



**MPUMALANGA PROVINCIAL GOVERNMENT**

**MPUMALANGA  
DEPARTMENT OF EDUCATION  
INFRASTRUCTURE BACKLOGS  
IMPLEMENTATION PLAN**

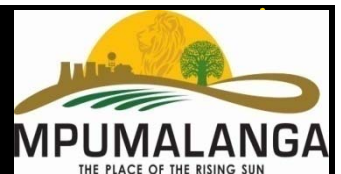
**NOVEMBER 2014**

**Revision 01**

**Prepared by:** Directorate: Physical Resource and Facilities Planning



**Education**  
DEPARTMENT OF EDUCATION  
**MPUMALANGA**



**MPUMALANGA DEPARTMENT OF EDUCATION**

**Infrastructure Backlogs  
Implementation Plan,  
November 2014**

**Prepared for:** Department of Basic Education  
Republic of South Africa

**Prepared by:** Mpumalanga Department of Education  
Directorate: Physical Resource and Facilities Planning

**Revision:** 01

**Date:** 26 November 2014

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## 1. INTRODUCTION

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### 1.1 Backlog Definition

The definition of backlog and unsafe structures are open to many interpretations. The definition of these concepts as used in this document is defined hereunder in order to have the same understanding.

Schools facilities backlog means an unavailability of sufficient facilities required to meet and satisfy the norms and standards for the provision of such facilities. An example shortage of classrooms where there is overcrowding, absence of other facilities like administration blocks, laboratories, libraries and computer centers.

Unsafe structures referring to school buildings that do not meet building regulations and health standards result in unavailability of sufficient teaching space hence creating a backlog. An example is schools constructed on asbestos, clay, wood and other dangerous material as well as dilapidated structures. Therefore schools that were assessed to be requiring a replacement of 70% of its buildings is considered to be a dilapidated school requiring complete replacement hence this included among the list of schools facilities backlog of Mpumalanga Province.

### 1.2 Causes of a Backlog of Schools Facilities

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 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 "urban" schools in the Province.

The second cause for school facilities backlog is related to school management, where for adjacent schools one ends up having an oversupply of facilities because learners are leaving the school due to poor academic performance of that school. The other school with good academic performance will end up having an increased demand due to higher enrolment resulting in a shortage of learning space, a backlog.

### 1.3 Vision, Mission and Strategic Departmental Goals

#### Vision

Accelerating Excellence in Education Delivery.

#### Mission

The Mpumalanga Department of Education is committed in providing excellence and quality education to the community through:

- Working together with stakeholders
- Effective teaching and learning
- Responsive curriculum

- Pro-active communication
- Good governance and effective management
- Bridging the digital divide
- Transformation
- Human resource development

We will be at the cutting edge of curriculum delivery and provide access to quality lifelong learning opportunities.

#### Values:

Key corporate values that the MDoE intends to uphold in the next 5 year period include:

- Integrity
- Professionalism
- Transformation
- Consultation
- Accountability
- Innovation

#### Strategic Goals of the Department

Access to quality education a basic human right, entrenched not only in our constitution, but also in province adopted agendas such as the millennium development goals (MDGs), Education for All (EFA) goals, PDGS, etc. The MDG commits Government to having poverty and reducing unemployment through strategies that upscale the commitments to education.

MDoE identified the following six (6) key strategic goals to map the way forward for the next five (5) years (2015-2020);

Goal 1: Improve Access and Provision of ECD

Goal 2: Improve Learner Performance

Goal 3: Improve Quality of Teaching and Learning

Goal 4: Skilled and Capable Workforce

Goal 5: Improve Performance of Systems

Goal 6: Create a Conducive Environment for Teaching and Learning

## 1.4 Discussion

This document outlines an overview on the infrastructure backlog implementation plan.

The implementation plan discusses in detail the following:

- Education infrastructure prioritization and targets
- Current status of schools infrastructure and determination schools facilities' backlog.
- Costing of Backlog
- Funding Sources
- Implementation Guidelines
- Implementation Methodology (Funding Based)
- HR Capacitation
- Recommendations

## 2. EDUCATION INFRASTRUCTURE PRIORITIZATION AND TARGETS

### 2.1 Infrastructure Priorities

The MDoE priorities are the same as the National Priority in as far as schools infrastructure provision is concerned. These priorities are:

- a) Basic Services and Inappropriate Structures.
- b) Basic Functionality
- c) Optimum Functionality
- d) Condition Priority (Maintenance)

MDoE's set targets for infrastructure implementation include "attending to storm damaged schools as and when they occur" as one of the priority plans to ensure achievement of Strategic Goal 5 (accelerate infrastructure provisioning conducive for delivery of quality education).

In line with this Goal and Priority, the storm damaged schools programme is always prioritised ahead of all other programmes in the infrastructure implementation

### 2.2 Infrastructure Priorities' Targets

The table below (Table 2.1) gives the infrastructure targets for the Mpumalanga Province which are also in line with the Department's Strategic Plan 2015- 2020. These targets were set in line with the current norms and standards:

**Table 2.1: Infrastructure Facilities Delivery Targets**

DESCRIPTION OF TARGET	TARGET DATE
<b>1. Basic Services/Inappropriate Structures</b> a) Appropriate Water Supply b) Appropriate Electricity Supply c) Appropriate Sanitation d) No Inappropriate Materials or Structures (Entirely)	2016
<b>2. Basic Functionality</b> a) Appropriate Fencing b) No Overcrowding c) Electronic Connectivity d) No Inappropriate Materials or Structures (Partly)	2020
<b>3. Optimum Functionality</b> Appropriate provision of sports facility, kitchen, school halls/forums, library, laboratories, car parks, multi-purpose centres.	2023
<b>4. Inappropriate materials maintenance and growth</b>	2030
<b>5. Storm damage rehabilitation as deemed necessary by demand</b>	Ongoing
<b>6. Condition Based Maintenance of existing facilities to avoid dilapidation.</b>	Ongoing

The compliance factors are a backlog under situations where the facilities were never provided at all as well as situations where the facilities were once provided but have deteriorated in condition or do not meet the basic Health and Safety Standards.





