities as outlined by the recently elected ANC led government. Among the five strategic priorities identified by the new administration education is specifically highlighted.

Noted below are the Strategic Priorities and specific targets that are of direct relevance to infrastructure provision for public schools.

[a] MTSF Strategic Priorities 2009-2014

Strategic Priority 2: Massive programme to build economic and social infrastructure

- Provide universal access to electricity, water and sanitation by 2014;
- Develop physical infrastructure [eg. schools in rural areas]
- Maintenance of existing infrastructure;
- Improve the capacity to plan for and maintain infrastructure; and
- Provision of education, library, sporting and recreation infrastructure.

Strategic Priority 4: Strengthen the Skills and Human Resource Base

Focus area: Improve Infrastructure, resources and equipment including the provision of basic services and ICT infrastructure.

- Within 6 months develop a plan for the rehabilitation and maintenance of schools;
- Fencing of schools and community involvement in ensuring security;
- Provide one resource centre per region to develop best practice;

Focus area: Build a developmental state, improve public services and strengthen democratic institutions.

- Improve management and HRD in the public service, including the recruitment for scarce skills;
- Filling vacant posts…

[b] National Educational Priorities 2009 MTEF

- Expansion of Grade R to reach universal provision by 2010;
- Strengthening of Special Schools by physical upgrading and providing equipment;
- Rolling out the National Schools Nutrition Programme [NSNP] to secondary schools and improving the quality of feeding; and
- Provision, upgrading and maintenance of school infrastructure including sports facilities and districts.

[c] Provincial Priorities 2009/2010

- Strengthening the capacity of the province to deliver physical facilities, asset management…by appointing key staff.

2.3.5 Department of Education Strategic Plan 2010-2015

Within the context of the above considerations the management of the Department convened a Strategic Planning Workshop on the 2nd and 3rd July 2009 and on the basis of the deliberations a revised strategic plan for the next five years was drafted. Those aspects with a direct relevance to schools infrastructure provision are extracted from this plan to provide focus to the infrastructure plan over the next five year period.

VISION: Accelerating Excellence in Education Delivery

SITUATIONAL ANALYSIS: This highlights two problem areas in particular. These are addressing the challenges of schooling in rural areas and farm schools on private properties challenges around scholar transport. The development of hostels to provide boarding school opportunities is viewed as a strategy to address these areas of concern.

STRATEGIC GOALS: Five strategic goals have been framed to guide the Department's activities over the period of the strategic plan. Goal 5 is of direct import as regards infrastructure aspects. This goal notes that the Department will, **"Accelerate infrastructure provisioning conducive for the delivery of a quality education".**

KEY EDUCATION SECTOR STRATEGIES [2010-2015]: Those strategies that impact directly on infrastructure aspects are as follows:

- The provision of boarding schools infrastructure;
- The recapitalisation of special schools;
- Improving the quality of schooling with particular reference to mathematics, science, technology and language development; and
- Build schools to replace mud schools [to be included in the EPWP].

INFRASTRUCTURE PROVISIONING TARGETS: Under each of the five Strategic Goals developed for the Department a series of objectives [with specified performance targets] are developed in the Strategic Plan. Those of direct relevance to the Infrastructure Plan are captured below:

[a] GRADE R:

OBJECTIVE: Ensure universal access to Grade R by 2014.

Enrolment targets:	2010/2011	72 000 learners
	2011/2012	82 000 learners
	2012/2013	92 000 learners
	2013/2014	102 000 learners

[b] WATER, SANITATION and ELECTRICITY

OBJECTIVE: To provide water, sanitation and electricity to all institutions and schools by 2014.

[c] SCHOOL INFRASTRUCTURE

OBJECTIVE: Undertake overall physical infrastructure construction, renovation, maintenance and rehabilitation according to the promulgated minimum standards.

Note: No specified targets are noted in the plan at present.

[d] BOARDING FACILITIES

OBJECTIVE: Make schools accessible to all learners by progressively establishing boarding facilities to mitigate scholar transport and multi-grade classes.

Note: No specified targets are noted in the plan at present.

[e] COMPUTER LABORATORIES and LAN

OBJECTIVE: Equip all secondary schools with computer laboratories and LAN by 2011 and cover 50% of primary schools by 2014.

Targets: Computer laboratories and LAN to 435 secondary schools by 2011 and 574 public primary schools by 2014.

[f] SCIENCE LABORATORIES and LIBRARIES/MEDIA FACILITIES

Note is also taken of the Strategic Objective to improve the quality of teaching by 20% over the five year period in the key subjects of mathematics, science, technology and language. The development of computer laboratories is taken account of in the above stated objective. Improved science and language development performance will require the construction and equipping of science laboratories and the provision of library and media centres.

No numerical targets are set for the provision of these facilities in the Strategic Plan and thus to quantify the requirement, using NEIMS 2006 statistics reveals the following:

- Science laboratory requirement [secondary schools]: 526 schools
- Libraries/media facilities [all schools]: 1592 schools

Applying the 20% performance improvement level indicated, this translates into the provision of an additional 106 science laboratories and 318 libraries/media facilities over the five year period of the plan.

[f] SPECIAL SCHOOLS

Target: The upgrading of physical facilities at 8 identified special schools is identified in the Strategic Plan.

2.3.6 Other Goals and Development Objectives of the Department

Each of these noted below are guided by priorities as noted in the PGDS.

SOCIAL DEVELOPMENT

- **Increased number of poverty alleviation projects**: Here the MDoE stipulates the use of the Preferential Procurement Policy Framework Act (PPPFA) in the procurement of goods and services that are utilised in the construction process. Also, the Extended Public Works Programme (EPWP) implemented under the Sakh'abakhi Project is utilised to build the capacity of previously disadvantaged individuals and emerging contractors.

- **Improved capacity for monitoring and impact evaluation on poverty alleviation initiatives:** Training and job creation should take place during the process of the construction of all schools and associated infrastructure. Head Office will, in the future, increasingly commit itself to evaluate and monitor the impact of projects on communities.

GOOD GOVERNANCE

- **Best practice, innovations and new models adopted in managing service delivery:** Institutional capacity within the MDoE is enhanced through its participation in the Infrastructure Development Improvement Programme (IDIP) processes. The availability of the Provincial Technical Assistant Team (PTAT) member within the MDoE assists to inculcate best practice within employees, while the addition of the Operational Support Team (OST) members at Head and Regional Offices assists to manage service delivery.

- **The National Spatial Development Perspective (NSDP), Provincial Growth and Development Strategy (PGDS) and the Integrated Development Plan (IDP) of Municipalities:** These strategies and plans are used within the MDoE to ensure alignment in the planning processes. Over and above avoiding duplication, improved cooperation between departments enables them to plan for the provision of services and infrastructure in a more structured and coordinated manner.

- **Execution of the Executive Council decisions.** The injunctions issued by the Premier and the Member of the Executive Council (MEC) during the State of Province Address and the Budget and Policy Speech respectively are taken into account when the planning and implementing projects.

- **Unqualified Audit Reports:** The MDoE requires that its projects are conducted in such a manner that unqualified audit reports are achieved. All relevant documents related to infrastructure thus need to be made available for submission promptly, should the auditors require them. To this end all relevant documentation kept previously by the Department of Public Works (MDPWR&T) is to be transferred to the MDoE in order to enhance auditing processes.

- **Budget allocations and expenditure in line with Government Programmes and delivery targets.** The MDoE has introduced the MTEF programme management techniques to its planning and implementation of projects in order to address problems of under expenditure. With IDIP support progress is being made in this regard.

- **Risk Management Plan developed and implemented:** Given the extensive use by the Department of external service delivery agents and the arms length project management arrangements that exist to manage these agents effectively, attention has been given to risk planning and devising risk mitigation measures.

- **Monitoring and evaluation capacity**. The organogram of the MDoE has been reviewed to create the space for the engagement of suitably qualified technical personnel to undertake project monitoring. However, these resources remain to be engaged.

- **Compliance capacity.** The MDoE is expected to have the requisite skills to enable it to comply with its infrastructure delivery requirements. The situation currently is that only Works Inspectors' posts are available on the structure while the rest of the posts are filled by people with no technical background. The Infrastructure Directorate is currently supported by the IDIP and OST resources but the finding of sustainable solutions to address the shortage of appropriate technical and managerial expertise remains one of the most intractable problems facing the Department.

- **Increase in the availability of scarce skills.** Members of the PTAT and OST are currently stationed in the MDoE to assist with capacity building and practical skills training.

2.4 Core Values of the Department

The infrastructure delivery activities of the Department are not only driven by legislation, by strategic missions, goals and objectives and the determination of specific delivery targets as discussed above. In addition, its activities are shaped by its adherence to a number of operating values and principles. The most important of these, as developed in the Departmental Strategic Workshop held in July 2009, are noted below:

- Mutual trust and respect
- Integrity
- Accountability
- Transparency
- Innovation
- Consultation
- Honesty

- Excellence
- Equity and Redress
- Dignity
- Accessibility

2.5 Legislative Mandate

Appendix A contains relevant detail in this regard.

2.6 Stakeholder Analysis

[a] National Department of Education: This Department is charged with the attainment of country-wide educational objectives and ,as such, provides policy and practical guidance for infrastructure provisioning. It is considered a key stakeholder to the provincial department.
[b] Office of the Premier: Within the province itself, and recognising the centrality given to education by the incoming administration, the Office of the Premier is considered a key stakeholder to identify educational priorities and to support the programmes of the Department in the province.
[c] Provincial Department of Education: Head Office, Regional, District and Circuit level structures and personnel are recognised as having specific roles and responsibilities in the identification of infrastructure needs and in their delivery to communities across the province.
[d] Learners: As the end users of schooling infrastructure the Department confirms that it has a key responsibility to these learners, at the primary and secondary school levels, to provide the type, range and quality of infrastructure needed to offer learning and teaching environments conducive to the learning experience.
[e] Teachers: The province's teachers are considered the backbone for the transmission of learning and teaching to primary and secondary school children. Consequently, the Department accepts that it bears the onus of responsibility to provision schools with the necessary infrastructure to enable teachers to best achieve their educational mandate.
[f] Parents: The Department acknowledges that parents expect that their children are able to access educational opportunities and that the teaching and learning experience is delivered in an environment that is safe and that offers the type, range and quality of infrastructure needed at schools.
[g] School Governing Bodies: SGB's are considered essential partners at each and every school across the province in order to deliver the Department's objective of providing conducive learning and teaching environments. SGB's are acknowledged to play important communication, decision making and shared responsibility functions at local level schools.
[h] Representative bodies: The Department acknowledges the important role of teacher and student representative bodies and the need to work constructively with them in pursuing policies and practical actions that address the concerns of their memberships.

[i] Educational NGO's and CBO's: These organisations are also considered important partners to support the vision, mission and goals of the Department and thus the Department accepts it's responsibilities to engage positively with such bodies to support public schooling activities in the province.
[j] Business Sector and Employers: The Department has been able to forge positive relationships with many from the business sector, primarily in the areas of additional resource mobilisation, making land available for schools and equipment donations. The Department commits itself to strengthen such alliances in the future in the interests of enriching the quality of education offered to learners in the province.
[**k] Municipalities:** Engagement with such municipalities through the IDP processes is a continual activity of the Department and its personnel to ensure that local needs for the provision of educational opportunities is taken account of. Equally, in the areas of obtain planning permissions, accessing school sites and the provision of services infrastructure the Department recognises the role of municipalities and, therefore, that it too is an important partner in the educational enterprise.
[l] Media: The important role played by the media to share information and as a locus for critical commentary is acknowledged and the Department will strive to maintain positive relationships with the media across the province.

2.7 Department of Education

The organisational structure of the MDoE has been reviewed and the approved structure is gradually being implemented. The Superintendent General is the administrative head of the MDoE. The organisational arrangements of the Department are as outlined below:

- The Superintendent General (SG) is the administrative head of the MDoE, the Accounting Officer and the custodian of the strategic direction of the MDoE.

- The SG is supported by three Deputy Directors General (DDG) for Curriculum, Systems and Planning and the Chief Financial Officer. DDG: Curriculum is responsible to ensure that the needs of the curriculum are communicated so that the facilities being built meet the curriculum requirements and the DDG: Systems and Planning is responsible for infrastructure planning and provisioning. The Branch ensures synergy between strategy and implementation of the infrastructure projects. The DDG: Chief Financial Officer is responsible for making the allocation of funds for the provision of infrastructure. This office also sees to it that the reports required by the Provincial Treasury are prepared and submitted.

- The Branch Systems and Planning has six Chief Directors and under it additional personnel responsible for infrastructure delivery. One of the Chief Directors is responsible for Infrastructure and Technical Support specifically. This Chief Directorate in turn has three Directors who are responsible for Education Resource Planning, School Resources Planning and Education Management and Governance Development. The Director School Resources Planning where infrastructure must manage the compilation of the Infrastructure Plan and prepare the Infrastructure Programme Management Plan (IPMP). Practical issues regarding the relations

between the MDoE and MDPWR&T are also managed in this Directorate, as are the responsibilities for the evaluation, monitoring and policy implementation. The posts are to be developed below the Director level and sent to Work study for recommendation to implement. The situation described below is what obtains currently.

- Owing to the fact that the posts indicated above have not been populated, the previous arrangement is still in operation with the Physical Resources Planning Sub-Directorate being responsible to verify and collate the Infrastructure Plans from the Regions and including preparing the Provincial Infrastructure Plan. Once prepared this plan is submitted to the Director, the Chief Director, the Deputy Director General: Systems and Planning and, finally, the Superintendent General for approval. The Physical Facilities unit is responsible for managing the actual implementation of the projects themselves. Claims from consultants and contractors are processed by this unit before being submitted for payment. Physical Facilities must also draft the IPMP to instruct the MDPWR&T on the expected deliverables. The Directorate offers, in addition, support to Physical Resource Planners.

- These Physical Resource Planners are responsible to obtain, verify and then collate information from the Circuit Managers and to prepare for their Infrastructure Plans. The Regions must ensure that all the plans submitted by the Circuits are realistic. In cases where there are difficulties in this regard, then the Region must refer the plans to the Circuit or Principals for correction. The involvement of municipalities takes place at the Regional level. Principals and / or School Governing Bodies are also involved at this level to ensure that the principles of Batho Pele are respected.

- The Department makes use of the services of three Implementing Agents to deliver the various facets of its Infrastructure Plan. These are the MDPWR&T, the Department of Water and Forestry responsible for school water and sanitation projects and the Department of Mineral and Energy responsible for school electrification projects. Each of these implementation agents is expected to produce an Implementation Programme Implementation Plan [IPIP] in response to the Infrastructure Programme Management Plan [IPMP] produced by the Department. The IPIP indicates how the respective implementation agents will carry out the projects handed over to it. A Service Delivery Agreement [SDA] regulates the relationship between the Department and its implementation agents as to how projects will be implemented.

- The management of projects is achieved by the establishment of the Project Operations Management Meeting [POMM] that takes place every two weeks at which implementation agents are required to report on project progress achieved.

ORGANISATIONAL STRUCTURE

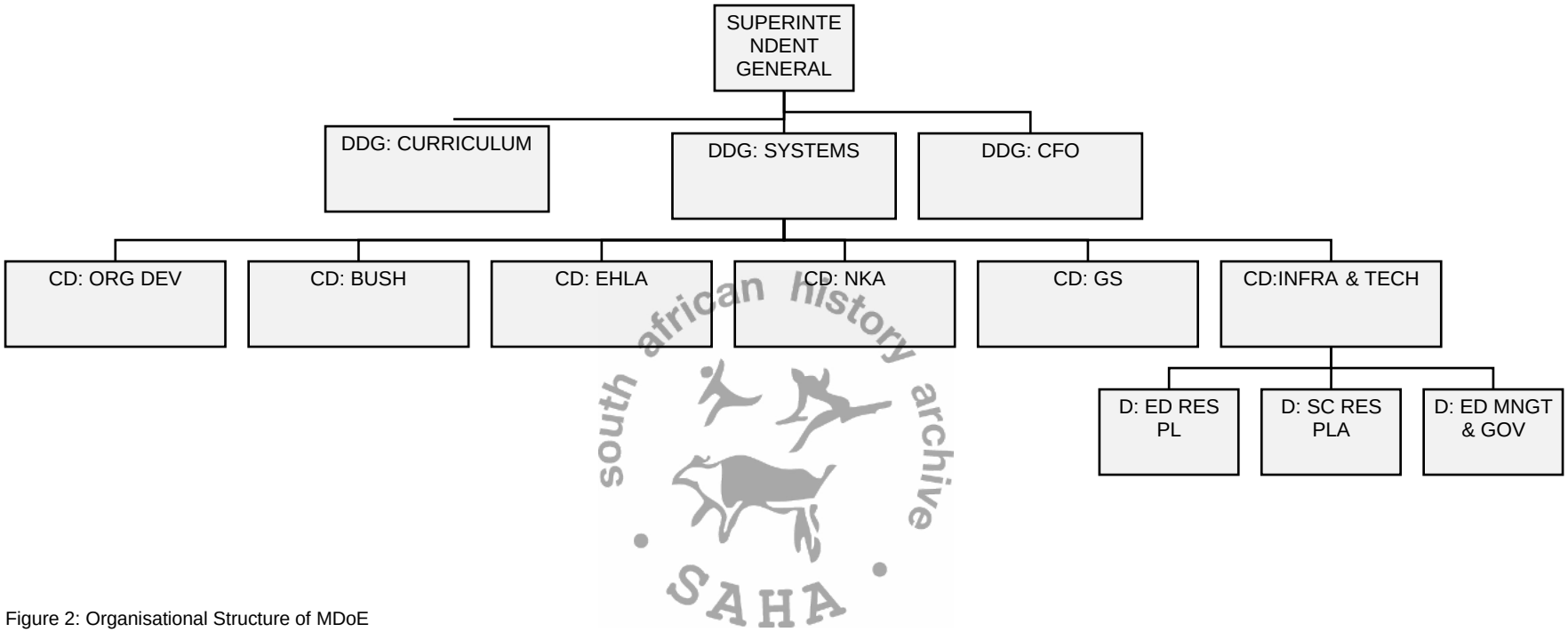


Figure 2: Organisational Structure of MDoE

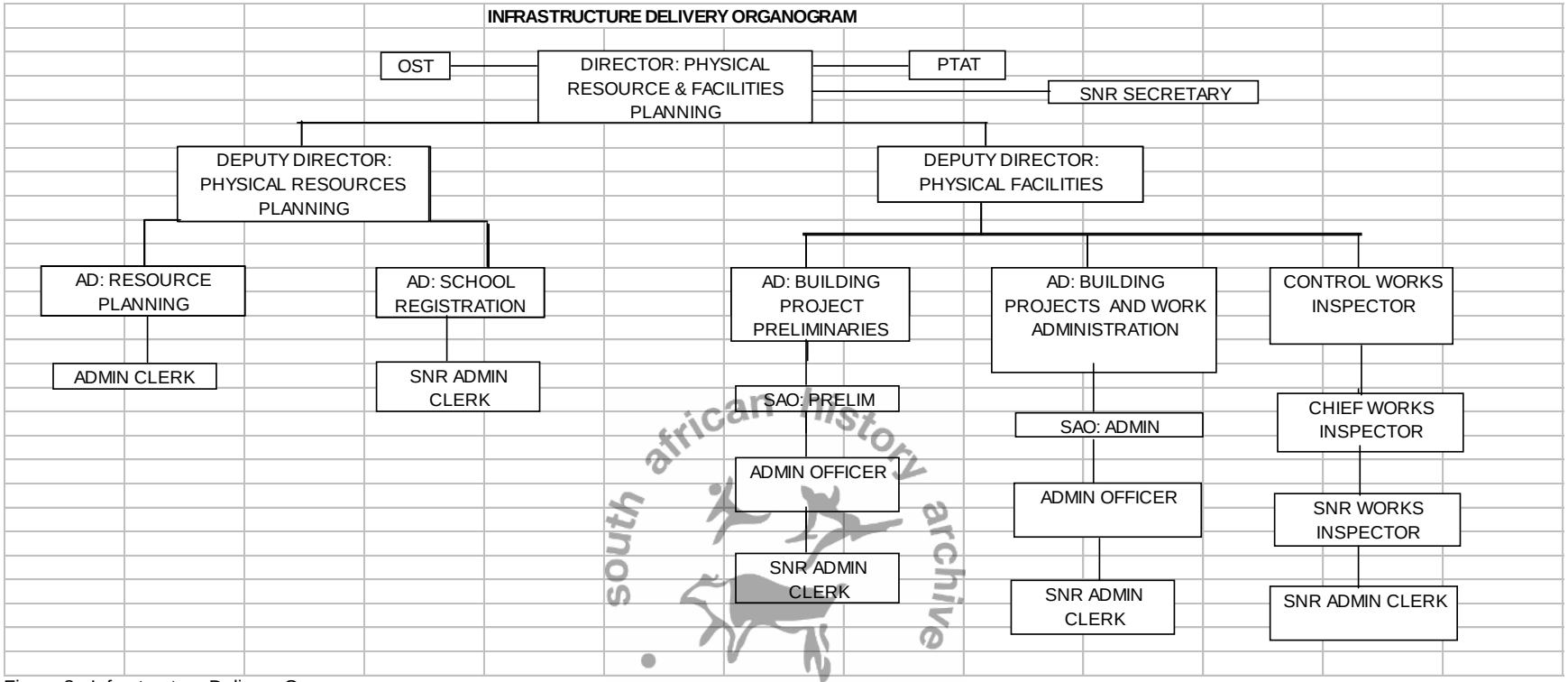


Figure 3 : Infrastructure Delivery Organogram

It is intended that the Infrastructure Directorate report to the Chief Director: Infrastructure and Technical Support. However, this post is vacant and the void is thus filled by the Director reporting directly to the Deputy Director General: Systems and Planning. The Provincial Technical Assistant (PTAT) and Operational Support Team (OST) assist the Directorate regarding technical matters. The Physical Resources Sub – Directorate deals with the planning for and the registration of schools while the Physical Facilities sub – Directorate deals with the implementation of projects. The latter section also deals with the implementing agents and the monitoring and reporting function.

The Directorate currently has a 60% vacancy rate and thus it is heavily dependent on the presence of the OST Team to support its infrastructure delivery responsibilities . This arrangement has its own challenges as the skills transfer and capacity building objectives have been neglected with the primary focus on infrastructure delivery during the past two years.

The Deputy Director: Physical Resources Planning post was expected to be filled by January 2009 but this has not taken place. The current scenario is as follows:

1. Deputy Director: Physical Resources Planning - Vacant.
2. Assistant Director: Resource Planning – Vacant.
3. Assistant Director: School Registration – Vacant.
4. Assistant Director: Building Preliminaries – Vacant.
5. Senior Administration Officer: Building Preliminaries – Vacant.
6. Control Works Inspector – Vacant.
7. Chief Works Inspector – Vacant.
8. Works Inspector – Vacant.
9. Senior Administration Clerk: Works Inspection – Vacant.

2.8 Determining the Project List

The Infrastructure Plan Project List is compiled with the assistance of Principals working in conjunction with the Circuit Managers. The Principals record the needs as identified by the school communities and the SGB's. These needs from different schools are then collated at the Circuit level to form a Circuit list of needs. Circuit Managers then submit the information on needs to the Regional Resource Planners where the different needs are collated to develop Regional lists of needs. The project list must also be verified at this level.

Interaction with IDP's is also important at the Regional Office level to ensure synergy in the provision of facilities. The regional lists are then forwarded to Head Office where the projects are checked then collated into a Provincial list of prioritised needs.

A policy to be used to prioritise projects for inclusion in the Infrastructure Plan will receive attention during the 2009/10 financial year. This policy will take its direction from the dictates of the Medium Term Strategic Framework 2009-2014, from the MTSF Strategic Priorities for the same period and the Strategic Plan 2010-2015 of the Department taking account of its strategic goals, key education sector strategies and infrastructure provisioning targets identified.

2.9 Planning Information and Methodologies

When undertaking planning for the purposes of infrastructure provision it is necessary to make a variety of assumptions. The most critical assumptions are:

- The information received from the Circuits and Regions through the Education Management Information Systems (EMIS) is accurate.
- The data captured in the NEIMS is the best current available data.
- The MDoE has the necessary person power to plan for the projects to be implemented.
- The necessary budget allocation is made to the MDoE for the provision of the infrastructure.
- Planning is done based on scientific methods and tools.
- The MDPWR&T and other implementation agents engaged has the necessary capacity to manage the consultants who in turn manage the contractors to ensure quality workmanship.
- Contractors are skilled and appropriately resourced to do the work.
- Building material is available for the contractors to do their work.
- The MDoE monitors the MDPWR&T and other implementation agents.

The Education Management Information System (EMIS) used within the Department is the custodian of all data that is utilised during the planning process. However, the packaging of this data does not always assist in the planning process. EMIS is however undergoing certain re-engineering and it is hoped that the result of this exercise will assist the Infrastructure Plan preparation processes in future years.

Physical Resource Planners, lack suitable software applications to assist them with their planning functions. This results in manual systems of data collection being used without a defined ability to cross compare data and sift information according to predetermined criteria.

The MDoE works under the assumption that the data it uses for planning purposes is correct and accurate. However, such data is not verified thus may be inaccurate. The release of an updated NEIMS report will confirm the type of information that needs to be used during planning.

Planning around individual schools has proved to be difficult as this does not take into account neighbouring schools. Unit planning is therefore utilised to ensure that schools in the neighbourhood are taken into account when planning. Schools within a five kilometer radius in the same Circuit are grouped together into one unit for planning purposes. This is done utilising school maps sourced from the Geographic Information Systems (GIS) official in the EMIS section. Schools at the boundaries of Circuits are then considered looking at the situation in the adjoining Circuits. The use of GIS is to be further introduced to ensure that the Regions and Circuits plan according to this tool.

The approach utilised in this Infrastructure Plan is to identify the schools that need resources and then capture these onto the plan. The first component is handled during the strategic planning process. The MDoE mandate, policies

and MTEF allocations are taken into account. The IDP's of the municipalities are assessed to ensure a collaborative approach to service delivery. This process allows for both a top down and a bottom up approach.

The second component commences where the Circuit Managers work with the local school communities and stakeholders to draw up a Circuit list of prioritised requirements. This process identifies the number of learners as opposed to the number of classrooms in existence. The type of structures in existence is also considered to ensure that dangerous ones are eliminated and substituted with proper structures. The availability of other facilities such as administration blocks, toilets etc. is also considered.

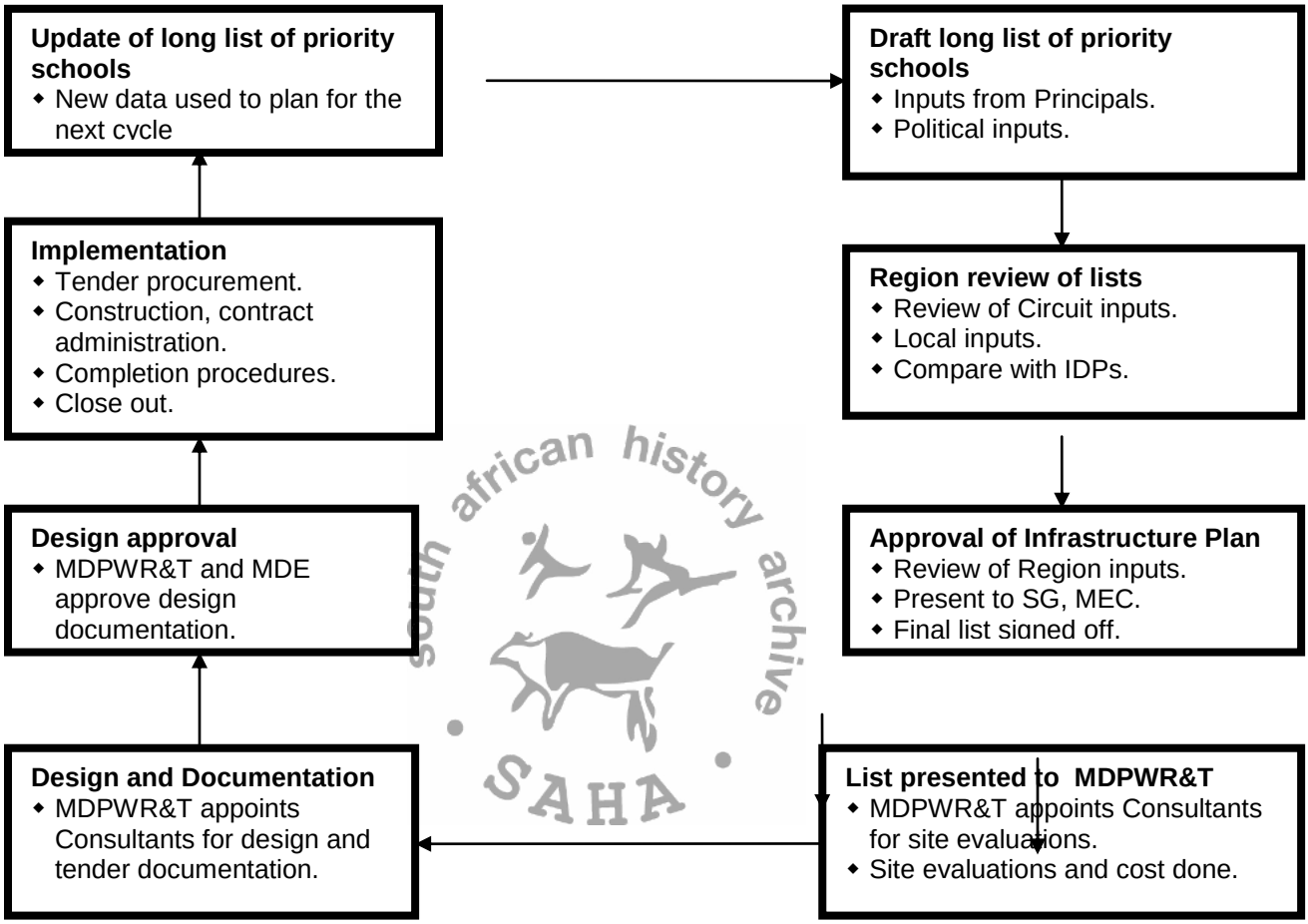
The use of demographic data cannot be over-emphasised at this level as it enables the correct placement of new schools. The use of scholar transport and other unused facilities structures is also considered. Equally, there are political aspects that need consideration. Consideration of all these factors allows the educational infrastructure gap to be determined after which the various practical alternatives and options to address the needs identified can be examined to determine the most cost effective provisioning options.

At Head Office level all the Regional inputs received are reviewed, collated and the Infrastructure Plan is then finalised. The Infrastructure Plan is then circulated to the Regions before being forwarded to the Superintendent General (SG) and the Member of the Executive Council (MEC) for final approval.

The Infrastructure Plan is presented to the Physical Facilities and DPWR&T. A Service Delivery Agreement (SDA) signed by both parties regulates the relationship between the MDoE and DPWR&T regarding infrastructure projects. The DPWR&T procures the services of consultants to conduct site evaluations and do final costings. After the approval of the design and documentation, projects are advertised and the procurement of contractors is made. The DPWR&T acts as an implementing agent until the projects are completed and the close out phase is reached where after the projects are handed over to the MDoE. The process is as schematically outlined in Figure 1 below.

The availability and use of reliable planning data lies at the heart of the ability to produce effective plans to address community needs within a framework of budget stringency. The absence of accurate data certainly has had an impact. It is the hope that the release of an updated NEIMS database will mitigate this challenge.

Fig. 4 Schematic Representation of the Infrastructure Planning Process



2.10 Conclusion

To provide the subsequent sections of the plan with greater focus this conclusion highlights all forms of public schooling infrastructure that have been identified as being priority interventions for the Department.

[a] Inclusive Education:

The PGDS states that all schools shall make provision for access for learners with disabilities by 2014.

[b] Water, Sanitation and Electricity:

The MTSF 2009-2014 strategic priority 2 notes that all schools shall have access to water, sanitation and electricity by 2014. This target is also noted in the Strategic Plan 2010-2015 of the Department.

[c] Grade R:

In terms of the National Education Priorities noted in the MTEF 2009 it is noted that the required facilities shall be provided by 2010. However, the Departmental Strategic Plan 2010-2015 has revised this, given the circumstances of the province, to be attained by 2014. The MDoE's enrolment targets over the next four years are as follows:

2010/2011	72 000 learners	[2400 classrooms]
2011/2012	82 000 learners	[2733 classrooms]
2012/2013	92 000 learners	[3067 classrooms]
2013/2014	102 000 learners	[3400 classrooms]

Given the provincial level of service of 1 classroom facility of a minimum of 60m² per 30 learners the number of Grade R classrooms can be calculated accordingly. These are reflected in brackets above.

[d] School Infrastructure:

In this regard the two guiding requirements are, firstly, the provision of the required infrastructure that achieves the prescribed pupil to classroom ratios of 1:35 in secondary schools and 1:40 in primary schools and, secondly, the construction of schools to minimum standards. The planning and space standards are as applicable in the National Minimum Norms and Standards for School Infrastructure [see Section 3 of this document for further details] and the National Building Regulations regarding building codes and practice.

[e] Computer Centres:

The Departmental Strategic Plan 2010-2015 identifies the target to provide 435 secondary schools with these facilities and LAN by 2011 and 574 public primary schools by 2014.

[f] Science Laboratories and Library/Media Centres:

The target of a 20% improvement in the performance of key subject categories identifies the need to provide a minimum of 106 science laboratories and 318 libraries/media facilities by the end of the 2014/2015 financial year.

[g] Special Schools:

The Departmental Strategic Plan 2010-2015 identifies the need to provide a further eight of these schools in the province within a five year period.

[h] Boarding Facilities:

The provision of school boarding facilities in the province is identified in the Strategic Plan 2010-2015 is identified as having a high priority to assist address the twin problems of scholar transport and multi-grade schooling. No specific numerical delivery targets have been set for the province at this time however.

[i] Sporting and Recreation Infrastructure:

Strategic Priority 2 of the Medium Term Strategic Framework 2009-2014 identifies the importance of sporting and recreation infrastructure. However, in this regard the MDoE has not set for itself any specific delivery targets.

[j] Fencing:

The importance of the fencing of schools is identified in the MTSF 2009-2014. Also the PGDS contains a target that 70% of schools should have been securely fenced by the end of the 2006/2007 financial year. Currently the Departmental Strategic Plan 2010-2015 is silent on a revised delivery target. Clearly though this requirement will need priority attention at schools.

[k] Mud Schools/ Unsafe Structures:

One of the key education sector strategies [2010-2015] is to replace mud schools with permanent structures built to prescribed minimum standards.

[l] Maintenance Planning:

The MTSF contains the requirement that it will be required to develop a plan for the rehabilitation and maintenance of schools within a 6 month period. In other words this plan must be completed by the end on the 2009/2010 financial year.

[m] Improving Departmental Capacity and Management:

Strategic Priority 4 of the MTSF 2009-2014 and the identified Provincial Priorities 2009/10 identify the need to fill vacant posts, recruit for scarce skills and improve management and human resource development in the public service. Strengthening the capacity of province to deliver physical facilities and asset management by appointing key staff is emphasized.

SECTION 3: LEVELS OF SERVICE

3.0 Provincial Norms and Standards

The MDoE uses the norms contained in The Manual for the Provision of Physical Facilities developed nationally as a base for the provision of its facilities, notwithstanding that these norms and standards are currently under review to align them to the changes taking place in the curriculum.

Appendix B contains a detailed recordal of the norms and standards applicable in the province. The discussion below concentrates on standards applicable to key infrastructure components.