### 3. CURRENT STATUS OF SCHOOLS INFRASTRUCTURE AND DETERMINATION OF SCHOOLS FACILITIES' BACKLOG

#### 3.1 Current Infrastructure Delivery

Mpumalanga Province has a total of three (3) District Municipalities namely Ehlanzeni, Gert Sibande and Nkangala. However, Mpumalanga Department of Education has four (4) districts; Bohlabela, Ehlanzeni, Gert Sibande and Nkangala after the splitting of Ehlanzeni District into 2 Education Districts.

As of the January 2014 snap survey, the province had a total of 1 776 public ordinary schools. These schools are providing education to 949 873 learners with noticeably higher levels of learner concentration in urban centres and in defined pockets. The numbers of schools in the Province changes on a monthly basis as some schools are merged, closed and new ones are registered.

The breakdown or composition of the 1776 public schools is given in **Table 3.1** below:

**Table 3.1: Number of Ordinary Public Schools [Source: EFMS 2013]**

DISTRICT	No. OF PUBLIC ORDINARY SCHOOLS	SPECIAL SCHOOLS	TOTALS
Bohlabela	381	2	383
Ehlanzeni	349	2	351
Gert Sibande	507	7	514
Nkangala	520	8	528
<b>TOTAL</b>	<b>1757</b>	<b>19</b>	<b>1776</b>

The EFMS was used to extract the quantities of the existing schools facilities per **Table 3.2** below. This was updated with the number of facilities completed in the preceding financial years to this report as the EFMS baseline is 2011.

Table 3.2 below shows the existing school infrastructure facilities for the Province.

FACILITY	Grade R Centre	*Admin Building	Laboratory	Library	Computer Centre	Multimedia Centre	Multi-purpose	School Hall	Kitchen	Car Parking	Classroom	Electricity	Water On Site	Water Off Site
TOTALS	411	1245	378	529	537	29	206	60	1413	188	26342	1688	1264	438

Table 3.2: Existing Infrastructure Facilities

### 3.2 General Overview of the Condition of Schools' Facilities in Mpumalanga Province

MDoE engaged the services of professionals to carry out a condition assessment of all the schools in the province. The information for all the schools was captured onto the Education Facilities Management System (EFMS). From the EFMS a summary of the schools facilities condition can be extracted. A Condition Score scale has been established. The overall condition of the buildings and site has been given on a scale of 0 to 5. The condition score is described in Table 3.3 below.

Table 3.3: Schools Condition Score Key

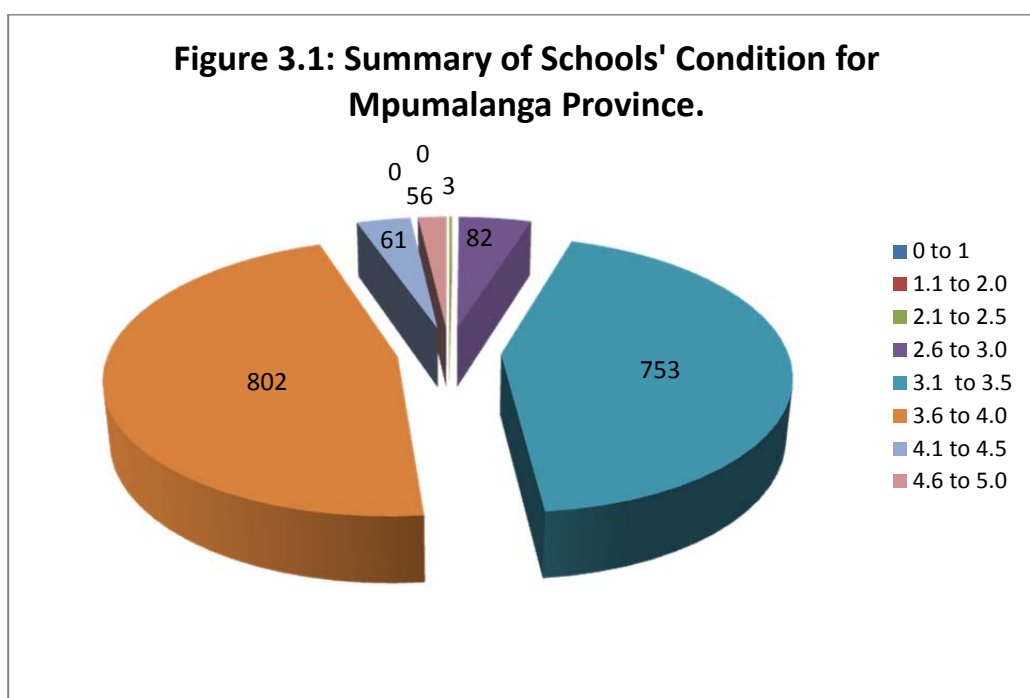
CONDITION SCORE AND KEYWORD	% REPLACEMENT	CONDITION CRITERIA FOR ALL SITE AND BUILDING ELEMENTS
5.0 "As good as new"	0%	New, or "as good as new". Has recently been renovated, OR Not Applicable.
4.5 Routine maintenance	3%	Requires <b>minor</b> maintenance. A bit of touching up will restore to "as good as new". Deterioration has been caused by normal wear and tear.
4.0 Requires specific repair	11%	Requires maintenance to <b>prevent it getting any worse</b> . Wear and tear is beginning to show and it is deteriorating.
3.5 Needs repair work soon	25%	Damaged areas, but not a health / safety risk. It is tolerable but not for much longer.
3.0 Significant repair work	45%	Has deteriorated a lot and needs repairing as soon as possible. <b>Significant sections damaged</b> . Is intolerable, a major problem and could be dangerous.
2.5 Partly replace	70%	Getting beyond repair, some of it needs <b>replacing</b> now. Is also intolerable and a major problem. Could be dangerous! However, not yet affecting adjacent elements.
2.0 Substantial replacement	100%	<b>Replace substantial sections</b> . It is beyond repair! Definitely could be dangerous if not attended to soon! It is so bad it is affecting adjacent elements.
1.0 Condemned	N/A	What's left should be <b>condemned</b> . It is of no use. It is seriously affecting adjacent elements. It is dangerous.
0 Upgrade	100%	This category applies to elements which were never provided originally, but it is seen as essential for the functionality of the building e.g. solid floors, ceilings, electrical installations etc.