(a) Grade R Centres

The latest requirement is to provide Grade R Centres in preparation for the accreditation of Grade R learners by 2014. The learner classroom ratio proposed for these learners is 1:30. This places high demands on the provision of facilities within the Province as none of the schools have such centres. The conversion of idle capacity may, however, have to be considered to ensure the optimum utilisation of available resources.

The size of the classroom needed to accommodate the activities that occur at this level is between 60- 80m^2. Grade R Centres must also have a basin and a tap in the classroom in order to teach basic hygiene to learners. Shelves must be fixed at the back and sides of the walls to accommodate learners' materials.

(b) Primary Schools

In the primary schools the ratio that is utilised is 1:40. It is noted that most primary schools no longer need classrooms as the overall learner classroom ratio is below 1:40. Notwithstanding this there are pockets of these schools that need additional classrooms.

(c) Secondary Schools

In secondary schools the ratio of 1:35 is used. These schools show a great need for the provision of additional facilities. The size of classrooms used at both primary and secondary schools is 60m^2. The curriculum section will advise if changes to the current sizes are needed. The number of classrooms in primary schools should not exceed 24 and in secondary schools 28.

(d) Administration Blocks

Administration blocks are divided into three types based on the number of learners at the school.

- Type A is provided to schools that have an enrolment of 600 learners and more. The structure must contain a principal's office, a deputy principal's

office, 3 heads of department (HOD) offices, staffroom, administration clerk's office, kitchenette, 2 sickrooms, storeroom and toilets.

- Type B is meant for schools with learners between 401 and 599. The building contains all the amenities contained by type A except for the deputy principal's and one HOD office.
- Type C is provided to schools with an enrolment of 400 in primary schools and 350 in secondary schools. These are schools that are static and do not show growth in pupil numbers. Schools that are too small are not provided with these facilities as is not cost effective and their future may not be guaranteed.

(e) Special Classrooms

Special classrooms provided to schools include a laboratory, media centre, computer centre and hospitality studies centre [depending on the learning area being offered at the school] and kitchen. The size for these facilities is 80m² as specified in the national norms and standards. Laboratories are only supplied to secondary schools while media centres are supplied to primary schools as well. These facilities must be supplied with the basic fittings to make them functional at completion. Schools supplied with these facilities must also be electrified. Kitchen is also equipped with boiler pots, a walk in freezer, a serving window, they have a change room with showers for the staff working in the kitchen and have an extractor fan.

(f) Toilets

Toilets provided to schools must be provided at a rate of 1, 5 toilets to a classroom. One of the toilet seats serve as a urinal in the case of male toilets. The number of toilets provided is limited to 28 in primary and 30 in secondary schools. Toilets supplied to schools must also have two toilets for persons with disabilities as well, including accessibility for a wheelchair. All toilets supplied must have water-borne sanitation where there is bulk water provision and sewerage services are provided by municipalities. Where no water borne sanitation exists, the provision of septic tanks and French drains is considered. In areas where water is not available the dry toilet system is utilised.

(g) Fencing

Fencing provided to schools must be steel palisade. The fence must be 2m in height, be spiked on top and with ground beams to strengthen fence construction. Fencing is positioned around the perimeter of schools to prevent them from being invaded. Previously some schools only erected their own fences to surround the school buildings only and not the perimeter of the school as a whole.

(h) Sports Fields

New schools must be provided with sports fields when constructed. Existing schools will be provided with sports fields incrementally and as the school sites allow. A combination court for tennis, volleyball and netball is a standard

arrangement. A combination sports field for soccer, rugby and athletics is also standard to all schools. Schools have a choice regarding other specialist sports like hockey, cricket and others should the topography of the school enable this.

(i) Car Park

The last amenity to be provided to schools is the car park. This is specified as a covered car park (with asphalt) in order to protect the vehicles of staff and visitors. A marked car parking space is made available for people with disabilities. The car park must be situated such that it allows persons with disabilities to be dropped of and collected with ease. The placement of the car park must minimise walking distances between the buildings and sports fields. The car park must also contain ramps constructed to the required specifications to access buildings for disabled persons. Rails must be provided where necessary for the safety of persons using wheelchairs.

3.1 Discussion

Previously the Department provided facilities to schools in a disjointed manner in order to provide facilities to as many schools as possible. For example, a school would be provided with classrooms and other outstanding facilities (administration block, laboratories, libraries, etc) would not be part of the package. In instances where a new school was planned this would mean providing only classrooms, toilets, fencing and electricity while other support facilities would not be provided.

The minimum size of a school site, according to the National Norms and Standards, is 2,8ha for primary schools and 4,8ha for secondary schools. Previously the province has sought school sites of 6,5ha in order to achieve the minimum demanded by a previous MEC. The size of school grounds also enables the construction of schools with their compliment of support facilities at once rather than planning to provide these at a later stage. The inclusion of all basic amenities, including sports facilities, at the time of construction is thus the policy of the Department.

A system of unit planning has been introduced to the Regions. This entails looking at a school that needs facilities in relation to neighbouring schools. A school that needs additional classrooms when there is idle capacity in the neighbouring school is thus not provided with such classrooms. In such instances the Department requires that the idle capacity in the near by school is fully utilised before consideration will be given to provide any additional facilities in the neighbourhood.

3.2 Current Levels of Service Provision

The following tables extracted from NEIMS paint a picture of key service provision challenges faced by the province. Where appropriate, comment is offered to draw the attention of the reader to pertinent issues.

Table 3: AVAILABILITY OF ELECTRICITY AT PUBLIC ORDINARY SCHOOLS [Source: NEIMS 2008]

Source of Power	Number of Schools	Percentage
No supply	242	12,6
Generator	1	0,5
Solar	1	0,5
Grid connection	1673	87,2
TOTAL	**1917**	**100,0**

It is of note that a further 19 schools will be electrified during the course of 2009/10. Support from the Department of Mineral and Energy is being received to achieve this. This aside the large number of schools without this basic service is noteworthy.

Table 4: AVAILABILITY OF WATER BY SOURCE TYPE IN PUBLIC ORDINARY SCHOOLS [Source: NEIMS 2008]

Source of Water	Number of Schools	Percentage
No water	136	6,7
Communal	515	25,3
Borehole	582	28,6
Tanker	186	9,1
Municipal	619	30,4
TOTAL	**2038**	**100,0**

Note: The higher number of schools recorded in this instance is due to the fact that certain schools have access to more than 0ne source of water supply.

A further 34 schools will be provided with water during the 2009/10 period and 40 in the subsequent year with the assistance of the implementing agent, the Department of Water Affairs and Environment.

The table below specifically examines the position of the province's smaller schools [up to 120 learners per school] to underline the harsh reality that their access to water, sanitation, electricity and the constructions materials used in the schools are of particularly serious concern. A high proportion of these schools are farm schools situated on privately owned land.

Table 5: CONDITION OF SERVICES AT SMALL PUBLIC ORDINARY SCHOOLS [Source: NEIMS 2008]

Small school category	Water Supply/Source			Electricity Supply/Source			Sanitation			No of Structures		
	None	Bore-hole	Tanker	None	Gener-ator	Solar	None	Bucket	Pit	Mud	Metal	Wood
0-30 Learners [99 schools]	29	32	8	53	0	0	21	0	0	3	12	1
31-50 Learners [67 schools]	20	28	1	29	0	0	4	0	0	2	10	1
51-120 Learners [164 schools]	35	74	11	61	0	0	13	0	0	8	24	9

In order to provide a comparative analysis of the province's position regarding the provision of perhaps the most basic of all services, namely water, the following table is provided. The province is noticeably below the national average and has comparative levels of provision to the two worst faring provinces.

Table 6: RATIO OF LEARNERS PER WATER TAP [Source: NEIMS 2008]

Comparative Figure	Ratio
National Average	1:151
Mpumalanga	1:183
KwaZulu Natal	1:195
Limpopo	1:198

The following table looks at the situation prevailing in the province's schools with respect to the provision of sanitation options. While there are clearly a variety of sanitation alternatives in use, the aspect of greatest concern is that the NEIMS data [updated in 2008] suggest that 55 schools have no sanitation alternatives at all, while 2 use buckets. Further, the majority of school children [57, 2%] use pit latrines: that is, the unimproved version or the improved pit alternative.

Table 7: NUMBER OF SCHOOL SITES WITH DIFFERENT ABLUTION FACILITIES [Source: NEIMS 2008]

Type of Ablution	Number of Sites	Percentage
Municipal [flush]	501	18,9
Septic [flush]	490	18,5
Enviro Loo	81	3,1
VIP	547	20,7
Pit Latrine	965	36,5
Buckets	2	0,1
No facility	55	2,1
TOTAL	**2641**	**100,0**

Note: Again with the number of site being greater than the number of schools in the province this is explained by those schools having access to one or more sanitation alternative.

T o enquire further into the critical state of sanitation arrangements in schools in the province further analysis of NEIMS data was undertaken. This reveals that 504 or over 25% of schools in the province have only access to pit latrines. Looked at from another perspective 73,9% of the public school population, comprising some 638 273 learners attending 1415 schools do not have access to the use of municipal flush toilets. The national average is 68,5% in this regard underlining that the province is more disadvantaged than the norm.

The table below provides another interesting perspective on the availability of toilet seats to learners. With 352 schools in the sample, involving 26% of the provincial school population, there is currently one toilet seat per 72 learners. With a provisioning norm of 1,5 toilets classroom [assume 40 learners] then the current level of provision is a full 80% below the norm set by the Department.

Table 8: NUMBER OF SCHOOLS THAT EXPERIENCE OVERCROWDING ON THE USE OF TOILET SEATS [Source: NEIMS 2008]

Number of Schools	352
Total learners	268 537 [26% of total school population]
Total toilets	3 735
Ratio	1: 72 [identical for males and females]

Table : 9 FENCING AND SECURITY IN PUBLIC ORDINARY SCHOOLS [Source: NEIMS 2008]

Type of Fencing	Number of Schools
Wire	1493
Palisade [steel]	41
Palisade [concrete]	10
Brick	13
No fencing	393 [21%]
Security	
Electric fence	1
Security gates	I699
Access control	10

Looking at the element of learner and school safety the above figures suggest that some 20% of schools, or 393 schools have no exterior perimeter fencing.

The following tables look at the current situation with respect to overcrowding in classrooms and the availability of science laboratories, libraries and computer centres. Again in each instance the latest NEIMS statistics illustrate the magnitude of the infrastructure challenges being experienced in the province.

Table 10: EXTENT OF OVERCROWDING IN CLASSROOMS IN PUBLIC ORDINARY SCHOOLS [Source: NEIMS 2009]
[Overcrowding is defined as more than 45 learners per classroom]

Total Number or Schools in Province	Number of Schools	% of Schools	Total number of learners	Total % of learners
1916	577	30	475 651	46

These figures illustrate that 46% of the provinces learners, comprising 475 651 learners at 30% of the schools experience overcrowding in the classroom.

Table 11: NUMBER OF ALL PUBLIC ORDINARY SCHOOLS WITHOUT LABORATORIES [Source NEIMS 2008]

Size of School	No of Schools	No of Learners
Up to 200 learners	439	35 381
Greater than 200 learners	1263	823 301
TOTAL	**1702 [88,9%]**	**858 682 [83,2%]**

The above figures reveal that for a country that has prioritized the teaching of maths, science and technology subjects over 83% of the provinces learners do not have access to a science laboratory. The severity of this reality is extended by examining the figures contained in the following table that examines secondary and combined schools with science laboratories.

Table 12: EXTENT OF SCIENCE LABORATORIES IN PUBLIC ORDINARY SECONDARY SCHOOLS [Source: NEIMS 2008]

No of secondary [inc combined] schools	706
No of these schools with science laboratories	178 or 25%
No of schools with laboratories stocked	34 [4,8 % of schools]
No of schools without science laboratories	526 or 75%

These figures illustrate that of the 706 schools in the sample 178 or 25% of them indicate that they have science laboratories. The real extent to which learners have access to a functional laboratory is revealed in the figure that only 34 schools out of the sample of 706 have stocked laboratories. This comprises just 4,8% of senior or combined schools in the province.

Table 13: EXTENT OF LIBRARIES IN PUBLIC ORDINARY SCHOOLS [Source: NEIMS 2008]

Size of School	**Number of Schools**	**Number of Learners**
Up to 200 learners	428	34 074
Over 200 learners	1164	747 357
TOTAL	**1592 [83,1%]**	**781 431 [75,7%]**

Over 75% of the provinces learners are recorded as not having access to the services offered by having a library. This situation affects a total of 1592 schools in the province.

Table 14: ACCESS TO COMPUTER FACILITIES [Source: NEIMS 2008]

Number of Schools greater than 300 learners	**Number of Learners**	**% of learners**
573	263 387	25,5

A somewhat more satisfactory situation prevails with respect to access to computer facilities. Here a quarter of learners have access to such facilities. The NEIMS figures could not indicate the extent to which the facilities available were in fact functional.

Table 15: NUMBER OF PUBLIC ORDINARY SCHOOLS WITHOUT SPORTING FACILITIES [Source: NEIMS 2008]

Number of Schools	Number of Learners
122 [6,4%]	61 666 [6,0%]

The province's learners are clearly more fortunate that only some 6% of learners are recorded as not having access to sporting facilities.

3.2.1 Discussion

The above analysis makes it clear that the province experiences critical infrastructure provisioning challenges. These relate to the most essential requirements at schools such as water and sanitation, both essential from a health and safety point of view; a power supply for lighting, to operate computes and other equipment; fencing to provide a level of protection to the school children and to protect the school premises from theft and vandalism; and also classrooms and more specialist teaching spaces necessary to offer the full range of educational experiences as required by the provincial curricula.

The section following in the infrastructure plan highlights the levels of service available in the province for each infrastructure component.

3.3 Levels of Service Provision: Overview

The statistics provided below are obtained from the 2008 Snap Survey and supplemented with the latest NEIMS data.

[a] Classrooms

The norm applicable is one classroom for 40 learners in primary schools and one classroom for 35 learners in secondary schools respectively.

The province as a whole has just over 1 million learners accommodated in about 26 216 classrooms. The figures available do not differentiate between primary and secondary schools. At the overall level there is an acceptable balance between the number of learners and the number of classrooms. However, when examined on a regional level a different picture emerges.

For example, the Bushbuckridge Region has 191 018 learners and 4 618 classrooms, a ratio of 1:41; Ehlanzeni has 308 218 learners and 6 352 classrooms, a ratio of 1:48; Gert Sibande with 259 875 learners and 6 959 classrooms has a ratio of 1:37 while Nkangala has 288 158 learners and 8 287 classrooms or a ratio of 1:34.

In essence the primary shortage of classrooms is experienced in the Bushbuckridge and the Ehlanzeni regions of the province.

[b] Administration blocks

The Province has a total of about 280 schools with administration blocks. Noting that the province has a total, according to NEIMS 2008 data of 1933 schools, this represents a backlog of 1653 units.

[c] Laboratories

Laboratories are normally provided to secondary schools as their curriculum demands such amenities. There are about 25% (178 secondary schools) that have laboratories with 526 schools not having this facility. The fact that a limited proportion of these science laboratories are properly equipped and stocked is of serious concern. The NEIMS data presented earlier would indicate that only 5% of secondary schools are able to offer their learners fully functional science laboratories. This reality will impact on the attainment of science passes attained in the province.

[d] Media Centres/Libraries

All schools that have a roll of 400 and 350 in primary and secondary schools respectively should be provided with media centres. Smaller schools are provided with classroom resources that can be used as library reference books. Again a small number of schools, namely those in the previously advantaged areas, have these facilities while the great majority of 1 610 schools do not. This inability of high proportions of learners to access published and reading materials will again impact on the ability of learners to excel at schools.

[e] Computer Centres

The NEIMS data suggests that some 25% of the province's learners have access to computer facilities. The 2008 Snap Survey indicated that this figure stood at 1% only. ***This matter requires follow up to determine the precise level of need in the province for computer facilities.***

[f] Hospitality Studies Centres

All schools that offered Home Economics previously as a learning area were provided with these facilities. The learning area has since changed to Hospitality Studies since the advent of the New Curriculum Statement (NCS).

[g] School Halls

Only about 1% of the schools have proper school halls. These are generally found in schools located in previously advantaged towns and residential areas.

[h] Water and sanitation

The overview presented earlier paints a picture of significant need in this regard. Information available indicates that all schools within the province have some basic sanitation arrangements. However, it is important to note that many of the facilities in use are not in accordance with the norms of the Department.

If a school has an occupational capacity of greater than 100%, then the ratio of 1.5 toilets for every 1 classroom is applied. If the occupational capacity is less than 100% then the ratio of 1.5 toilets for every 40 learners and 35 learners is applied in the primary and secondary schools respectively.

The Province have not met these norms and concerted attention will be required in the province to address this unsatisfactory state of affairs over time.

The provision of toilet facilities for persons with disabilities forms part of the broader planning for schools.

Information on schools that do not meet the norms and standards regarding water and sanitation are, for planning purposes, categorised from A to C with schools falling under category A having the greatest need while those under category C have lesser needs.

The Department of Water Affairs and Environment (DWAE) works in collaboration with MDoE to ensure that all schools are provided with water and sanitation.

[i] Fences

Data available in this regard suggests that some 95% of the schools have some form of fence around them. However, many of these fences are dilapidated and in poor condition thus no longer performing the function they were intended for.

[j] Electricity/Power Supply

A total of 1675 schools are recorded as has access to a power supply, of these 1673 having access to grid supply. Notably, certain schools that were previously electrified have been vandalised and thus they are reported as having no electricity. The statistics available record that 242 schools do not have electricity or an alternative power supply.

[k] Kitchens

Schools currently use makeshift structures for kitchens. The Portfolio Committee on Education, Sports, Art and Culture have previously raised concerns about some of the structures in use. No proper kitchens have yet been provided, as the MDPWR&T have been busy with the design thereof. Secondary schools on quintiles 1 to 3 are to join the Nutrition Programme as well and will have to be supplied with kitchens.

[l] Ramps and rails

Ramps and rails were previously not provided to schools. The MDoE has initiated a programme of making schools accessible to disabled persons. The actual statistical data about schools in need of ramps and rails still needs to be determined. Some schools have begun to receive such facilities already.

The gradient for the slope of the ramps should meet the required minimum standard of 1:10. Walkways must be created to join the buildings that are adjacent to one another and must be covered.

[m] Sports Grounds and Car Park

Sports grounds and car parks are a new category of facilities that are to be provided. Provisioning of these identified requirements commenced in the 2007 / 2008 financial year. Only a few schools have proper sporting facilities and these are concentrated in the former advantages schools. The formerly disadvantaged schools on the other hand have poorly constructed facilities.

3.4 Required Levels of Service per Region

3.4.1 Ehlanzeni

[a] Table 16: Existing physical facilities

NO.	Municipality/ Circuit	No. of Schools	C/R	AD	LAB	LIB	H/C	C/C	T	F	E	W	KIT	R/R
1.	Umjindi	21	279	25	14	8	4	5	371	15	20	20	8	11
2.	Thabachewu	43	502	13	6	7	3	6	358	20	22	19	2	1
3.	Mbombela	199	3241	127	58	53	19	33	2897	167	184	158	35	35
4.	Nkomazi	159	2410	79	30	31	14	30	2337	121	148	100	13	31
	TOTAL	422	6427	244	108	99	40	74	5963	323	374	297	58	78

3.4.2 Bushbuckridge

[a] Table 17: Existing physical facilities

NO.	CIRCUIT	NO. OF SCHOOLS	EXISTING PHYSICAL FACILITIES									
			C/R	AD	LAB	LIB	H.E	OTH	T	F	E	W
1	AGINCOURT	22	16	0	0	0	0	0	10	1	1	0
2	ARTHURSEAT	22	260	3	2	1	0	0	111	22	33	13
3	CASTEEL	22	294	1	0	1	0	0	85	22	29	21
4	COTTONDALE	26	25	0	0	0	0	0	70	23	20	10
5	DWARSLOOP	26	432	8	0	0	0	0	77	26	26	16
6	GREENVALLY	20	339	4	2	2	0	0	87	20	31	12
7	LEHUKWE	26	323	7	1	1	0	0	86	26	30	10
8	MANYELETI	28	117	2	0	1	0	0	78	28	27	11
9	MARITI	25	205	0	**0**	0	0	0	68	25	19	12
10	MAVILJAN	11	126	0	0	0	0	0	72	11	23	12
11	MKHUHLU	28	479	10	3	4	0	0	72	28	22	18
12	SHATALE	21	176	2	0	1	0	0	73	21	24	6
13	THULAMAHASHE	28	372	6	4	2	0	0	112	28	34	5
14	XIMHUNGWE	27	385	6	2	2	0	0	67	27	19	6
	GRAND TOTAL	**332**	**4591**	**67**	**17**	**19**	**0**	**0**	**1068**	**381**	**338**	**152**

3.4.3 Nkangala

[a] Table 18: Existing physical facilities

NO.	CIRCUIT	EXISTING PHYSICAL FACILITIES									
		C/R	AD	LAB	LIB	H.E	OTH	T	F	E	W
1	DELMAS	439	17	8	10		5	29	23	30	25
2	WITBANK 1	566	29	11	10		5	324	24	30	25
3	WITBANK 2	654	26	18	10		2	760	27	28	34
4	WITBANK 3	458	22	24	17		5	789	24	23	23
5	WATERVAL BOVEN	328	10	3	5		3	475	16	27	16
6	MIDDLEBURG 1	423	52	27	12		13	468	20	22	21
7	MIDDLEBURG 2	370	14	13	12		20	415	21	21	21
8	MIDDLEBURG 3	317	18	10	7		6	273	19	18	20
9	KWAGGERFONTEIN E	351	5	**0**	0		0	334	24	23	24
10	KWAGGAFONTEIN W	402	8	5	6		0	319	21	25	25
11	TWEEFONTEIN N	370	8	3	3		2	20	26	24	25
12	TWEEFONTEIN S	384	3	1	1		2	29	29	29	29
13	KWAMHLANGA NE	375	3	3	3		3	343	18	21	22
14	KWAMHLANGA SW	290	11	3	3		2	209	20	18	20
15	LIBANGENI	394	7	4	2		0	93	17	21	18
16	WELTEVREDE	561	13	7	3		3	399	32	35	37
17	SIYABUSWA	578	17	9	4		2	400	37	36	37
18	MMAMETLHAKA	271	10	6	5		0	216	17	21	19
19	NOKANENG	321	15	4	4		1	298	24	26	23
20	MARAPYANE	325	11	4	5		0	1605	19	23	22
	GRAND TOTAL	**8177**	**301**	**163**	**122**		**74**	**7798**	**458**	**501**	**468**

NOTE: H.E not specified; OTH consists of school halls and kitchens.

3.4.4 Gert Sibande

[a] Table 19: Existing physical facilities

CIRCUIT	Cr	Adm	Lab	Lib	CC	HS	Hall	Kit	T	F	W	E	SG	PK
Amsterdam														
Badplaas														
Balfour														
Bethal	267	13	11	5	0	2	0	0	316	19	23	18	4	4
Breyten	201	7	2	3	0	1	1	3	256	18	25	22	1	7
Carolina	145	5	2	3	4	2	6	5	198	14	15	16	7	1
Dun Donald	248	10	2	2	0	1	0	0	275	21	19	19	0	0

Ermelo 1	297	10	8	6	4	0	4	4	244	18	21	21	4	5
Ermelo 2	105	2	2	1	1	1	2	4	150	10	16	13	1	0
Highveldridge E	580	25	20	18	3	3	10	2	703	27	26	27	36	17
Highveldridge W	437	18	29	14	7	7	8	0	661	22	24	24	8	11
Mashishila	443	13	7	2	0	2	0	6	172	23	11	79	0	0
Mpuluzi	284	9	3	3	0	2	1	3	181	17	29	26	5	5
Piet Retief	366	14	11	7	3	4	9	6	378	17	23	21	6	4
Staneast	195	3	3	3	0	0	0	0	0	0	0	0	3	3
Stanwest	375	13	6	6	3	3	3	0	347	18	22	18	3	5
Volksrust	264	11	15	8	2	4	4	0	240	21	17	10	3	3
Wakkerstroom	459	15	11	5	1	5	0	2	458	23	26	25	1	0
TOTAL FACILITIES	**4666**	**168**	**132**	**86**	**28**	**37**	**48**	**35**	**4579**	**268**	**297**	**339**	**82**	**65**

Key: **Cr** = classrooms; **Adm** = administration blocks;
Lab = laboratory; **Med** = media centre; **CC** = computer centre; **HS** = hospitality study
SH = school hall; **Kit** = kitchen; **T** = toilet seats; **SF** = sport field; **Pk** = car parking area

NOTE: The processing of the above data indicates a number of issues that the MDoE will need to address in the production of future Infrastructure Plans, being: devising and requiring all Regional Offices of the Department to collect information about existing and required facilities on a standardized template in which information in all fields must be collected; that prior to its submission it needs to be checked and verified and that information provided must be for all circuits. Without a complete infrastructure requirement the Infrastructure Plan is seriously compromised and proper planning and budgeting cannot be undertaken for the province.

SECTION 4: NEED OR DEMAND DETERMINATION

4.0 Introduction

The need for educational infrastructure is determined by a range of factors. These include, for example, demographic trends and population movements, patterns of economic growth and development, policy imperatives to address regionally expressed service level inequalities, changes and differing curricula emphasizes that require new or different infrastructure requirements, technology considerations and the quality of teaching and learner support given that dramatically impacts on the fluctuating numbers of pupils attracted to particularly "township" schools in the province.

4.1 Demographic Trends

The tables overleaf contain information per municipal area for the province. It is unfortunate that demographic information is not available per educational circuit thus making planning difficult.

After the tabular presentation certain conclusions are also noted.

Table 20: Demographic Trends, Gert Sibande Region

Region/Municipality	Age Cohort 0-4	Age Cohort 5-14	Age Cohort 15-19	Total Population in 0-19 year age cohorts	% of Provincial Population (3 365 886)	% of Regional School Going Population at Municipal Level	Total Population	% of School Going Population at Local Municipality Level	Variance between District and Local Municipality figures
Gert Sibande District Municipality	**101,465**	**216,169**	**106,279**	**458,084**	**13%**	**35,8%**	**900,007**		
Albert Luthlui Municipality	22,765	53,556	26,531	102,852	3%	24%	187936	21%	3%
Dipaleseng Municipality	3,954	8,753	4,352	17,059	1%	4%	38617	4%	0%
Govan Mbeki Municipality	21,668	42,619	21,429	85,716	3%	20%	221747	25%	-5%
Lekwa Municipality	10,662	22,475	11,696	44,833	1%	11%	103267	11%	0%
Mkhondo Municipality	18,608	37,841	18,126	74,575	2%	18%	142892	16%	2%
Msukaligwa Municipality	13,906	29,658	14,119	57,683	2%	14%	124812	14%	0%
Pixley Ka Seme Local Municipality	9,902	21,267	10,026	41,195	1%	10%	80736	9%	1%

Source: Gaffneys, 2008/09

Table 21: Demographic Trends, Ehlanzeni Region [Including Bushbuckridge]

Region/Municipality	Age Cohort 0-4	Age Cohort 5-14	Age Cohort 15-19	Total Population in 0-19 age cohorts	% of Provincial Population (3 365 886)	% of Regional School Going Population at Municipality Level	Total Population	% of School Going Population at Local Municipal Level	Variance between District and Local Municipality figures
Ehlanzeni District Municipality	**170,222**	**378,313**	**182,481**	**731,016**	**22%**		**1447053**		
Bushbuckridge Municipality	61,106	148,392	68,757	278,255	8%	38%	497958	34%	4%
Mbombela Local Municipality	52,153	112,646	57,322	222,121	7%	30%	476593	33%	-3%
Nkomazi Local Municipality	43,995	92,381	43,378	179,754	5%	25%	334421	23%	1%
Thaba Chweu Municipality	7,760	15,453	7,724	30,937	1%	4%	81681	6%	-2%
Umjind Municipality	5,208	9,441	5,300	19,949	1%	3%	53744	4%	-1%
Kruger National Park				0	0%	0%	2656	0%	0%

Source: Gaffneys 2008/09

Table 22: Demographic Trends, Nkangala Region

Region/Municipality	Age Cohort 0-4	Age Cohort 5-14	Age Cohort 15-19	Total Population in 0-19 year age cohorts	% of Provincial Population (3 365 886)	% of Regional School going Population at Municipal Level	Total Population	% of School Going Population at Local Municipal Level	Variance between District and Local Municipality figures
Nkangala District Municipality	**112,343**	**232,069**	**117,879**	**462,291**	**14%**		**1018826**		
Delmas Municipal Council	6,237	11,733	5,851	23,821	1%	5%	56208	6%	1%
Dr. J.S. Moroka Municipality	27,149	65,094	32,622	124,865	4%	27%	243313	24%	3%
Emakhazeni Local Municipality	4,474	9,088	4,747	18,309	1%	4%	43007	4%	0%
Emalahleni Local Municipality	26,852	51,567	26,414	104,833	3%	23%	276413	27%	-4%
Steve Tshwete Local Municipality	13,758	28,523	14,734	57,015	2%	12%	142771	14%	-2%
Thembisile Municipality	29,399	66,264	33,511	129,174	4%	28%	257114	25%	3%
Provincial Total	**384,030**	**826,551**	**406,639**	**1,617,220**	**48%**		**3,365,886**		

COMMENTRY:

- A total provincial population of 3,37 million is indicated above;
- Of this population a total of 48% are concentrated in the 0-19 year age cohorts;
- Within the primary and secondary schooling ages of 5-19 years the total population is 1,233,190 persons, comprising a total of 36,6% of the provincial population;
- Official school going figures of the province stand at 1,033,966, according to NEIMS 2008, indicating that some 200,000 children in the 5-19 age groupings are not attending schools for one or other reasons;
- In the final column of the table those municipalities with a negative scoring are illustrative of those municipalities that have a relatively higher younger population [0-19 years] indicating the trend of shifting towards larger economic centres.
- From an educational infrastructure planning point of view it is of particular note that there are only 384,030 persons recorded in the 0-4 age cohort, indicating that as this age grouping moves upward into the 5-9 age cohort there will, in all likelihood, be an oversupply of primary schools and classrooms. Presently, according to the statistics of the Department, there are 551,195 learners in primary schools across the province;
- Conversely, as the current batch of those in the 5-9 age cohort move upwards through the schooling system, there is likely to be growing pressure on the secondary schooling infrastructure system. Currently, for example, secondary schools across the province accommodate 322,669 learners and if these schools are to accommodate even 80% of the current batch of those at the primary level at present then the secondary schooling system is potentially short of approximately 120,000 secondary school places in the future.

Note: The fact that there is no match up between population enumeration and circuit boundaries makes exact planning taking into account demographic factors an inexact process. Perhaps consideration needs to be given aligning circuit boundaries with municipal boundaries in the future.

The province as a whole needs to give much greater attention to demographic analysis and modeling in future as this will support much more sophisticated infrastructure demand management in future. A key consideration is the inter and intra-regional movements of population as this too impacts on the need for schooling infrastructure.

4.1.1 Regional Demographic Dynamics

In the submission of infrastructure plans by the Regions certain demographic trends and considerations were highlighted. These are captured at this point in the plan as the have planning implications that will need to be taken account of.

[a] Nkangala Region:

- The increase in population especially in the Emalahleni and Thembisile Municipalities has placed enormous pressure on the existing schools infrastructure and thus there is a need for additional schools and additional classrooms to accommodate the overcrowding that exists.
- Between the census year 2001 and the 2007 Community Survey the population in certain other municipalities declined. The areas experiencing the most significant decline were Emakhazeni and the Delmas Local Municipality.
- There has been a slight increase in the population of the Dr J S Moraka Municipality

[b] Gert Sibande Region:

- The growth in the population in the Piet Retief Circuit is noted in the Regional Infrastructure Plan;
- The growth in other [unspecified areas] is also referred to. These are normally the larger urban centres. Conversely, the decline in other areas is noted.

[c] Bushbuckridge

- No regional trends are noted in the Regional Plan.

[d] Ehlanzeni

- No regional trends are noted for consideration in the Regional Plan.

4.2 Patterns of Economic Growth and Development

Earlier it was noted that, from the point of view of the current distribution of schooling infrastructure, there existed a high concentration of schools in certain areas. These localities are strongly associated with the historical patterns of apartheid development in South Africa. For example, the concentrations of settlements in parts of the Nkangala Region [what was formerly largely the KwaNdebele Homeland], the concentrations of people living in the Bushbuckridge area and on the outer perimeter of the Mbombela Municipality are all evidence of the spatial patterning that is directly due to policies of the past.

What is clear is that over time, and largely in response to regional economic forces, the patterns of settlement in the province will shift. Already in this regard there is clear evidence of two provincial economic trends are underway. These are:

- The growth of the larger urban centres and the relative stagnation of smaller places.

- The continuing depopulation of rural or farming communities and the absolute decline of the provinces smaller towns and settlements, unless there are unique or special factors at work.

Thus on the eastern edge of the province, and strongly associated with the dynamism of Nelspruit and activities associated with the strengthening of the Maputo Corridor, the municipalities of Mbombela and Nkomazi in particular will experience strong growth tendencies. Equally, Bushbuckridge is anticipated to continue to grow strongly and above the average rates of growth for the province as a whole. These eastern regions of the province are also stimulated by the location of the provincial government, the dynamic commercial estate farming sector, tourism and the growth of the commercial services sector in the major towns.

In the Nkangala and Gert Sibande Regions too larger towns are experiencing growth tendencies of note. In the municipalities of Emalahleni, Steve Tshwete, Albert Luthlui and Govan Mbeki the growth impetus is much more related to the mining, power generation and petro-chemicals industries. Also the continuing strong commuting relationships between settlements in parts of the Nkangala region and the Pretoria/Johannesburg conurbation cannot be underestimated.

As noted previously in the Infrastructure Plan greater attention needs to be given to undertaking more thorough demographic and economic analysis in the province in order for provincial departments to make well considered strategic decisions regarding medium and longer term infrastructure planning.

4.3 Infrastructure Demand and Forecast Considerations

In addition to demographic and economic considerations impacting on the demand for public schooling infrastructure there are certain additional considerations that need to be taken account of. These are examined below.

[a] Regional imbalances in Schooling Provision: The two regions of Bushbuckridge and Ehlanzeni experience the most pressing shortages of schools and additional classrooms in the province. The learner classroom ratios for these two regions are 1:44 in Bushbuckridge and 1:46 in Ehlanzeni respectively. The other two regions of the province both have ratios of below 1:40 learners per classroom.

[b] Shortage of Secondary Schools: While the provision of primary schools is generally sufficient to address the needs of province, there is a distinct shortage of secondary school classrooms and additional, more specialized, facilities. As pointed out from the demographic analysis, this pressure will intensify over time as learners in the primary school phase move upward in secondary schools.

[c] Inequality of Schooling Provision: The need to address historical imbalances in the quality of schooling provision is a priority identified by the Department. Overcoming these imbalances will need to be addressed on a progressive basis over time.

[d] Provision of Nutrition to Learners: The Department is of the view that the provision of nutrition to learners has drawn additional learners into the schooling system. Higher enrolments in the Foundation Phase, as distinct from the Senior and FET phases, have been noted which, in turn, places additional pressures on the provision of facilities. While this situation can be alleviated through the Department's Scholar Transport scheme in the short term, a longer term solution to provide additional facilities is needed.