The overall confirmed condition of the schools in Mpumalanga Province per district is summarized in Table 3.4 below and Figure 3.1 is a graphical representative of overall schools' condition.

Table 3.4: Summary of Schools' Condition for Mpumalanga Province

Condition Score	Total Number of Schools Under the Condition.	Replacement of Percentage for the Buildings
0 to 1	0	100%
1.1 to 2.0	0	100%
2.1 to 2.5	3	70 - 100%
2.6 to 3.0	82	45 - 69%
3.1 to 3.5	753	25 - 44%
3.6 to 4.0	802	11 - 24%
4.1 to 4.5	61	3 - 10%
4.6 to 5.0	56	0%

*NB: Table excludes special schools.*



### 3.3 Determination of the Backlog

The backlog figures presented are based on previous studies carried out using data collected by district resource planners and the data extracted from the Education Facilities Management System (EFMS).

Using the 2013 snap survey enrolment figures of each school and the norms contained in the "Regulations Relating to Minimum Uniform Norms and Standards for Public School Infrastructure" promulgated by Department of Basic Education (DBE) setting out the minimum requirements and the total number of facilities required per school was determined. The balance between the total required facilities and the available facilities for every school is the backlog.

Unsafe facilities that are a result of dilapidation or standards not meeting the Safety and Health Standards were quantified using the EFMS Property Module. The assessment of the condition of the existing school facilities was done and condition score given per school using the EFMS as described in Clause 3.2 above.

### 3.4 Gap Between Supply and Demand

It is important to note that while some schools have a shortage of certain facilities particularly classroom, there are some schools with more than required facilities (classrooms).

An analysis has been done for every school per circuit level to determine whether there is a need for additional classrooms or there is an over-supply of classrooms. The information has been summarised and presented per district and **Figure 3.2** below indicate the status of oversupply and demand of classrooms in the Province.

**Figure 3.2: Mpumalanga Provincial Classrooms' Demand and Supply Summary**

**Table 3.5: Provincial Summary of Classrooms' Oversupply and Required**

DISTRICT	Excess Classrooms	Required Classrooms
BOHLABELA DISTRICT	562	561
EHLANZENI DISTRICT	379	890
GERT SIBANDE DISTRICT	1039	920
NKANGALA DISTRICT	1101	998
<b>TOTALS</b>	<b>3081</b>	<b>3369</b>

**Table 3.4: Provincial Classroom Demand and Supply Summary**

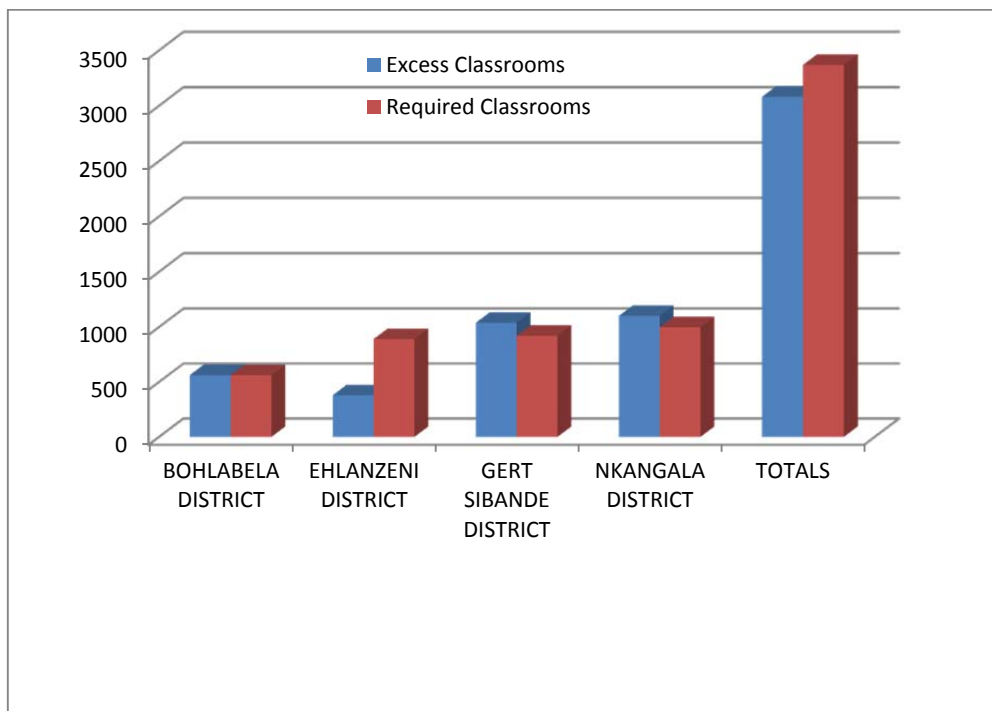


Figure 3.2: Provincial Classroom Demand and Supply Summary

### 3.5 Quantities of the Basic Services Backlog in the Province Targeted for Eradication in 2016

Tables 3.2 below quantifies the Basic Services backlog of the Province's school facilities according to the two scenarios; existing but deteriorated facilities and new facilities respectively.

Table 3.6: Quantities of Required Basic Services & Inappropriate Structures Compliance Targeted for Full Eradication in 2016

**Mpumalanga Department of Education**

**Infrastructure Backlogs Implementation Plan, November 2014**

BASIC SAFETY COMPLIANCE FACILITY	BASIC SAFETY FACILITY NEVER PROVIDED BEFORE PER DISTRICT					BASIC SAFETY FACILITIES EXISTING BUT IN UNSUITABLE CONDITION PER DISTRICT.					GRAND TOTAL
	Bo	Eh	GS	Nk	TOTAL	Bo	Eh	GS	Nk	TOTAL	
Water Supply	6	7	3	2	18	95	7	89	36	227	245
Electricity Supply	6	6	3	3	18	12	12	29	11	64	82
Sanitation (Number of toilet seats required)	1416	3452	2462	5658	12988	5 689	4 802	5 414	5 151	21056	34044
<i>Unsafe Structures - Condition assessment extracted from EFMS.</i>											
No. of schools in Condition Score 2.5 requiring 70% replacement.	-	-	-	-	-	0	0	3	0	3	3
No. of schools in Condition Score 2.6 to 2.8 requiring 60% replacement.	-	-	-	-	-	0	5	9	8	22	22
No. of schools in Condition Score 2.9 to 3.0 requiring 50% replacement.	-	-	-	-	-	0	13	25	16	54	54

**LEGEND:**

**Bo** - Bothabetswe, **Eh** - Ehlanzeni, **GS** - Gert Sibande, **Nk** - Nkangala

### 3.6 Quantification of the Basic Functionality Facilities Backlog in the Province.

Basic functionality facilities are targeted for full delivery in 2020. Quantifying the backlog for these facilities was done using the EFMS as well as the information collected from the districts' physical resource planners.

It is important to mention that the data captured on the EFMS Property Module is still being updated to address the omissions and disparities from the previous baseline data. The backlog eradication strategy will be revised accordingly in line with the norms and standards.

Tables 3.7 below show quantify of the Basic Functionality backlog of the Province's school facilities according to the two scenarios; existing but deteriorated facilities and new facilities respectively.

**Table 3.7: Quantities of Required Basic Functionality Compliance Targeted for Full Eradication in 2020**

BASIC SAFETY COMPLIANCE FACILITY	BASIC SAFETY FACILITY NEVER PROVIDED BEFORE PER DISTRICT					BASIC FUNCTIONALITY FACILITIES EXISTING BUT IN UNSUITABLE CONDITION PER DISTRICT.					GRAND TOTAL
	Bo	Eh	GS	Nk	TOTAL	Bo	Eh	GS	Nk	TOTAL	
Fencing	0	2	7	2	11	106	88	129	150	473	484
Classrooms to Alleviate Overcrowding	382	1047	716	877	3022	220	392	69	0	681	3703
Electronic Connectivity	193	96	240	256	785	190	255	274	272	991	1776

**LEGEND:**

**Bo** - Bohlabela, **Eh** - Ehlanzeni, **GS** - Gert Sibande, **Nk** - Nkangala

### 3.7 Quantification of the Optimum Functionality Backlog in the Province.

Optimum functionality facilities are targeted for full delivery in 2023. Quantifying the backlog for these facilities was done using the EFMS as well as the information collected from the districts' physical resource planners.

Table 3.8 below shows the quantities of the required optimum functionality requirements.

Table 3.8 Required Optimum Functionality School Facilities Targeted for Full Eradication in 2023

Optimum Functionality	Bohlabela	Ehlanzeni	Gert Sibande	Nkangala	TOTAL
Grade R	83	251	118	182	634
Administration Building	165	135	68	370	766
Laboratory	195	72	73	350	719
Library	201	261	284	546	1321
Computer Centre	200	267	331	424	1222
Multimedia Centre	143	342	-	-	485
Music Room	173	340	164	-	677
Home Economics	85	322	21	86	428
Technical Workshop	44	343	-	-	387
Multi-purpose Centre	151	343	-	-	494
School Hall/Forums	168	317	106	-	591
Kitchen	156	251	356	426	1189
Ramps and Rails	167	251	408	477	1303
Sports Field Small	227	239	-	-	818
Sports Field Large	202	338	352	-	540
Car Parking	187	284	328	-	799



## 4. COSTING OF THE BACKLOG

### 4.1 Costing of Basic Services for MDoE Targeted for Full Eradication by 2016

The total amount for providing all the outstanding basic services in the two years (2015 and 2016) is R **2,809,821,000** (Two Billion, Eight Hundred and Nine Million, Eight Hundred and Twenty One Thousand Rand). This is the budget required to meet the 2016 targeted basic services in all Mpumalanga Province's schools. R53,1 Million of this funding is in the 2014/15 financial year.

Table 4.1: Costing of Required Basic Services Facilities Targeted for Full Eradication in 2016

NEW FACILITIES								
Basic Services	Bohl	Ehla	GS	Nka	QTY	Estimated Rate per Unit	Amount	
Water Supply	9	0	5	3	17	350,000	5,950,000	
Electricity Supply	8	3	16	3	30	600,000	18,000,000	
Sanitation (Number of toilet seats required)	2644	4463	4382	7915	19404	79,000	1,532,916,000	
Sanitation (No. of toilet seats) - 75% of existing 28076 seats are pit latrines to be replaced by dry or waterborne systems.	5689	4802	5414	5151	15792	79000	1,247,568,000	
<b>Sub-total</b>							<b>2,804,434,000</b>	
EXISTING FACILITIES (CONDITION BASED)								
Condition Score	% Replacement							
0 to 2.5	70 - 100%	0	0	3	0	3	0	-
2.6 to 3.0	45 - 69%	18	2	33	29	82	10000	820,000.00
3.1 to 3.5	25 - 44%	156	83	336	178	753	5000	3,765,000.00
3.6 to 4.0	11 - 24%	177	249	139	237	802	1000	802,000.00
4.1 to 4.5	3 - 10%	6	4	2	49	61	0	-
4.6 to 5.0	0%	1	1	7	23	32	0	-
<b>Sub-total</b>							<b>5,387,000.00</b>	
<b>TOTAL COST FOR BASIC SERVICES BACKLOG</b>							<b>2,809,821,000.00</b>	

#### 4.2 Costing of Required Basic Functionality Facilities Targeted for Full Eradication in 2020

Table 4.2 below shows the costing of the facilities required for eradication of Basic functionality by the year 2020.

The total for Basic functionality compliance in the 6 years (2015 to 2020) is **R2,345,450,000** (Two Billion, Three Hundred and forty five Million and Four Hundred and Fifty Thousand Rand). This is the budget required to meet the 2020 target in all Mpumalanga Province's schools.