[e] Provision of Kitchens: The nutrition policy of the Department has created additional demands to provide kitchens so that food can be properly and hygienically prepared. It is a fact that the great majority of schools are still reliant upon totally inadequate food preparation and serving arrangements.

[f] Use of GIS Modeling: The use of this tool can be substantially enhanced within the Department to ensure the more effective placement of new schools , additional classrooms and the addition of specialist teaching spaces. For example, the number of learners within a five kilometer radius of schools needs to be plotted as well as the movement pattern of scholars using the Scholar Transport scheme. Such analyses will assist to support appropriate school location decisions.

[g] Moveable Classrooms: The use of movable classrooms is practiced within the Province. For example, the construction of the Mbombela Stadium at a site near two schools has led to the provision of such structures as a temporary measure while permanent facilities are constructed at an allocated site.

In areas such as Piet Retief that experience overcrowding on a large scale and thus become flashpoints, the provision of movable classrooms have become essential while proper plans are put in place to provide permanent structures. Also, in instances where small schools are identified as being unsafe such communities will be provided with movable classrooms until alternative arrangements can be made.

[h] Scholar Transport: Scholar transport is utilised to transport learners living over five kilometers from their schools. This arrangement is used mainly in the rural areas where walking distances are invariably much greater. The provision of scholar transport is a continual challenge for the MDoE as costs invariably escalate beyond what the budget can sustain. Other means are being considered to ensure optimum utilisation of this facility and to prevent the abuse of the subsidies paid by the Department.

[i] Small Schools: Two approaches are currently in use regarding small schools. The first of these is to teach in a multi-grade set up with learners in different grades being schooled in a single class and being taught by the same educator. During certain times during the school programme specific grades receive tuition, while others are given work exercises to complete and vice versa. The scenario is particularly challenging as the educators may not necessarily have been trained for this type of teaching.

Another scenario is that of amalgamating small farm schools. In such instances the learners from the amalgamated schools are taken to other bigger schools or, alternatively, small schools are amalgamated to form one bigger school. The process is, however, very slow due to the consultation processes that must be undertaken.

[j] School Hostels: Previously hostels were used in certain schools. The reuse of this option is being considered to ensure that learners from farm schools can receive schooling. Also the use of this option enables the Department an additional alternative to the continued support for uneconomical small schools in out lying localities.

[k] Re-grading Schools: Discussions are currently on course at management level to re-grade schools according to the National Qualification Framework (NQF) scenario. The division of schools according to the different phases that are taught is important if the available infrastructure is to be used effectively. Currently some schools go up to Grade 7 while others extend up to Grade 9. In some areas schools begin from Grade 1 to Grade 12. There is often little that can be done with such schools as they are found mainly in small places with few other educational alternatives.

[l] Use of Bicycles: The Department of Transport has provided bicycles to some learners in the rural areas. The project termed "Shova Kalula" is now in its fourth year. This entails providing bicycles that are used to travel from home to school and vice versa. The project has, however, not reached all the learners and thus the Scholar Transport scheme continues to be heavily used.

Notwithstanding the latter comment, "Shova Kalula" has registered some success as learners who do not qualify for Scholar Transport, due to their numbers, are now able to use bicycles to schools. This shortens the time learners take to arrive at school and at home on return. The Department of Transport is gradually increasing its project to cover other deep rural areas to ensure that learners have greater access to education.

[m] New Curriculum in Schools: The introduction of new curricula in schools impacts upon the need for additional infrastructure. This needs to be constantly borne in mind when planning. For example, facilities like computer studies and hospitality studies must now be provided for. Other specialized requirements like workshops must also be provided where the curriculum demands these.

[n] Unsafe Structures: A programme is currently underway within the Department to upgrade a total of 31 schools constructed of mud blocks, as their structural stability is an aspect of concern and they do not meet the required building standards. This programme will be largely completed during the 2009/10 financial period.

The province has, over the last number of years, experienced considerable storm damage to schools in certain localities. For example, the Department has had to commit R 83million to the repair of schools in the Bushbuckridge area, the so-called Singita Programme. This programme too will be largely complete during the 2009/10 financial year.

A third concern of the Department is to replace, as rapidly as it can, schools constructed using asbestos sheeting and other asbestos products. In terms of the policy of the Department such structures should already have been replaced. Unfortunately, the limited budget of the Department, and its need to respond to a whole range of other infrastructure requirements, have not enabled it to complete this programme yet.

[o] Responding to changes in settlement patterns: The growth of certain areas and the corresponding decline of others place demands on the Department to respond accordingly to make sure that required facilities are provided where the demand warrants it. Equally, in declining areas schools need to be amalgamated or closed down should demand for school places fall to a low level.

[p] Changes in Technology: The greater use of technology as a platform to provide an enriched learning experience is somewhat far distant in ordinary primary and secondary schools. However, the greater use of broadband infrastructure is already under discussion within the management structures of the Department. Also the need to ensure that expensive electronic systems are safe from theft and vandalism will become increasingly important for the Department.

[q] Provision of Electricity: The provision of electricity to schools is considered essential to enable schools to keep up with the changing demands of the curriculum. Unfortunately, the remote location of certain schools makes this decision difficult and expensive to implement. Currently, the Department of Mineral and Energy is supporting the Department to electrify schools. Where appropriate solar energy solutions and the use of generators is also considered. Both of these options have theft and vandalism problems associated with them.

[r] Water supply: The availability of water at schools is considered to be extremely important. Where there is access to bulk supply, connections to schools are made with the support of municipalities. Where such a service is not available boreholes and the provision of water to schools with the use of water tankers is the only available alternative.

[s] Sanitation: While the preferred alternative is the provision of a flush system connected to a municipal sewer reticulation system, the location of many schools require them to use pit toilets. Because of the potential for underground water contamination, particularly in densely settled areas, the Department favors the provision of EnviroLoo toilets. Such toilets also enable the solid dry wastes generated to be used for composting the soil and the growing of vegetable food gardens.

4.4 Required Schooling Infrastructure

The tables below, generated by school principals and as submitted upwards by the Departmental Circuit Offices indicate the required schooling infrastructure on a region

by region basis. The concluding table in this section of the report, aggregates the regional requirements to provide an overall province wide picture.

4.4.1 Table 23: Required Schooling Infrastructure: Ehlanzeni

NO.	Municipality/ Circuit	No. of Schools	C/R	AD	LAB	LIB	H/C	C/C	T	F	E	W	KIT	R/R
1.	Umjindi	21	34	11	15	13	0	5	17	122	3	4	11	15
2.	Thabachewu	43	55	5	5	33	1	6	28	358	2	8	33	31
3.	Mbombela	199	287	19	58	149	5	33	168	2748	22	38	129	148
4.	Nkomazi	159	526	37	30	120	14	1	136	2361	11	57	98	137
TOTAL		422	902	72	108	315	20	45	349	?	38	107	271	331

Note: The fencing statistic is clearly not correct and requires verification.

4.4.2 Table 24: Required Schooling Infrastructure: Bushbuckridge

NO.	CIRCUIT	NO. OF SCHOOLS	FACILITIES REQUIRED									
			C/R	AD	LAB	LIB	H.E	OTH	T	F	E	W
1	AGINCOURT	22	3	12	22	21	22	22	21	3	5	10
2	ARTHURSEAT	22	11	19	20	21	21	21	285	0	3	10
3	CASTEEL	22	0	22	21	21	21	21	327	14	14	16
4	COTTONDALE	26	86	25	25	26	26	26	6	11	7	18
5	DWARSLOOP	26	-24	26	26	26	26	26	575	20	19	14
6	GREENVALLY	20	26	15	18	18	20	20	497	20	20	20
7	LEHUKWE	26	48	19	25	25	24	26	433	5	3	10
8	MANYELETI	28	0	26	26	26	28	28	109	10	0	23
9	MARITI	25	25	14	17	17	17	17	254	6	4	6
10	MAVILJAN	11	25	11	11	11	11	11	121	9	1	1
11	MKHUHLU	28	87	16	23	22	25	22	770	4	2	7
12	SHATALE	21	52	19	16	18	23	18	345	19	20	16
13	THULAMAHASHE	28	96	28	27	27	8	27	633	28	28	28
14	XIMHUNGWE	27	20	21	25	25	25	27	581	3	0	17
	GRAND TOTAL	332	455	273	302	304	297	312	4957	152	126	196

Note: The number of toilet facilities noted requires verification as it appears very high

4.4.3 Table 25: Required Schooling Infrastructure: Nkangala

NO.	CIRCUIT	REQUIRED PHYSICAL FACILITIES										
		GRADE R C/R	C/R	AD	LAB	LIB	H.E	OTH	T	F	E	W
1	DELMAS	3	8	2	23	21		19	20	3	2	2
2	WITBANK 1	6	0	1	2	4		13	16	1	1	1
3	WITBANK 2	8	0	0	24	3		18	12	1	1	2
4	WITBANK 3	2	64	3	14	4		16	48	2	2	2
5	WATERVAL BOVEN	8	5	2	26	4		10	3	1	2	2
6	MIDDLEBURG 1	1	4	2	14	1		8	4	2	1	1
7	MIDDLEBURG 2	1	16	1	14	2		8	12	0	0	1
8	MIDDLEBURG 3	0	34	39	14	4		6	159	0	0	0
9	KWAGGERFONTEIN E	6	12	2	24	24		13	12	2	2	2
10	KWAGGAFONTEIN W	6	97	2	21	24		16	14	2	2	2
11	TWEEFONTEIN N	4	6	1	26	25		11	20	3	3	2
12	TWEEFONTEIN S	4	50	1	7	29		37	20	4	4	3
13	KWAMHLANGA NE	8	18	5	12	21		17	8	2	1	1
14	KWAMHLANGA SW	17	111	8	4	4		29	15	3	4	4
15	LIBANGENI	2	16	26	26	13		16	22	2	1	1
16	WELTEVREDE	4	8	32	32	10		19	20	3	2	3
17	SIYABUSWA	11	4	32	32	6		24	28	3	2	2
18	MMAMETLHAKA	0	4	19	19	4		12	22	4	2	1
19	NOKANENG	2	4	23	23	24		15	20	3	3	3
20	MARAPYANE	2	12	25	25	8		10	19	6	2	3
	GRAND TOTAL	95	473	226	382	235		317	494	47	36	38

Note: OTH consists of kitchens, computer centres, school halls and hospitality studies

4.4.4 Table 26: Required Schooling Infrastructure: Gert Sibande

	Cr	Adm	Lab	Lib	CC	HS	Hall	Kit	T	F	W	E	SG	PK
Amsterdam	67	6	3	7	9	0	3	10	0	7	8	3	0	0
Badplaas	10	2	2	4	6	1	2	2	0	2	5	3	0	0
Balfour	20	1	2	4	6	0	3	5	0	0	7	3	0	0
Bethal	0	1	13	25	19	0	6	24	0	0	0	0	1	0
Breyten	17	3	4	14	18	0	4	24	68	13	11	14	30	19
Carolina	4	1	0	8	11	0	4	7	8	4	4	0	13	14
Dun Donald	7	0	0	0	21	0	19	21	317	1	2	2	21	21
Ermelo 1	44	8	7	10	15	0	7	13	92	0	5	7	20	6

Ermelo 2	33	1	0	17	15	0	0	15	34	7	8	10	19	5
Highveldridge E	34	5	17	19	19	0	9	12	196	0	0	0	6	4
Highveldridge W	0	10	11	9	23	0	5	24	75	4	13	12	16	12
Mashishila	24	13	15	15	24	0	3	23	108	22	18	15	26	25
Mpuluzi	24	7	13	16	20	1	11	17	0	4	3	1	20	18
Piet Retief	74	21	16	24	29	0	16	24	0	22	20	18	30	22
Staneast	0	1	9	9	0	0	0	0	5	0	0	0	32	0
Stanwest	4	0	7	21	15	0	13	16	0	0	0	0	20	13
Volksrust	9	1	1	6	21	9	0	22	18	0	3	3	19	21
Wakkerstroom	95	22	29	29	24	0	19	35	180	12	12	9	35	35
TOTAL FACILITIES	**466**	**103**	**149**	**235**	**295**	**11**	**134**	**294**	**1101**	**99**	**119**	**100**	**308**	**215**

Key: **Cr** = classrooms; **Adm** = administration blocks; **Lab** = laboratory; **Med** = media centre; **CC** = computer centre; **HS** = hospitality study **SH** = school hall; **Kit** = kitchen;
T= toilet seats; **SF** = sport field; **Pk** = car parking area

4.4.5 Table 27: Total required facilities [all regions]

REGION	Cr	Adm	Lab	Lib	CC	HS	Hall	Kit	T	F	W	E	SG	PK
EHLANZENI	902	72	108	315	45	20	0	271	349	?	107	38	0	0
BUSHBUCKRIDGE	455	273	302	304	0	297	0	0	4957	152	196	126	0	0
NKANGALA	190	226	382	235	50	0	118	95	494	47	38	36	0	0
GERT SIBANDE	466	103	149	235	295	11	134	294	1101	99	119	100	308	215
TOTAL	1918	674	941	1089	390	328	252	660	6901	298	460	300	308	215

Note: 1. Nkangala records a need for 190 class rooms: of this total need 95 are for Grade R classrooms.
2. ? denotes a need to verify this figure as the figure provided by the Regional Office is not credible.
3. The use of a 0 denotes information not supplied from the Regional Offices.
4. Ehlanzeni also recorded the need for 331 ramps and rails.

SECTION 5: Existing Infrastructure

5.0 Introduction

This section of the report looks at what exists from an infrastructure point of view in the province. It looks at the quantum of schools; their distribution in the province, per region and educational circuit; the essential characteristics of schools and their condition.

Further to the above, this section of the plan examines the infrastructure delivery achieved by the Department over the last number of years as well as examining the current infrastructure delivery per project type.

5.1 Number and Distribution of Schools

According to the NEIMS 2008 data the province has a total of 1933 schools consisting of 1230 primary schools, 426 secondary schools and 277 combined schools, and 18 special schools. Figure 3 below further examines the distribution of schools by their type.

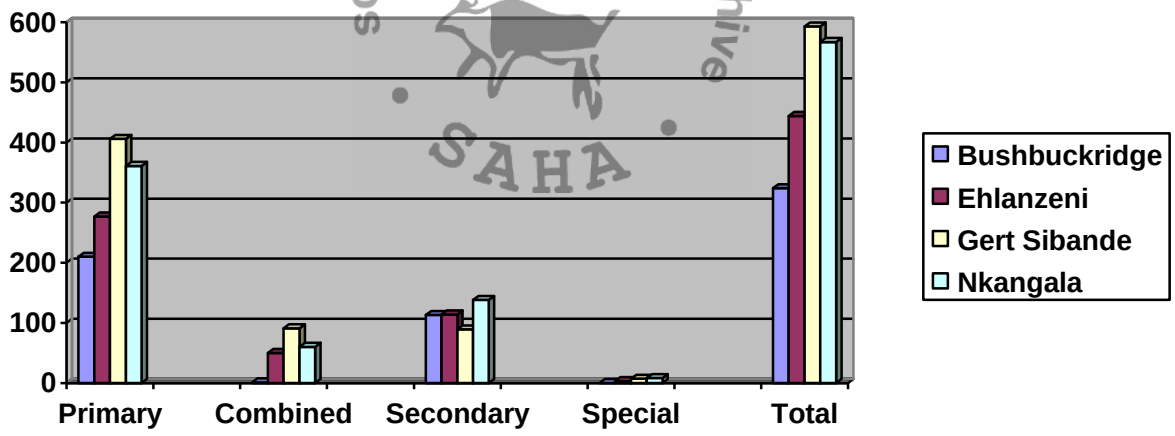


Figure 5: Number of Schools in the Province

The number of schools increases or decreases marginally per annum depending on the number of schools that are amalgamated, registered or built. It is also of note that the Gert Sibande Region has a number of Farm Schools and these are gradually being closed down due to the de-registration of learners.

5.2 Capacity of Schools

The capacity of schools differs from Region to Region. The situation in Bushbuckridge and Ehlanzeni Region is more or less comparable regarding the use of facilities. Here

approximately 30% of the schools are over utilised while a further 10% are under utilised.

In the Gert Sibande and Nkangala Regions approximately 10% of schools are over utilised. However, in these two Regions approximately 30% of the existing capacity is underutilised. The unutilised capacity in the latter Regions is mainly due to the movement of people from old settlements to new ones. Figure 4 depicts the scenario of the capacity of schools in the different Regions.

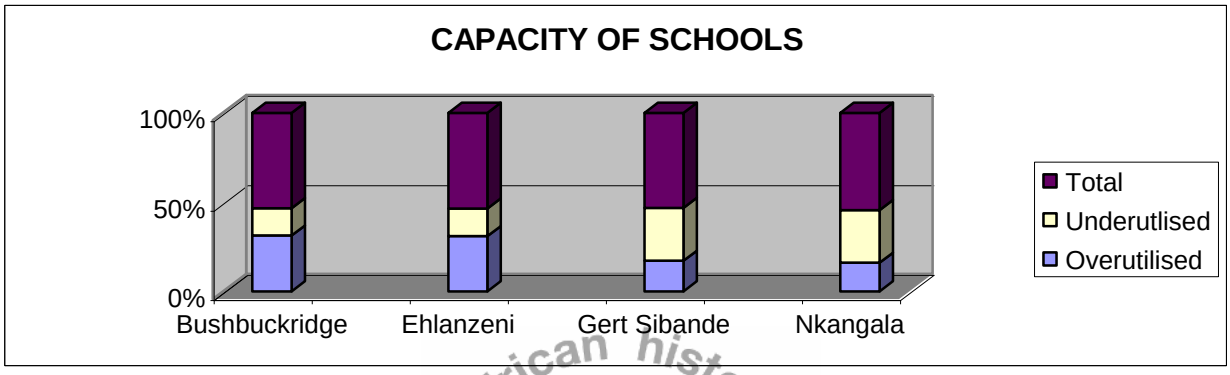


Figure 6: Capacity of Schools

5.3 Historical Provision of Infrastructure

The tables below illustrate the value of infrastructure delivered by the Department since the 2002/2003 and 2008/2009 financial years. Also the actual physical delivery achieved as recorded in the records of the MDPWR&T is also noted.