Table 4.2: Costing of Required Basic Functionality Facilities Targeted for Full Eradication in 2020

Basic Functionality	Bohlabela	Ehlanzeni	Gert Sibande	Nkangala	QTY	Estimated Rate per Unit	Amount
Fencing	52	55	121	131	359	R 1,350,000	R 484,650,000
Classrooms to Alleviate Overcrowding	561	890	920	998	3369	R 550,000	R1,852,950,000
Electronic connectivity	193	96	240	256	785	R10,000	7,850,000
<b>TOTAL COST FOR BASIC FUNCTIONALITY COMPLIANCE</b>							<b>R2,345,450,000</b>

#### 4.3 Costing of Optimum Functionality Compliance Facilities Targeted for Full Eradication by 2023

Table 4.3 below shows the costing of the facilities required for eradication of optimum functionality by the year 2023.

The total for optimum functionality compliance in the 9 years (2015 to 2023) is **R15,692,847,196** (Fifteen Billion, Six Hundred and Ninety Two Million, Eight Hundred and Forty Seven Thousand One Hundred and Ninety Six Rand). This is the budget required to meet the 2023 target in all Mpumalanga Province's schools

Table 4.3: Costing of Required Facilities for Optimum Functionality Compliance Targeted for 2023

Optimum Functionality	Bo	Eh	GS	Nk	TOTAL	Estimated Rate Per Facility	Amount
Grade R Centre	261	425	222	399	1307	R1,893,640	R2,474,987,480
Administration Building	166	78	209	156	609	R3,658,606	R2,228,091,054
Laboratory	343	269	426	442	1480	R1,247,367	R1,846,103,160
Library	106	238	181	181	706	R1,293,526	R913,229,356
Computer Centre	106	238	181	181	706	R1,350,713	R953,603,378
Multimedia Centre	-	-	-	-	0	R1,350,713	R 0.00
Music Room	-	-	-	-	0	R1,293,526	R 0.00
Home Economics	-	-	-	-	0	R1,293,526	R 0.00
Technical Workshop	-	-	-	-	0	R 3,500,000	R 0.00
Multi-purpose Centre	-	-	-	-	0	R1,350,713	R 0.00
School Hall/Forums	297	290	235	346	1168	R4,298,671	R5,020,847,728
Kitchen	51	87	130	156	424	R929,210	R393,985,040
Ramps and Rails	167	251	408	477	1303	R350,000	R456,050,000
Sports Field Small	227	239	-	-	466	R 750,000	R349,500,000
Sports Field Large	202	338	352	-	892	R1,050,000	R936,600,000
Car Parking	187	284	328	-	799	R 150,000	R119,850,000
<b>TOTAL COST FOR OPTIMUM FUNCTIONALITY COMPLIANCE</b>							<b>R15,692,847,196</b>

#### 4.4 Total Costing of Eradicating School Facilities Backlog by 2023

Table 4.4 below summarizes the total required cost for eradicating the schools facilities backlog. A total of **R20,848,118,196** is required between 2015 and 2024 for eradicating schools facilities backlog in Mpumalanga Province. It should be noted that **R 2,809,821,000** for basic services has to be availed within the next 2 financial years or by 2016.

Table 4.4: Total Cost for Eradicating Schools' Facilities Backlog for Mpumalanga Province

Priority	Targeted Date	Amount
Basic Services and Inappropriate Structures	2016	R 2,809,821,000
Basic Functionality and Connectivity	2020	R 2,345,450,000
Optimum Functionality	2023	R 15,692,847,196
<b>Total Cost for Eradication of Schools Facilities Backlog</b>		<b>R 20,848,118,196</b>

These costs are all **present values** for eradicating the backlogs. The final sums will depend on the period of the eradication strategy adopted.

## 5. FUNDING SOURCES AND OPTIONS

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### 5.1 Funding Sources

The Province has the following as sources of funding:

- a) Education Infrastructure Grant (EIG).
- b) Other Conditional Grants (Dinaledi, Technical Schools Recapitalization, EPWP, etc.)
- c) Equitable Share from the Provincial Government.
- d) Accelerated Schools Infrastructure Delivery Initiative (ASIDI) for the eradication of unsafe structures and provision of electricity, water and sanitation to those schools that never had the facilities.
- e) Mpumalanga Education Development Trust (MEDT) through partnerships with Vodacom, Eskom, Vuma Mining Trust, Buffelshoek Trust, etc.
- f) Donations - some schools are able to organise donations from the business community through programmes such as Lotto, Africa Foundation, Dept of Rural Development and Land Reform, etc.

It is however important to note that the EIG and the ES are the major sources of funding for the Province's schools infrastructure.

### 5.2 Non-Infrastructure Solutions

It is also important to note that the Mpumalanga Province considers also some non-infrastructure alternatives to the provision of infrastructure facilities. The following are considered as alternatives to provision of infrastructure facilities:

- a) Scholar transport.
- b) Merging of schools.
- c) Improvement of school management.
- d) Conversion of redundant classrooms into optimum functionality facilities.

**Scholar Transport** - There are schools with an over-supply of crowding while there are some with overcrowding. In the event where such schools are next to each other, the option of learner transport can be considered.

**Merging of Schools** - There are small schools with facilities in poor conditions and/or requiring basic services and functionality facilities. These schools may be merged with the nearest schools with sufficient facilities or over-supply of classrooms.

The provision of boarding schools that is currently being implemented in the Province shall result in the closure of some farm schools with poor facilities.

**Improvement of School Management** - Good management of a school resulting in high pass rate at one school while there is poor management on a school next to the good one results in overcrowding of the

well-managed school causing overcrowding at the school. The poorly managed school will end up having redundant classroom facilities. Improvement of management at the poorly managed school can be a non-infrastructure solution to the overcrowding at the well managed school.

**Conversion of Redundant Classrooms Into Support Facilities** - MDoE is looking into the possibility of converting surplus classrooms into support facilities like the Administration Building, laboratories, libraries, music rooms, computer or home economics centres.