Table 28: Budget Allocations and Expenditure on Infrastructure 2003/2010

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Budget allocation	265 708.00	218 515.00	336 084.00	345 913.00	382 976.00	424 958.00	362 204.00
Actual expenditure	229 515.00	129 233.00	173 406.00	300 526.00	242 775.00	425 742.00	91 533.00
Variance	36 193.00	89 282.00	162 678.00	45 387.00	140 201.00	(784.00)	270 671.00
Under expenditure	36 193.00	89 282.00	162 678.00	45 387.00	140 201.00	0,00	270 671.00
Expenditure in percentage	86.38%	59.14%	51.60%	86.88%	63.39%	100.00%	25.27%

Table 29: Delivery of Infrastructure 2004/2008
[as extracted from the MDPWR&T report of June 2009]

Infrastructure Type	04/05	05/06	06/07	07/08	TOTAL
NEW CONSTRUCTION					
Classrooms	64	209	228	124	**625**
Computer centres	3	4	8	13	**28**
Libraries	0	0	5	8	**13**
Laboratories	0	0	0	3	**3**
Kitchens	0	0	3	6	**9**
Ramps and Rails	0	1	14	5	**20**
Hospitality studies	0	0	0	0	**0**
Sports grounds	0	0	0	3	**3**
Parking	0	0	0	1	**1**
Admin buildings	4	14	10	10	**38**
School halls	16	4	5	2	**27**
Toilets	213	437	334	94	**1078**
Water	17	45	9	5	**76**
Electrification	11	16	9	3	**39**
Fencing	28	26	21	5	**80**
MAINTENANCE					
Classrooms	332	543	328	163	**1366**
Computer centres	5	1	0	0	**6**
Libraries	0	0	0	0	**0**
Laboratories	0	0	0	1	**1**
Kitchens	0	0	0	0	**0**
Ramps and Rails	0	0	0	0	**0**
Hospitality studies	0	0	0	0	**0**
Sports grounds	0	0	0	0	**0**
Parking	0	0	0	0	**0**
Admin buildings	6	3	3	4	**16**
School halls	0	0	1	0	**1**
Toilets	24	2	29	48	**103**
Water	3	0	0	0	**3**
Electrification	15	5	2	0	**22**
Fencing	4	0	1	0	**5**

The above table, reviewing as it does the delivery record of the Department over a four year period, provides a perspective on, firstly, the types of infrastructure investment favored and, secondly, the rates of infrastructure delivery per infrastructure type per annum.

[a] Patterns of Infrastructure Spend: In this regard there has clearly been a strong emphasis on both the construction and maintenance of classrooms with 625 new classrooms built and 1366 receiving maintenance attention. Also there has been a strong emphasis on the provision of new toilets [1078], the provision of water [76],

electrification [39] and fencing [80]. Toilets also have received maintenance attention in 103 instances.

The construction of administrative buildings [38], school halls [27] and computer centres [28] have also received considerable attention. Lesser attention has been given to the development of libraries [13] while only 9 kitchens and 3 laboratories have been developed over the four year period being reviewed.

[b] Rate of Infrastructure Delivery: Dividing the total delivery achieved over the review period by the number of years provides one with a fair idea of the average annual rate of infrastructure delivery achieved per infrastructure type. If one in turn relates this back to the infrastructure targets set by the Department as noted under point 2.3.5 one is able to obtain a sense of the realism of these targets.

Extending this analysis further and looking at the current infrastructure needs of the province [as extracted from the data made available from the Regions] and then dividing the extent of required infrastructure by the average rate on annual infrastructure production reveals the following picture:

Table 30: Comparison between the rates of Infrastructure Delivery achieved between 2004 and 2008 and the stated delivery targets of the MDoE

Infrastructure Type	Total No Built	Ave Delivery Rate/Annum over 04/08 period [4 years]	Required facilities as identified in 2009 by Regions	Years reqd. to deliver the identified backlog at current delivery rates	Current target delivery year as identified by Dept at present
NEW CONSTRUCTION					
Classrooms	625	156,25	1918	12	Not stated
Computer centres	28	7,00	390	55	22/23
Libraries	13	3,25	1089	335	22/23
Laboratories	3	0,75	941	1254	19/20
Kitchens	9	2,25	660	293	24/25
Ramps and Rails	20	5,00	-	-	19/20
Hospitality studies	0	0,00	328	?	09/10
Sports grounds	3	0,75	308	410	Not stated
Parking	1	0,25	215	860	Not stated
Admin buildings	38	9,50	674	71	19/20
School halls	27	6,75	252	37	27/28
Toilets	1078	269,50	6901	26	09/10
Water	76	19,00	460	24	09/10
Electrification	39	9,75	300	31	11/12
Fencing	80	20,00	298	15	10/11

The above picture is clearly not a flattering one in that in not one instance, on the basis of the data analysed, will the stated targets of the Department be met. Indeed, the periods of time required to meet the currently determined of infrastructure need in the province, at the current rates of delivery, will require a radical shake up of the whole approach school infrastructure delivery in the province.

5.4 Condition of Schools

On the whole it is not easy to determine the age of the buildings as they were built at different times and according to different standards. A number of these schools are found in rural and semi rural areas which were previously disadvantaged. Some schools in these areas were constructed by the communities themselves and are not constructed according to building standards. Many of these schools are characterised by being poorly maintained while being intensively utilised both in terms of learners and the use of the available school sites, and cannot accommodate further developments. Examples of such schools are in Moloto, extensions in the KwaGuqa area, Piet Retief and in Nkomazi.

Schools have also constructed utilising a variety of materials. A number of farm schools were even constructed of mud. These schools are mainly located in the Gert Sibande Region. The National Department of Education has employed the services of IDT to assist upgrade these schools.

Other schools that are overcrowded have even erected corrugated iron structures to alleviate the congestion. Such schools are found mainly in the Ehlanzeni Region where overcrowding is rife.

Schools constructed using asbestos products comprise another category. The bulk of these schools are former Model C schools, more especially, in the Nkangala Region that is characterised by the presence of a number of mines. Also the mining companies and Eskom donated a number of schools found in the previously disadvantaged areas.

The table below, extracted from NEIMS, provides an overview of the condition of schools in the province.

Table 31: ASSESSED CONDITION OF PUBLIC ORDINARY SCHOOLS [Source: NEIMS]

Condition	Number of Schools	% of Schools	Number of Learners
Poor	13	1	1 309
Average	290	15	100 736
Good	1613	84	930 210

The above figures were compiled in 2006 and clearly this is problematic from a planning perspective. The current condition of schools needs to be determined in order to calculate the maintenance backlog in the province.

5.5 Compilation of Asset Registers

In terms of the Government Immovable Asset Management Act [GIAMA] the province is obliged to establish asset registers for all immovable assets utilized by the Department. In this connection the Sub-Directorate: Immovable Assets has the responsibility of taking the lead to prepare the requited assets registers, that must also include condition assessments.

While some progress has been made with the preparation of these registers a substantial amount of additional work is required to complete them. In this connection a tender was advertised by the Provincial Treasury in June 2009 for a service provider to be engaged to complete the asset registers. The MDoE has set a target for the completion of all the required work by the end of the 2009/10 financial year. Consequently, until this work has been completed the asset management plan that is spelt out in the subsequent section of this report has to be framed around a number of assumptions relating to the condition of schools.

5.6 2009/2010 Infrastructure Delivery Programmes in the Department.

A budget of R419,2 was approved for infrastructure expenditure in 2009/2010. However, owing to various project accruals that had to be taken account of owing to the extent of expenditure achieved in 2008/2009, the actual budget that could be planned to be utilized amounted to R324,7m. In the light of this, and allowing a contingency amount of R10m in the case of contract disputes arising has enabled the Department to make the following project allocations:

Table 32: 2009/2010 Infrastructure Delivery Programme

Project Type	Budget Allocated[Rm]	Implementing Agent
Incomplete projects 2004/2008	R108,0	MDPWR&T
Singita Projects	R83,0	MDPWR&T
Unsafe Structures [Mud Schools]	R29,8	MDPWR&T
Special Schools	R29,0	MDPWR&T
Septic tanks [Mataffin Schools]	R1,2	MDoE
New School Projects	R71,0	MDPWR&T
Roofing [Gert Sibande Schools]	R9,0	MDPWR&T
Kitchens	R2,5	MDPWR&T
Grade R provision	R2,6	MDPWR&T
ADDITIONAL ITEMS		
Contract dispute provision	R10,0	
Organisational support [4%]	R16,7	

[a] Incomplete Projects: Appendix C provides details of all the Incomplete Projects and their current budgeted values to complete them. In brief, incomplete projects can be summarized as follows:

- 04/05 Projects: 8 in total [value R4,9m]
- 05/06 Projects: 10 in total [value R9,4m]
- 06/07 Projects: 23 in total [value R57,6m]
- 07/08 Projects: 80 in total [value R1,238bn]
- 08/09 Projects: 28 in total [value R4,7m]

[b] Singita Projects: These are project identified as being necessary in the Bushbuckridge area to repair schools that have experienced storm and other damage, as well as to provide a range of other facilities. In short, there are 25 of these projects with a total estimated contract value of R111m. Financial provision in the 2010/2011 financial year of an amount of R28m will be necessary to complete the projects identified.

[c] Unsafe Structures/Mud Schools: These are schools identified in the province that have been mostly constructed by the communities themselves that require to be comprehensively rebuilt to accord with National Building Regulations [NBR]. A overview of these batch of schools is as follows:

- School projects are broken down into Priority 1 and Priority 2 projects;
- Priority 1 [14 projects] have a value of R38,3m;
- Priority 2 [6 projects] have a value of R13,6m;
- 18 of 20 projects are located in the Gert Sibande Region;
- R29,8m has been set aside to fund these projects in 2009/2010
- The balance of the funding required for the completion of this project will be included in the 2010/2011 financial year.

Appendix D contains the details and project values of these schools.

[d] Special Schools: These are schools built to address the needs of learners with special needs. There are a total of four projects falling into this category, valued at R29 million.

[e] Septic Tanks- Mataffin Schools: Provision has been made for this item until the schools concerned have been constructed, one of which, the Cyril Clarke Secondary School, will be constructed, substantially, during the 2009/2010 financial year.

[f] New School Projects: In this regard a total of eight schools with a total project value of R71m. Three projects will commence construction this financial year [Cyril Clarke Secondary, Kunjuliwe and Magudu School] with all the others being in the planning and design phase. It is of note that in the case of the Cyril Clarke School that a donation of R7, 5m from the Vodacom Foundation has been secured.

[g] Roofing: A number of schools in the Gert Sibande region have been identified as needing urgent roof repairs and that unless the roofs concerned are attended to much more significant damage to the schools concerned will result. Effectively these can be considered as preventative maintenance projects.

[h] Kitchens: In this instance a total of R2, 5m has been budgeted to provide kitchens in four schools. Kitchens are considered a priority to support the objectives of the Schools Nutrition Programme.

[i] Grade R Provision: Here a total of 70 Grade R centres have been identified and a budget of R37 000 each has been made available to proceed with planning and design activities in the 2009/2010 financial year.

SECTION 6: Asset Management Plan

6.0 Introduction

The policies of the Department with respect to its creation/acquisition of infrastructure, routine maintenance, renewal or replacement and its disposal plan are reviewed in this section of the plan.

6.1 Creation / Acquisition Plan

This item refers to those works that create new infrastructure that were previously not in existence. It is also inclusive of upgrades or improvements to existing infrastructure.

The identification of projects and the prioritisation process commences at the Circuit Office level with the Circuit Manager meeting with the school principals to identify and recommend facilities that are required. These facilities are then listed according to their priority with the neediest schools being given the highest priority. This list is then given to the Regional Resource Planners to confirm and to attach the budget required. The list of facilities and the required budgets are then forwarded to the Head Office of the Department.

At Head Office the lists from the different Regions are assessed to ensure that the facilities and the budget correspond. The various lists received are then collated to form a single list that is then incorporated into the infrastructure plan. This plan is then forwarded to the Physical Resource Planners to confirm the projects that are likely to be implemented and to enable further forward planning to be undertaken by the Regions.

In deciding upon which infrastructure is to be developed the Department is guided by its identified targets as outlined in Section 2.3.5 of this document. These targets are, in turn, guided by the strategic objectives and plans of the Department.

Key considerations taken into account when considering the creation or acquisition of new assets include:

- The need for the facility as a result of population growth or migration tendencies;
- Class room to pupil ratios with those schools having the most unfavorable ratios relative to the desired norm being given a higher priority;
- The need to address unsafe structures;
- The need to provide for specialist learning spaces to support the curriculum objectives of the Department;
- The need to provide for the health and safety requirements of teachers and learners; and
- The need to replace structures built with unsafe building materials such as asbestos.

The Department of Education normally utilises standard drawings for the provision of facilities to schools. However, in the recent past the Department has been constructing schools on the basis of more innovative designs. The first schools to be provided based on the new designs are the 2007 / 2008 projects. The construction of the Cyril Clarke Secondary School on the basis of the "Pendulum Design Concept" is an example of such a school.

The additional cost of constructing schools in the province according to the new design approach have cost implications and this will require careful management.

The costs associated with the creation and acquisition of new infrastructure are carried by allocations from the Equitable Share and the Provincial Infrastructure Grant [PIG]

6.2 Maintenance Plan

Regular and ongoing work that becomes necessary to keep infrastructure operating or where work is necessary to prevent infrastructure failure [and that needs immediate repair] is considered **routine maintenance.**

Previously such maintenance was carried out through Day-to-Day Maintenance allocation, which was controlled by the Regions. In this instance Day-to-Day Maintenance Contractors were appointed after tenders had been called for. These contractors operated on a two-year contract after which fresh tenders were called for. Commencing from the 1st April 2005 routine maintenance funding allocations were deposited into the accounts of schools, as all schools within the Province were declared Section 21 in terms of SASA. The only schools not falling within this arrangement were Section 20 schools in the Bushbuckridge Region, that were recently transferred to the province from the Limpopo Province.

Planned maintenance, as distinct from routine maintenance, was previously not budgeted for in the province with the result that schools would only be renovated when this was considered absolutely necessary. This policy led to a number of complaints being received. The policy with respect to more affluent schools was that they would conduct their own maintenance, unless the school should require major renovations.

In response to the complaints received regarding planned maintenance the Department decided that 5% of its infrastructure allocation must be made available to Regional Directors for them to undertake the planned maintenance of buildings. For the 2008 / 2009 financial year an amount of R18m was set aside for this purpose thus providing an amount of about R4m per Region per annum.

The R4m allocation was to be monitored on a quarterly basis with those Regions not using their allocations for the quarter forfeiting their allocations for the next quarter. The arrangement was to be reviewed immediately an asset register was in place. Unfortunately, the Finance Chief Directorate, pointed out that this arrangement was not acceptable and thus it could not be continued.

It is now required that Regional Directors draw up management plans for planned maintenance and that the 5% budget allocation is then transferred to the accounts of the Regions in order for them to deal with planned maintenance costing less than R500 000.00 per contract. In instances where works exceed R500 000.00 these are to be handed over to the Implementing Agent of the Department to be handled through a shortened tendering process to enable contractors to be on sites more quickly. In those instances where contractors are already busy on specific sites, it was agreed that their contracts would be extended to include the new works required.

It was then decided that until the asset registers had been finalized that 10% of the infrastructure budget allocation be set aside for both planned and unplanned maintenance with each receiving a 5% allocation.

The MDoE did not previously, as a policy, make provision for the setting aside of budget allocations for reactive maintenance needed due to storm damages and other unforeseen circumstances. Also, the MDoE does not insure school buildings against unexpected hazards like storms. Equally, SGB's of many schools have also not insured their schools against such eventualities. The result of this is that the MDoE must intervene in all instances where schools are storm damaged.

Where schools in the past were damaged by storms or other unforeseen circumstances they would be repaired through the normal priority list system. This arrangement often took over two years to have the schools repaired. As a result of these unacceptable time delays, the Department, as from the 2006 / 2007 commenced to set aside a certain percentage of the infrastructure allocation for such reactive maintenance. Since the 2007 / 2008 financial year the funds set aside have been raised to 5% of the budget allocation. This has assisted with the more prompt repair of storm-damaged schools.

The MDoE has now adopted, in principle, the planned maintenance approach as advocated in terms of IDIP. This requires that newly constructed schools, including those that have been recently renovated, are subject to an Infrastructure Maintenance Plan which develops a specific plan as to how major renovations and routine maintenance will be undertaken. This ideal approach has yet to be implemented within the province.

Monitoring the quality of maintenance workmanship is one of the greatest challenges given how maintenance is done and the shortage of technical personnel in the Department.

The absence of an overall Infrastructure Maintenance Plan makes it impossible for the MDoE to forecast the extent of planned and unplanned maintenance work required. The current maintenance arrangements are not satisfactory leading, directly, to the deferring of essential maintenance. The risk attached to this is that certain schools will not be maintained on time thus becoming dilapidated and non-functional.

The above comments notwithstanding, maintenance has been carried out by the Department across a range of infrastructure types in the province. Table 33 below

illustrates the maintenance of 1366 classrooms, 103 toilets, 16 administration buildings etc. The absence of recorded maintenance with respect to a considerable number of infrastructure types is an aspect of considerable concern.

Table 33: Type and Extent of Infrastructure Maintenance 2004-2008

MAINTENANCE	04/05	05/06	06/07	07/08	TOTAL
Classrooms	332	543	328	163	**1366**
Computer centres	5	1	0	0	**6**
Libraries	0	0	0	0	**0**
Laboratories	0	0	0	1	**1**
Kitchens	0	0	0	0	**0**
Ramps and Rails	0	0	0	0	**0**
Hospitality studies	0	0	0	0	**0**
Sports grounds	0	0	0	0	**0**
Parking	0	0	0	0	**0**
Admin buildings	6	3	3	4	**16**
School halls	0	0	1	0	**1**
Toilets	24	2	29	48	**103**
Water	3	0	0	0	**3**
Electrification	15	5	2	0	**22**
Fencing	4	0	1	0	**5**

6.3 Renewal / Replacement Plan

Renewal is regarded as major work done to existing facilities that does not increase the facilities' design but rather restores, rehabilitates, renews or replaces existing infrastructure to its original capacity. In this instance the renewal of schools is done on an ad hoc basis where it is clear that a building requires work or it has become dangerous to use.

Again because there is no system in place as yet to assess and capture the condition of buildings, the Department is unable to develop a structured approach to the renewal or replacement of its infrastructure.

Schools that become dilapidated and cannot be attended to through Day-to-Day Maintenance Programme, as explained earlier, are normally put on a list for renovations. In some instances these schools are also too old to be renovated and thus they will need to be replaced completely.

Because there is no systematic approach in the Department to asset management, buildings requiring attention are normally brought to the attention of the Department by communities and circuit officials inspecting schools from time to time. Once a need is identified Regional Resource Planners then confirm whether buildings need renewal. In instances where the Resource Planners are unable to visit the affected school, the recommendation of consultants assists the Department. Identified schools are then

captured in the infrastructure plan for attention, except in instances where an emergency has occurred.

Materials used during the renewal of facilities are normally prescribed by the consultants employed by the Department of Public Works. Materials preferred for such work are those that are appropriate and functional and best match the construction materials used previously.

Emergencies are catered for using funds set aside for reactive maintenance. Such projects are reported to the Department of Public Works who then engage consultants and contractors to repair them.

Consistent with earlier comments it is not possible for the Department to manage its assets optimally due to its lack of essential building condition information and, based on this, the development of Infrastructure Maintenance Plans.

6.4 Disposal Plan

Disposal refers to discarding obsolete facilities that are no longer in use. Again because there is no asset register in place it is not easy ,at a glance, to determine the age of the different facilities within the Province and which ones are due to be decommissioned because to their age.

To date the majority of the schools that have been decommissioned are small schools found on farmland. When such schools are no longer in use they are invariably not sold, but are either let to decay as buildings or the owner of the land takes them over for another purpose.

In those instances where the Department is made aware of schools that are to close, this information is brought to the attention of MDPWR&T who, in turn, make them available to other departments or the municipalities for their use. To date there have been no indications from MDPWR&T that land or buildings previously in the use of the Department has been sold and disposed of entirely.

Currently the MDoE is engaged in the process of amalgamating small farm schools in the province. This process is driven by the desire to have schools that are bigger in terms of learner and teacher numbers in order to use the available resources effectively, efficiently and economically. There is, however, no plan in place to ensure that the schools that have been amalgamated are disposed of. Communication processes between the Circuits, Regional and Head Offices further complicates the matter as the Head Office normally only becomes aware that a school has closed after it has actually happened. At this late stage the Department then has to make plans to demolish those structures that are not likely to be used further.

The availability of an asset register, the preparation of an infrastructure management plan and improved and timely communication will assist to forecast the disposal of

buildings and plan for how they will be disposed of and set aside any budgets required to achieve this.

According to returns submitted by the Regional Offices the following schools and buildings will require disposal in 2010/2011:

[a] Ehlanzeni Region: No schools are intended for disposal in this region.

[b] Gert Sibande Region:

Amersfoort Combined School, Volksrust, Prixley ka Seme. Reason: Disposal of unsuitable structures that are not being utilized in the school because of their construction with asbestos.

[c] Bushbuckridge: No school is intended for disposal in this region.

[d] Nkangala:

The following schools have been identified for disposal:

- Ntobeng Primary School [Mmametlhake]: Reason-This school is to be merged with Nkotolane School;
- Semotlhase Primary School [Libangeni]: Reason-This school is to be merged with Sehoko School;
- Ikageng Combined School [Marapyane]: Reason- The school has new facilities; and
- Phelwane Primary School [Tweefontein South]: Reason- The school is to have new facilities.

SECTION 7: Financial Considerations

7.0 Introduction

This section of the plan looks at costs of infrastructure provision in the province taking into account the need for new and additional facilities, for upgrading facilities and addressing backlogs identified and for addressing maintenance aspects. The availability of infrastructure funding over the MTEF period will be examined. This analysis will illustrate the funding gap that exists and the need for appropriate educational policy and strategy decision making including those related to funding strategies themselves.

This section of the plan also contains proposed funding allocations, per project type and as per the identified delivery targets of the province. The actual details of projects targeted for funding allocations are contained in appendices to this document.

7.1 MTEF Funding Allocations

The MDoE derives its infrastructure budget from two sources, namely, equitable share allocations and the Infrastructure Provincial Grant. In addition, additional allocations, as and when they are sourced, in partnership with the business sector, are channeled via the Mpumalanga Education Trust Fund, or in specific other cases, via other mechanisms agreed with the party concerned. An example of this in 2009 is the joint funding partnership that will be entered into with the Vodacom Foundation to fund the Cyril Clarke Secondary School, in the vicinity of the Mbombela Stadium.

The allocations for infrastructure for the current MTEF period are contained in the table below. This table, extracted from Budget 2009, Estimates for Provincial Expenditure, will, in due course need to be updated to include the full MTEF period for 2010- 2013 as the 2010 Budget estimates are made available.

The estimates of provincial expenditure make provision for the following categories of expenditure:

- New infrastructure assets
- Existing infrastructure assets
    - Maintenance and repair
    - Upgrading and additions
    - Rehabilitation and refurbishment

Provision is also made for professional fees for planning, design and project management expenses.

Table 34: MTEF Infrastructure Funding Allocations and Projections [2009/2015]

Department of Education							
					27/01/09		
Infrastructure Budget - 2009/10 MTEF							
		MTEF			PROJECTIONS		
		2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Cons/prof: Infrastructure & planning		54,059	55,079	58,188	61,679	65,380	69,303
Payments for Capital Assets (Excl. cons. fees)		**365,145**	**385,992**	**356,261**	**377,637**	**400,295**	**424,313**
Building & other fixed structures		365,145	385,992	356,261	377,637	400,295	424,313
	Buildings	336,513	366,850	346,729	367,532	389,584	412,959
	Other fixed structures	28,632	19,142	9,532	10,104	10,711	11,353
MEMO: TOTAL PAYMENTS (CONS. FEES & CAPEX)		***419,204***	***441,071***	***414,449***	***439,316***	***465,675***	***493,615***
Payments for infrastructure by category		**419,204**	**441,071**	**414,449**	**439,316**	**465,675**	**493,615**
New Infrastructure Assets		133,722	140,697	103,612	109,829	116,419	123,404
Existing Infrastructure Assets		285,482	300,374	310,837	329,487	349,256	370,211
	Maintenance and repair	***68,855***	***72,447***	***145,057***	***153,761***	***162,986***	***172,765***
	Upgrading and additions	***64,393***	***67,752***	***41,445***	***43,932***	***46,568***	***49,362***
	Rehabilitation and refurbishment	***152,234***	***160,175***	***124,335***	***131,795***	***139,703***	***148,085***
Current Infrastructure		***54,059***	***55,079***	***58,188***	***61,679***	***65,380***	***69,303***
Capital Infrastructure		***365,145***	***385,992***	***356,261***	***377,637***	***400,295***	***424,313***
TOTAL PROVINCIAL INFRASTRUCTURE		**419,204**	**441,071**	**414,449**	**439,316**	**465,675**	**493,615**

7.2 2009/2010 Budget Allocations

Before being able to look forward to the identification of expenditure categories over the coming MTEF cycle and beyond, it is necessary to review the allocation of the available 2009/2010 budget. This is necessary as there are a variety of current projects that need to be taken account of and for which budget allocations will need to be made in subsequent years. Only projects for which there are current construction commitments are reflected below.

Table 35: Current Projects requiring Funding Allocations in 2010/2011

Project Type	Funding Needs 2010/2011
Singita schools	28,0
Unsafe structures/Mud schools	22,1
New school projects - Cyril Clarke - Magudu - Kunjuliwe - John Mdluli **Sub-total**	 14,0 15,0 14,0 30,0 **73.0**
TOTAL	**123,1 m**

Further to the above it is noted that certain provisions will need to be made for the so-called incomplete projects for the 2004/2008 period. Currently, these are costed at R1,315 bn , although it needs to be acknowledged that this figure is likely to be inflated by some 20% given that new schools noted in this list, largely for the 2007/2008 period, provide for an inflated cost of R47 m to construct new schools based on the, at the time, new design approach being considered. This is no longer the case and thus currently a new school cost of approximately R30m is considered more realistic.

With R108m allocated to incomplete projects in 2009/2010 this leaves a funding need of approximately R1,0 bn for this grouping of projects.

Allocation decisions will also need to be made in respect of three new schools that received budgets of R2,0 m each for planning and design purposes. These are the schools of Kamhlushwa, Phelwane and Khulufunde.

Lastly, in 2009/2010 a budget of R2,5 m was set aside for planning and design activities for 70 Grade R Centres in the province. Decisions will need to be made as to which of the centres could be funded in the coming years.

7.3 The Extent of Current Project Funding Needs

Based on current funding needs of the Department of R 123,1 m noted in table 35 above, a need of approximately R 1,0 bn to address incomplete projects, as well as budgets for three new schools and 70 Grade R Centres that have received planning and design budgets in 2009/2010 computes into an overall funding requirement of approximately R1,25 bn. In this calculation the new schools have been costed at a current day estimate of R 30 m each and a Grade R Centre at R 300 000 each.

Further to this one must acknowledge the significant school maintenance backlog that is known to exist in the province and although this cannot be quantified precisely because of the absence of asset and building condition registers, it is likely to a meaningful figure, of say at least R 250 m.

All in all therefore, a total funding requirement of approximately R 1,5 bn is indicated to address existing requirements, even before additional requirements are added to this figure by the additional projects identified as being needed in Table 27 based on the Regional infrastructure plans submitted to inform this infrastructure plan.

The table below computes, based on current estimated construction costs, the additional cost to the province of addressing these additional needs identified.

Table 36: Cost Estimate to Address Additional Infrastructure Needs Identified in the Province based on the Regional Infrastructure Plans

Infrastructure Type	Number Required	Construction Cost [Rands]	Total Cost per Item [Rand millions]
Classrooms	1918	300 000	R 575,4
Admin buildings	674	1 250 000	R 842,5
Laboratories	941	700 000	R 658,7
Libraries	1089	700 000	R 762,3
Computer Centres	390	600 000	R 234,0
Hospitality Studies	328	800 000	R 262,4
Halls	252	2 200 000	R 552,2
Kitchens	660	750 000	R 495,0
Toilets	6901	650 000 [10 units]	R 448,6
Fences	298	250 000	R 74,5
Water	460	150 000	R 69,0
Electricity	300	200 000	R 60,0
Sports Grounds	308	100 000	R 30,8
Parking	215	200 000	R 43,0
TOTAL			**R 5,108,4 bn**

Notwithstanding the earlier expressed concerns about the completeness and accuracy of certain of the returns received from the Regional Offices in listing of their needs, the above exercise does provide at least **an order of magnitude** financial requirement to address the provinces school infrastructure needs. If this figure is added to the R 1,5 bn computed above, this yields a figure of some R 6,5 bn in required funding.

7.4 Implications of Financial Need Determinations

The following points are noted in this regard:

- Assuming the current R400-R500million commitment to school infrastructure in the province suggests at least a 13-16 year time period to address existing school infrastructure needs;
- In reality, because one is dealing with an expanding school population the time period to address needs will take longer than this;

- Also given that the above costing exercise has used present day construction values, the R 6,5bn price tag estimated will also increase over the delivery period of the infrastructure;
- The magnitude of the challenge identified above underscores, critically, the need for long term [20 year] infrastructure planning and not short term thinking;
- The scale of need and the ability to achieve the delivery targets set by the Department emphasizes the importance of efforts to optimize the number of schools in the province relative to the learner population. In short, there are simply too many small schools with cost per learner ratios that cannot be afforded in the province;
- Careful thought is required so as to identify savings in the entire Department of Education budget in the province so that additional resources can be mobilized to address infrastructure needs;
- Infrastructure delivery must be accorded greater importance in the overall budget allocations of the province for without this, and the corresponding attention being given to the province's ability to spend additional budgets made available, the performance of the overall public schooling system in the province will not meet the expectations demanded of it;
- Lastly, and to reinforce the last point made, unless the province has sufficient schooling infrastructure that is maintained and operated effectively, the potentials of the young persons of this province will not be realized in full.

7.5 Proposed Allocation of 2010/2011 Budget for Schooling Infrastructure

In the light of the above financial need review the proposed allocation of funding is presented. This allocation takes into account an amount of R 123,1m in existing commitments, provisions to continue to fund incomplete projects mostly for the 2007/2008 period, commitments of the Department to address the health and safety considerations of teachers and learners [i.e. water, sanitation, electrification and fencing requirements], maintenance budgets, and other expressed priorities of the Department. These relate to Grade R Centres and the provision of specialized teaching spaces for hospitality studies, computer studies, science laboratories and libraries.

Table 37: 2010/2011 Budget Analysis [Proposal]

Budget Item	**Budget Allocation**
2010/2011 Infrastructure Budget	R 441 071 000
DORA support @ 4%	R 17 642 840
Available for Infrastructure Spend	**R 423 429 160**
Carry Over 2010/2011 Commitments [refer Table 35]	
Singita schools	R 28,000 000
Unsafe/Mud Structures	R 22,100 000

New School Projects - Cyril Clarke - Magudu - Kunjuliwe - John Mdluli	R 73,000 000
Sub- Total	**R 123 100 000**
New Commitments	**R 300 329 160**
Reactive maintenance [5% of budget]	R 21 171 458
Planned maintenance [5% of budget]	R 21 171 458
Incomplete projects	R 75 237 000
Water/Sanitation [Water x 100/Sanitation x500]	R 47 500 000
Electrification [50 schools]	R 10 000 000
Fencing [50 schools]	R 12 500 000
Grade R [40 schools]	R 12 000 000
Science laboratories [20 schools]	R 14 000 000
Computer Centres [20 schools]	R 12 000 000
Libraries [20 schools]	R 14 000 000
Hospitality Studies [20 schools]	R 16 000 000
Kitchens [20 schools]	R 15 000 000
Classrooms [60]	R 18 000 000
Admin buildings [4]	R 5 000 000
Halls [3]	R 6 750 000
Sub- total	**R 300 329 160**
GRAND TOTAL	**R 423 429 160 [100% of budget]**

Explanation of Allocation:

In presenting the above proposed allocation of the 2010/2011 infrastructure budget the following are noted:

[a] Provision for Existing Projects: The necessary funding is allocated to continue with and complete projects currently underway and for which funding must be committed.

[b] Restoration of maintenance budgets: After a under allocation of these budgets for a number of financial years their restoration will now allow critical maintenance tasks to be addressed.

[c] Emphasis on health and safety considerations as a key priority: The provision of water, sanitation, electrification and fencing are all accorded a high priority in the allocation of the budget. The targeting of 100 schools for water, the construction of 500 toilets and the electrification and fencing of 50 schools each is considerably above funding allocations in previous financial years. This is because without the essential aspects being met the quality of the schooling experience can be seriously affected.

[d] Grade R Centres: The allocation provides funding for 40 such centres in recognition that special attention must be given to assist those with remedial needs in order to extend educational opportunities to those requiring special coaching.

[e] Provision of Specialised Teaching Spaces: The allocation takes account of the need to expand the provision of these in order to enrich the learning experience afforded learners and offer them the chance to acquire particular competencies. In each instance 20 additional laboratories, libraries, computer centres and facilities for hospitality studies are provided for in the proposed allocation.

[f] Kitchens: The provision of funding for an additional kitchens gives support to the Department's policy in this regard.

[g] Classrooms and Incomplete Projects: The allocations in respect of these will enable 60 new classrooms and three new schools to be provided for, representing a further 60 classrooms.

[h] Administration buildings and school halls: Although funds have been allocated for these purposes these allocations are given lesser importance.

The project lists as contained in Annexure E will be structured in accordance with the overall proposals noted above. Furthermore, in future years of the implementation of this infrastructure plan, the Head Office of the Department will take responsibility for setting infrastructure guidelines per facility that are to be funded on an annual basis. This is to ensure that policy and educational objectives are met on a progressive basis and that Regional Offices of the Department receive the necessary guidance in the selection of the infrastructure to receive funding support.

7.6 Special Projects

The MDoE works in partnership with the Mpumalanga Education Trust to attend to certain of the projects on the Project List. For the financial year 2007 / 2008 to 2009 / 2010 there were three projects that were identified, namely, Duvha, Wilge and Thembeka.

There are other projects that are taken over from time to time by the Mpumalanga Education Trust Fund, a partnership between the MDoE and business in the province. Such allocations do not come to the MDoE but are controlled by the Trust and the Superintendent General. The Trust will normally concentrate on big or flagship projects; for example, the Mogale Wa Bagale project. The projects carried out by the Trust are normally extracted from the infrastructure plan as prepared by the MDoE.

The MEC also sometimes makes special requests to the Trust to assist with projects that come to her attention through community visits. An example is the construction of

Amandla Primary School in the Gert Sibande Region. The funding for such projects is normally transferred to the Trust for its management.

7.7 Funding Strategy

The analysis contained in this section of the report makes it abundantly clear that the gap between what is required in terms of school infrastructure and the level of funding that is available to underpin this activity is wide indeed.

Note: In recognition of this special attention will need to be given to formulating and implementing novel approaches to raising additional budgets for infrastructure investment. The need for the formulation of a strategy in this regard is addressed in the Plan Improvement component of this plan.