## 6 IMPLEMENTATION GUIDELINES

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### 6.1 Planning Requirements

MDoE approved standard drawings for all education facilities. Upon promulgation of the norms & standards (November 2013), these were checked for compliance and found to be fully compliant except Grade R's whose floor area did not meet requirements. These drawings have since been amended and are now compliant.

The above means that all new schools are implemented using compliant drawings.

Planning roles are defined as follows;

#### a) Department of Education

- Projects handed over to the responsible implementing agent, via this IPMP, shall be well researched and matters pertaining to the availability of land and services shall have been addressed. As regards authorisations and approvals concerning land, services and planning permissions, where necessary, these shall be obtained in writing prior to the handover of the project to the Implementing Agent.
- MDoE will take responsibility for the preparation of the Infrastructure Programme Management Plan. The IPMP sets out the client department's requirements and expectations as regards the implementation of its infrastructure programme.
- The MDoE will issue written instructions or provide works order promptly so that projects can be advertised for the procurement of contractors. Such procurement should preferably enable work to commence at the beginning of a financial year. In other words, contractors should be engaged as early as possible in a financial year to expedite delivery.
- The MDoE must approve all variation orders on projects, including, where the variation requested to the budget exceeds the approved project budget, including contingencies. This is to ensure that the variation orders are accounted for and approved according to the PFMA. All variations approved must be reported upon by the Implementing Agent on a monthly basis.

#### b) Department of Public Works, Roads and Transport

- The DPWRT is required to execute projects as per the plans, programmes and budgets of the client department. Obtaining 'value for money' is the primary concern of MDoE.
- The DPWRT must ensure that the building plans prepared meet the minimum standards of municipalities. Municipalities require that original building plans are submitted to them for approval before construction occurs. Implementing agents must thus ensure that the consultants, as appointed, honour this requirement. Municipalities are no longer willing to allow construction to proceed unless this objective has been met.
- Further, DPWRT will undertake through its consultants the Department of Basic Education's (DBE) required NEIMS Assessments for upon completion of every project on a school for the purpose of

updating the NEIMS database. The same information will then be used to update the EFMS property module database.

- New classrooms and new schools should, ideally, be completed towards the end of the calendar year so that the new facilities are useable at the start of the new academic year.
- Completed projects must be snagged correctly and then arrangements must be made for them to be handed over to the client department with the minimum of delay.
- DPWRT shall ensure that there is effective communication between their project managers (including consultants) and the MDoE district offices.

## 6.2 Implementation Requirements

### a) Procedure for Submission of Claims

Payments for consultants and/or contractors must be accompanied with a checklist and/or a progress report of the work done on a specific project. No claims will be processed for service providers if they are not accompanied by a written progress report which must also be uploaded on the EFMS. All payments must also be captured on the EFMS before being submitted to MDoE.

### b) Submission of Construction Cash flow Forecast

Within a period of 2 weeks after the appointment of a service provider, the firm concerned will be required to provide the DPWRT with a programme and a cash flow for the project. This programme and cash flow is to be captured onto the EFMS by the Consultant and verified by DPWRT. These cash flows must be updated during monthly reporting. The agreed project programme and cash flow is to be submitted with the first claim of the service provider. No payment of service providers will be processed unless these requirements have been attended to.

Revisions to the programme or cash flow submitted and reported by DPWRT must be reported in a manner that enables the client department to monitor service provider performance against the original programme and cash flow submitted, and not one that is modified from time to time.

### c) Environmental Impact Assessment Requirements and Other Legislative Requirements

Legislation and procedural requirements related to the build industry must be observed.

The IA shall be in compliance with the National Environmental Impact Management Act (NEIMA) at all times. Environmental Impact Assessments and Geotechnical Reports: The IA will be required to submit an EIA report together with the Geo-tech results for 2015/16 and 2016/17 projects where appropriate.

### d) CRDP Municipalities

Projects falling within CRDP Municipalities are to be implemented using the implementation guidelines as set out by the Mpumalanga Provincial Government.

**e) Expended Public Works Programme (EPWP)**

The DPWRT should implement all projects making use of the EPWP processes and principles as defined by the prevailing legislation and policies. In order to facilitate this it is a requirement that tender documentation must be framed in order for contractors to specify how they will respond to the achievement of EPWP requirements. Also with regards to monthly reporting, this shall be in terms of the EPWP reporting requirements.

**f) Submission of Construction Programme**

Project programmes agreed by the IA with service providers and reported in the DPWRT monthly report are to be carefully monitored. Should the service provider be unable to honour the delivery programme agreed, DPWRT will bring this to the attention of the POMM for noting and deciding upon how the issue should be addressed.

**g) Appropriate Skills to Implement Projects**

The DPWRT is requested to ensure that appropriate strategies and measures are in place to enable it to have the necessary skills, experience and capacity to manage the consultants appointed to undertake design work and manage the implementation of projects, including contractors, on their behalf.

**h) Clustering of Projects**

Projects in the same category will be clustered. Consultants should each oversee a number of construction sites that are to be clustered into Principal Contracts. In turn each Principal Contract shall include a number of construction sites that can be assigned to smaller sub-contractors as deemed by the appointed Principal Contractor. The Principal Contractors to be appointed shall be capable of delivering the work according to the specification and quality within the budget and within the allowable timeframes, as required.

**6.3 Monitoring of Quality**

Quality control and reporting at project and programme level shall be the responsibility of the Implementing Agent who shall ensure that:

- Workmanship and quality of materials used are of the specified standard as prescribed in the designs and bills of quantities at all times.
- Contractors honour their contractual obligations and that due care is taken to finish contracts and that snagging lists are attended to promptly.
- The MDoE reserves the right to visit projects unannounced to check on the progress of projects and that the desired quality of construction and finishing is being achieved. The MDoE will respect construction site etiquette and at all times if there is a need to take up a quality related matter this will be done via the Implementing Agent or its appointed Principal Agent and not with the contractor directly.
- Work carried out by contractors and accepted by the responsible Implementing Agent, which is found to be of unacceptable or below the stipulated standards, shall be repaired / replaced at the cost of the Implementing Agent and/or contractor.
- The snagging process to be carried out at all stages of completion shall be attended by MDoE officials who will be part of the process.