7.8 Valuation Forecasts

No valuation and depreciation forecasts have been made due to the absence of an asset register and a system to manage infrastructure. An urgent need exists to put into place an infrastructure management system to ensure that proper management and reporting also takes place. This requirement needs to be addressed together with the expansion of the organisational structure to cater for the engagement of technically qualified staff.

SECTION 8: Organisational and Support Plan

8.0 Introduction

This section of the report recognizes that it is the department itself using its human resources, procedures, processes and systems that will deliver on the infrastructure plan it has developed. Consequently this section describes the organizational structure and functional relationships that are responsible for infrastructure delivery. Gaps and organizational weaknesses are highlighted in order to concentrate management attention on these aspects.

Following the analysis component above, the measures to be put in place, how this is to be achieved, how much it will cost and how its achievement is to be monitored will be explained.

8.1 Human Resources

In the work and gathering of information to support the preparation of the infrastructure plan there is a large chain of managers and officials involved. Each of these plays their defined role and if this set of responsibilities is not discharged effectively, the quality of the plan will suffer.

School Principals: At the level of schools Principals are expected to identify their infrastructure needs.

SGB's: Working in partnership with Principals SGB's assist to identify their infrastructure needs.

Circuit Managers: Working in partnership with Principals and SGB's the 67 Circuit Managers of the province are responsible for compiling lists of infrastructure needs in public schools in their circuits.

Physical Resource Planners: Once the resource lists are compiled they are then handed over to the Physical Resource Planners. Their task is to verify the needs identified, develop some idea about the priority of the project identified and draft the Regional Infrastructure Plan. There are three Physical Resource Planners at the Regional Level; one of these three officials is a Deputy Chief Educational Specialist with the other two persons being First Educational Specialists.

The former post is now graded as a Deputy Director's post, thus enabling persons other that previous educators to be drawn into this position. The high rate of turn over of Physical Resource Planners at the Regional level is an acute problem for the Department.

Head Office: Recently an Acting Chief Director: Physical Resources and Planning was appointed to head up the Directorate. He is backed up by the Director: Physical Resource and Facilities Planning and two Deputy Directors, one for Physical Resources Planning and the other for Physical Facilities.

Currently the Physical Resources Planning sub-Directorate has two vacant Assistant Directors posts that need filling. The Physical Facilities component has two Assistant Director's posts with one them filled. The vacant post has not yet been filled.

The Chief Works Inspector serves as the last leg under the Deputy Director: Physical Facilities. One of the Works Inspectors posts under the Chief Works Inspector is vacant and will need to be filled. There are also support staffs of to give administrative support to the management team described above.

8.2 Resources Challenges

[a] Staff Vacancies: The first concern relates to the extent of staff vacancies. As a result critical capacity does not exist and the existing members of staff are pressurized unduly to perform tasks that should be the responsibility of staff who have not yet been appointed.

[b[Technical Skill Levels: The persons mentioned do not have a technical background except for officials in the Works Inspectorate section. Personnel at Circuit Office level are mainly educators that render professional support to schools and are not technical persons. The Regional Office Resource Planners are also educators by training and while this background is of some use in the preparation of the Regional Infrastructure Plans, the shortage of planning and built environment abilities is all too apparent in the quality of the plans submitted at the Regional level. Finally, none of the Head Office management team have a technical background either. It is in this context that the support and assistance offered by the PTAT and the OST is of particular importance to the Department.

[c] Improved Planning and Management Capacity at the Regions: The current system of infrastructure planning within the Department is strongly decentralized and thus for it to be more effective, it requires the necessary technical skills and, more especially, Programme Managers at Regional Offices to assist with the planning processes. The strengthening of this component at the Regional Offices will enhance better planning and the delivery of infrastructure generally. Technical staff at the Regions will also be available to assist Circuit Managers when they initiate the planning process.

In addition to the work currently done by the Physical Resource Planners, it is important that a new arm is established at this level to deal with matters relating to Physical Facilities. Currently the OST members in each of the Regions partially fills this gap but

with the ending of their contract period at the end of April 2010, alternative arrangements will need to be made to address this.

The proposed new posts at the Region are as follows:

- 1 X Deputy Director (With technical background in the Build Environment)
- X Technicians (With technical background in the Build Environment)
- X Support Staff

[d] Improved Management Capacity and Technical Expertise at Head Office

At the Head Office level the Physical Resources Planning sub – Directorate is staffed with two officials, one as Deputy Director and the other as Assistant Director. Again these personnel do not have any technical staff to assist them with planning, decision making requiring a technical background, costing issues, the condition of buildings etc. Also because of the extreme shortages of Head Office staffing, the current officials do not have the time to visit schools due to the crisis management they are involved in on a daily basis.

There is currently one post that has been made available according to the new proposed structure that needs to be filled, namely:

- 1 X Assistant Director who is a Technician (With experience in the Build Environment)

The presence of technically qualified staff at Regional Offices, complemented by the presence of a technically qualified person at Head Office will alleviate, to a large degree, the challenges that are currently faced. .

[e] Effective use of Consulting Resources: Currently the Department uses the services of externally sourced technical persons to provide a range of services. The key challenge facing the Department in this regard is to effectively manage these persons and to ensure that they provide value for money service.

[f] Management of Technical Project Processes by External Parties: The current arrangements of the Department are such that a high degree of reliance for effective programme delivery is placed on the implementing agents engaged and then their daily management to ensure that they are discharging their responsibilities properly. The three agents of the Department are the MDPWR&T, DWAE and DME.

This arrangement has its own difficulties as well. At one level one is simply inheriting the organizational weaknesses of ones partner implementing agents and this has impacted on the Department. Secondly, having multiple implementing agents requires that they are managed well to get the best from them and that they report regularly and in ways that enable the Department's officials to interact with the reports being presented. This has been a particular challenge facing the Department.

Lastly, the tyranny of the technocrat or the person with the technical ability needs to be managed and this is not always easy for a person with very little technical know how to do.

[g] Too often in crisis mode to do the things that matter: The shortage of Head Office personnel and the constant demands on them to follow up matters that are placed on their desks by the management of the Department makes it very difficult for them to give management time to key tasks that need attention. This results in a crisis management style of working. This impacts on dedicated planning activities and the preparation of key planning documents in particular.

8.3 Organisational Structure: Head Office

The organisational structure that is needed to carry out and manage the massive infrastructure programme has been reviewed and is being implemented in phases.

The new Head Office structure is illustrated in the organogram shown below. This structure is now operational and posts are gradually being filled.

8.4 Infrastructure Programme Management

The Directorate: Planning and Facilities recognizes the importance of putting in place appropriate arrangements for the management of its infrastructure delivery programme. To this end it has created the Programme Operations Management Meeting [POMM]. This meets every two weeks and the implementing agents of the Department report into this structure on progress being made with the implementation of projects. Also via this mechanism, that is chaired by the Director: Planning and Facilities, problem issues can be dealt with. All the deliberations of the POMM are minuted and implementing agents are required to submit written progress reports.

8.5 Improvements to Systems and Business Processes

The Directorate: Planning and Facilities has identified that it needs to give attention to certain key systems and procedures considerations. Those identified and the actions taken to strengthen organizational effectiveness are detailed below:

[a[Claims Processes: It is accepted that contractors and service providers need to be paid on time for the services they provide. A policy of a maximum payment of 30 days is in effect in the Department. In order to ensure an effective and a streamlined process attention was given recently, using the assistance of the PTAT and the OST, to review

the claims process in operation and to identify aspects that can be tightened up. Out of this process it was agreed that the Director responsible would present the proposed payment changes to senior management for its approval before implementation within the organization is undertaken.

[b] Project Filing and Document Management System: The importance of maintaining project records and the proper filing of documentation and reports is recognized as important. Already the filing cabinets required have been purchased and the project files of the Department are being consolidated with the assistance of two trainee project managers recently sourced by the Department.

[c] Data Management: Meetings have taken place with those in the Department to address concerns related to data management with a particular reference to data that is required to undertake planning for the Department. A Task Team has now been established to look at issues of data cleaning and then analysis. This process is being driven by the PTAT in the province.

[d] Immovable Asset Management: The importance of this activity in the effective management of schooling infrastructure is noted. To this end two activities have recently been undertaken. The first of these was to hold a meeting with the Sub-Directorate responsible for the preparation of the asset registers to assess their state and the work that will be required to bring them up to the required standard and to render them useable documentation. The second activity was the advertising of a tender in June 2009 to appoint a service provider to update the asset registers.

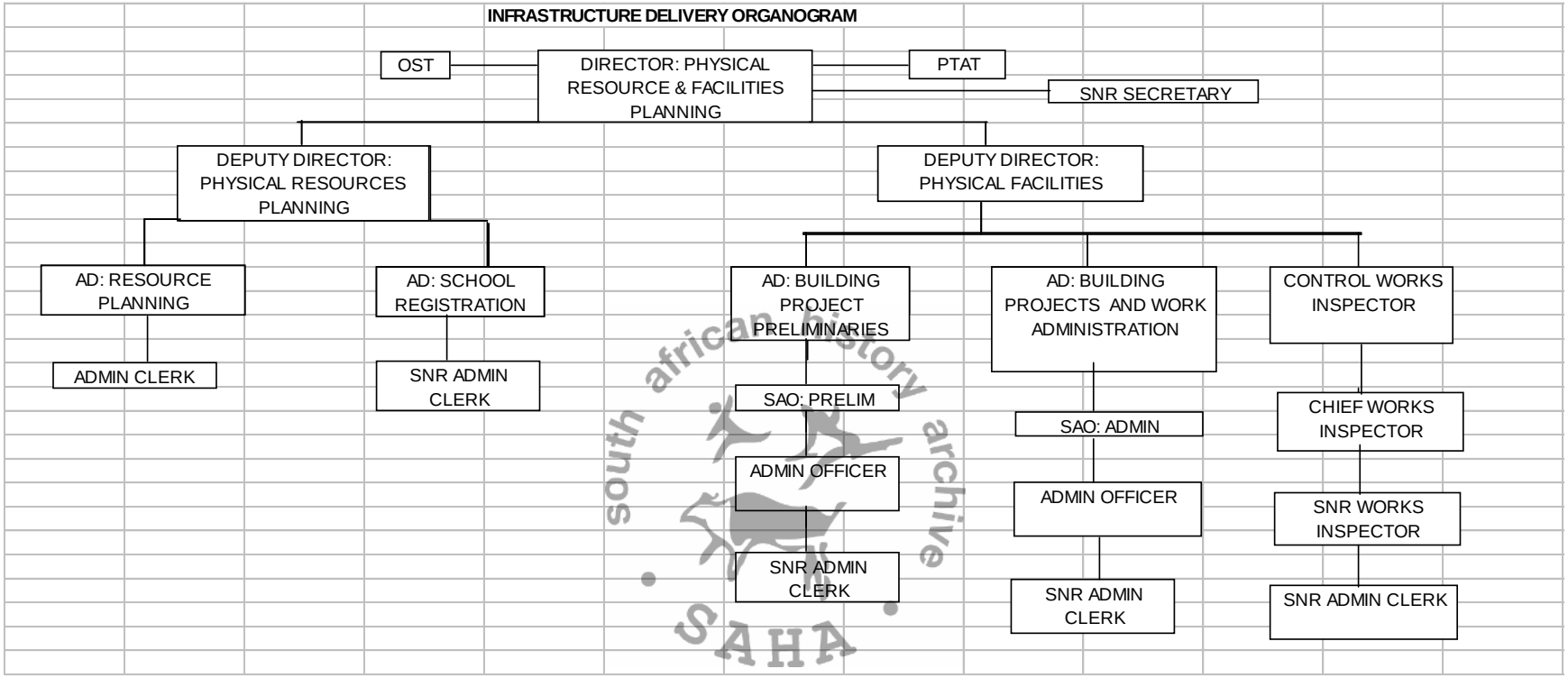


Figure 7: Head Office Infrastructure Organogram

SECTION 9: Infrastructure Plan Improvement Plan

9.0 Introduction

This section of the Infrastructure Plan identifies those aspects that are not considered to be satisfactory, in part or in all respects, and that should receive further attention. Not all of the matters raised for attention are in the hands of the Department to address. However, where it is possible and feasible to take corrective actions, these actions are identified, as well as the time scale over which they will receive attention.

9.1 Issue Identification and Planned Action

[a] Updating and Revision of the five Year Strategic Plan for Department: The current strategic plan, used in guiding this plan, ended its five year term in 2008. This plan needs to be revised by the Department and particularly aspects pertaining to the situational analysis, the identification of opportunities and constraints and any changes that might be needed to goals and objectives.

Action: The Department will be reviewing this plan over the next couple of months now that the elections have been completed and a new administration is in place.

[b] Revised IPMP Targets: The need to revisit these has been shown in the plan as essential given the rate of actual infrastructure delivery being achieved in the province. Currently the rates of delivery being achieved suggest that none of the provincial targets set will be met.

Action: This matter will be canvassed at strategic planning processes planned for the 2nd and 3rd July 2009 to determine the way forward.

[c] Formulation of a Provincial Spatial Development Perspective: Nationally the National Spatial Development Perspective has developed a particular approach that argues the need to give careful consideration to the spatial placement of infrastructure spending in order to maximize the returns both economically and socially. This infrastructure plan argues that the framing of a provincial spatial development plan could assist guide infrastructure decisions and, by so doing, offer guidance to the Department in the planning of its public schooling infrastructure.

Action: This matter will be raised with the Senior Management of the Department with a view to opening the debate with the Premier's Office, this being perhaps the logical home were such a plan might be developed.

[d] Enhance Demographic and Socio-Economic Analysis for the Province: The ability to plan is strongly dependent upon having access to reliable planning data. In this connection all infrastructure planning departments in the province as a whole would benefit from having access to a single set of province wide demographic and socio-

economic data. The preparation of such data and analysis could be undertaken as a subset of the formulation of a provincial spatial development perspective noted above.

Action: The same action as noted above will be taken in this regard.

[e] Asset Registers and Infrastructure Evaluations: The importance of these has been underlined repeatedly during the course of the infrastructure plan as they form the basis for rational management of infrastructure and the preparation of the Infrastructure Maintenance Plan.

Action: The Department has identified the preparation of the required registers and condition surveys as a deliverable in the 2009/2010 year. In June 2009 the province issued a tender for the appointment of a service provider to progress this work.

Note: It will be important for officials concerned with infrastructure matters to be involved with the briefing and determining the scope of work of the service provider such that the firm concerned delivers the information required and in a user friendly manner.

[f] Funding Strategy: The plan submitted does not contain a funding strategy that looks at ways and means of addressing the funding gap between what infrastructures is needed and the extent of public monies available to the Department from year-to-year. Developing this funding strategy is of great importance to public schooling in the province given the extent of infrastructure needs.

Action: This matter will be raised at the planned strategic planning sessions the Department is to hold as well as being a matter that needs to receive the attention of senior management.

[g] Improved Data Management and Analysis within the Department: In the SWOT analysis undertaken, the point was made that the Department is a data rich environment but an information poor environment. This is essentially so as those responsible for the data management and analysis function in the Department are performing below the levels that they can. On the one hand the data that exists needs to be cleaned, other available information needs to be captured and, above all, the analysis of the data needs to be handled in a more creative manner to give support to the infrastructure planning sections of the Department.

The data sources include EMIS, NEIMS, Annual Snap Surveys, data being captured as part of the preparation of asset management registers, demographic reports, planning studies etc. The overriding conclusion is that the ability and the quality of the plans that could be produced within the Department would be enhanced, substantially, by improved data management and analysis undertaken by those responsible for this.

Action: This matter has been discussed with the responsible officials within the Department and a Task Team has been set up, under the management of the PTAT, to drive this initiative forward. It is thus the hope that in the next round of the updating of the infrastructure plan, the process will benefit from improved planning information availability.

[h] GIS Capability: The same comments that were made above apply in this regard. The Task Team formed will also be seeking to integrate better data management and analysis with the more dynamic use of the GIS capability that the Department has.

[i] Improvements to the Quality of Infrastructure Planning Undertaken by the Regions: At present each Region in the province is required to prepare their own Regional plans. Overall these plans are poor and there is a great deal of room for their improvement. Improving the quality of these plans is important to the provincial plan in that the latter plan is strongly dependent upon information gathered at the lower level and fed upwards.

Areas of improvement include the following:

- Plans need to contain more information;
- They need to be complete in all respects and not just contain a few isolated snippets of information;
- There needs to be attention to detail throughout the plans;
- Project information is not provided in a number of instances;
- Project information that is provided is not prioritized;
- Plans do not contain the appendices indicated containing back up information;
- Plans are not delivered on time;
- Certain of the information presented in plans is not credible and needs verification. Again if the data management function was more effectively managed and on-line data bases were available regional information could be checked against other data bases such as EMIS and Snap Surveys; and
- Level of service and required infrastructure lists do not use standardized templates to collect information. This makes the summation of all regional information impossible to do on a consistent basis.

Action: Over the next six months it is planned that a series of workshops be held to discuss and agree upon the way forward with Physical Resource Planners. Much more consistent and tighter management of these officials is essential if the quality of Regional Plans is to improve.

[j] Release by the Department of Priority Funding Guidelines: In the past the infrastructure plan and its project list has been driven by returns and information submitted upwards from circuit offices to the Regions and then upwards to the Head Office where the plan is pulled together. While this methodology is solid, in that it is able to respond to infrastructure needs at the individual community level, the Department recognizes that it too must provide clear guidelines to the regions such that the composition of projects selected also address the strategic and higher level educational objectives of the Department. The analysis of actual infrastructure delivered from 2004-2008 also makes it clear that the spread of project types could be improved and, in particular, that the need for specialized teaching spaces has not received the attention that it might have.

Action: Each year the Department will release funding priority guidelines to the provinces at a suitable time in the planning cycle to provide guidance as to the specific make up of infrastructure types that the Head Office of the Department would like to see delivered in furtherance of provincial educational objectives.

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