- The IA may be requested to submit a quality assurance plan to MDoE for the programme implementation or to at least provide adequate coverage of quality planning, assurance and control in the IPIP.

#### 6.4 Procurement Requirements

It should be noted that Mpumalanga Province has less contractors registered in high CIDB grading which reduces the capacity to implement projects. Table 6.1 below analyses the provinces potential based on minimum work value range and available contractors in that category. This reflects a total R1,5 Billion excluding the lower ranges (below R4 Million) spread over 3,5% of total active contractors in the province.

Table 6.1: Active Contractors on CIDB Database

CIDB Grading	Work Value Range	Number of Active Contractors	% Of Total	Implementation Capacity at Min Work Value Range	Envisaged Programmes
9	>R130 Million	2	0,04%	R260 Million	New Schools, Water & Sanitation, Upgrade & Additions, Substitution of unsafe structures, and Technical Schools
8	R40 – R130 Million	6	0,12%	R240 Million	
7	R13 – R40 Million	22	0,45%	R286 Million	
6	R6,5 – R13 Million	76	1,58%	R494 Million	
5	R4 – R6,5 Million	61	1,27%	R244 Million	
4	R2 – R4 Million	46	0,95%	N/A	Maintenance, Dinaledi, Grade R, Storm Damage, and Refurbishments.
3	R0,65 – R2 Million	41	0,82%	N/A	
2	R0,2 – R0,65 Million	101	2,10%	N/A	
1	<R0,2 Million	4454	92,67%	N/A	
<b>TOTALS</b>		<b>4809</b>	<b>100%</b>		

##### 6.4.1 General Procurement Requirements

- The Implementing Agent shall procure the services of consultants and contractors through the tender advertisement process according to the conditions and in accordance to stipulations contained in the MDoE Construction Procurement Strategy which shall be in compliance with the Preferential Procurement Policy Framework Act and related Regulations.
- Depending on the value of the tender, the Implementing Agent shall be entitled to call for work quotations, recommend the preferred party and make the necessary appointment of the contractor concerned.
- The DPWR&T shall chair the Bid Committee meetings in the process of bid specification, adjudication and evaluation of bids and make inputs into the appointments of consultants and contractors. At least two [2] representatives of the client department shall be entitled to attend Bid Committee meetings and these persons shall have a vote of equal stature as all other members of the Committee in the awarding of contracts.
- The DPWR&T shall take the responsibility for convening the Bid Committee and ensuring that MDoE officials are invited to attend its deliberations when deciding upon MDoE contract awards.

#### 6.4.2 Procurement Objectives

Primary procurement objectives are as follows:

- a) To procure the services of competent professional service providers to do planning, design, construction supervision and project management of school infrastructure.
- b) Competent contractors with financial autonomy to deliver quality infrastructure facilities within time, cost as well as good quality.

Secondary procurement objectives are as follows:

- a) Job creation and poverty alleviation of rural communities (youth, women and people with disabilities).
- b) Skills transfer to the rural community members.
- c) Provision of a conducive environment for effective teaching and learning.
- d) Provision of apprenticeship to qualified TVET students as part of the MDoE's youth development programme

#### 6.4.3 Delivery Mode – Project or Programme

MDoE shall package projects into programmes aimed at addressing specific facilities backlog to be classified as per Table below follows;

Table 6.2: Summary of Programmes

No.	Category/Programme	Targetted Output	Implementing Agents/ Sub-implementing Agents	(Year of Implementation)
1	Water & Sanitation	Basic Services	DPWRT, Mvula Trust & MRTT	2014/15 – 2016/17
2	Substitution of Unsafe Structures (All)	Eradication of inappropriate / unsafe structures	DPWRT	2014/15 – 2020/21
3	Renovation & Refurbishment	Upgrading of unsafe structures & Conditions Priority	DPWRT	2014/15 – 2020/21
4	Upgrades & Additions	Basic & Optimum functionality	DPWRT	2014/15 – 2023/24
5	Grade R	Optimum functionality	DPWRT	2014/15 – 2023/24
6	Technical Schools	Optimum functionality	DPWRT	2014/15 – 2023/24
7	Dinaledi Schools	Optimum functionality	DPWRT	2014/15 – 2023/24
8	Storm Damaged Schools	Conditions Priority	DPWRT	On-going per demand
9	Maintenance Programme	Conditions Priority	DPWRT, GS College & MRTT	On-going
10	New Schools	Conditions Priority	DPWRT	On-going per demand

#### 6.4.4 Pricing Strategy

Prices shall be determined through priced bills of quantities for construction and maintenance projects utilizing standard conditions of contract. The prices shall always be guided by or benchmarked against standard costing conducted by MDoE that is updated annually to prevent price monopoly.

#### 6.4.5 Outsourced Professional Services

The Construction Procurement Strategy issued with the IPMP shall determine programme packages for each MTEF. This shall also determine required services in terms of Quantity Surveying, Architecture and Civil/Structural/Electrical Engineering as well as the actual construction services. Geotechnical specialists and topographical surveyors will be required as sub-consultants to the professional service providers.

A team of professional service providers shall be awarded a package or programme. The pricing thereof shall be based on gazetted guidelines for the individual professional bodies of the specialized disciplines.

#### 6.4.6 Procurement Procedure

In general terms there are there are the following three main bidding methods applicable:

- Request for Quotations (RFQ) Small work for maintenance and storm damaged
- Invitation to Bid (ITB) - For construction works.
- Request for Proposals (RFP) - For Consultants

Policy guidelines for the Design Build method are currently being developed. This method shall be utilized upon approval.

#### 6.4.7 Construction Procurement:

The procedure to be followed for construction only and maintenance only or a combination of the two will be by invitation to tender. Procurement of professional service providers will be through request for proposals. The procedure for the two methods is going to be the same and will be as defined in the steps below:

- a) Tender advertisement.
- b) Tender Opening.
- c) Preliminary check for responsiveness.
- d) Tender evaluation.
- e) Tender adjudication
- f) Tender award.

#### 6.4.8 Tender Evaluation Procedure

The tender evaluation procedure is normally given in every tender document. It is however important to note that the following tender evaluation criteria are applicable to MDoE:

- a) 80/20 Evaluation criteria for project value equal to or below R500 000.00
- b) 90/10 Evaluation criteria for project value above R500 000.00.

The 80 or 90 is a percent component representing the price while the 20 or 10 component is a percentage representing functionality.

Functionality elements comprise of the following:

- a) Experience of the company on projects of similar nature and capacity.
- b) Financial autonomy to execute projects of similar nature and capacity.
- c) Human resource capacity in terms of skilled and experienced personnel to work on the project.
- d) Availability of plant and equipment for the execution of the works.

#### 6.5 Key Implementation Risks

Table 6.3 below analyses key implementation risks based on historical performances on infrastructure programmes.

Table 6.3: Key Risks

<b>RISK</b>	<b>DESCRIPTION</b>	<b>CAUSES</b>	<b>MITIGATION</b>
Project Delays (non-compliance to project milestones)	Poor performance by consultants	<ul style="list-style-type: none"> <li>• Poor project planning</li> <li>• Lack of supervision</li> <li>• Poor contract administration</li> <li>• Limited capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Implement a point-based performance monitoring system for consultants that will merit/demerit service providers</li> <li>• Blacklisting of poor performing service providers</li> </ul>
	Poor performance by contractors	<ul style="list-style-type: none"> <li>• Project overloading thus reducing capacity</li> <li>• Lack of supervision</li> <li>• Poor contract administration</li> </ul>	<ul style="list-style-type: none"> <li>• Enhance selection criteria (functionality) to address identified weaknesses</li> <li>• Blacklisting of poor performing service providers</li> </ul>
	Limited capacity within implementing agent	<ul style="list-style-type: none"> <li>• Single-point responsibility has a low risk tolerance</li> <li>• Extended turn-around time on document handling</li> </ul>	<ul style="list-style-type: none"> <li>• Increase implementing agents / sub-implementing agents to reduce the risk associated with utilizing one I.A.</li> <li>• Reduce turn-around time to handling or processing of information / documentation</li> </ul>
Delayed Implementation of identified projects	Underfunding of Infrastructure Plan	Suspension of other programmes to align needs to available budget/funding	<ul style="list-style-type: none"> <li>• Improvement of the UAMP to enable access to the Incentive Grant</li> <li>• Full compliance with Disaster Relief Grant requirements to access alternative funding for storm damage projects</li> <li>• Increase Equitable Share funding to match EIG per DoRA</li> </ul>

## 7. IMPLEMENTATION METHODOLOGY (FUNDING BASED)

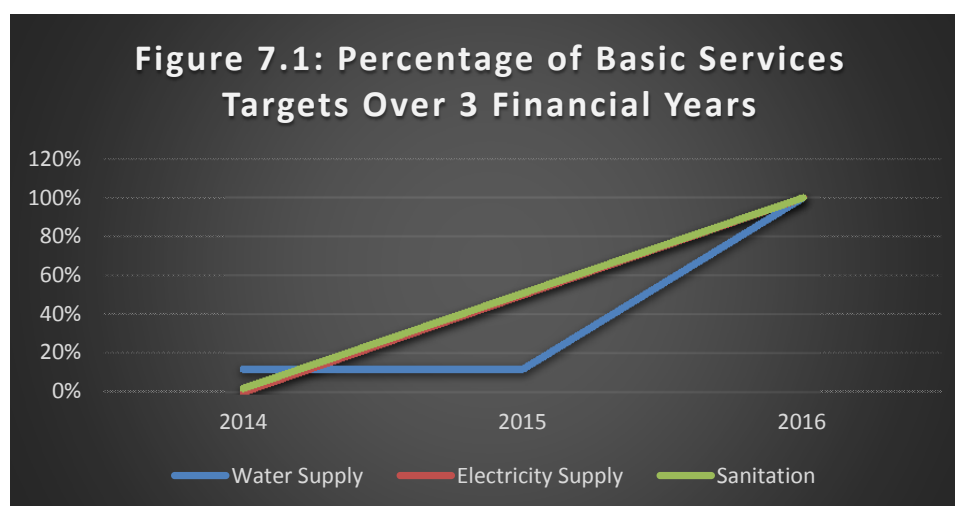
### 7.1 Funding of Basic Services for 2016 December

Mpumalanga does not have schools built entirely of inappropriate materials as the last recorded school per EFMS, Ngwempisi Primary School was closed in the schools merging process. The province's challenge is dealing with schools whose buildings have exceeded their life-span or that have been deprived of maintenance.

Basic Services provided in the 2013/14 financial year are already known and are included in the existing facilities table in **Table 3.2** in **Chapter 3**. The total outstanding basic services facilities and cost thereof are calculated in **Table 4.1**. The basic services to be provided in the 2014/15 financial year are deducted and the remainder is divided by two as these facilities must be provided in the 2015/16 and 2016/17 respectively to comply with the 2016 December target. The funding required thereof is shown in **Table 7.1** below.

**Table 7.1: Basic Services Facilities Targeted for Full Eradication by 2016 December**

Basic Services Facilities	Grand Total '000	2014 '000	2015 '000	2016 '000
Water Supply	R5,950	R700	-	R5,250
Number of Schools With no Electricity Supply plus those with vandalised or not in working condition.	R18,000	-	R9,000	R9,000
Sanitation - Number of toilet seats required plus those in unsafe condition to be replaced.	R2,780,484	R51,689	R1,364,398	R1,364,397
Sanitation - Toilet facilities to be upgraded (condition based)	R5,387	R711	R4,676	-
<b>TOTALS</b>	<b>R2,809,821</b>	<b>R53,100</b>	<b>R1,378,074</b>	<b>R1,378,647</b>



## 7.2 Basic Functionality Compliance Facilities Targeted for 2020 December

Funding of R2,345,450,000 is required to completely eradicate the backlog for the Basic Functionality requirements. This funding has to be made over the 2015/2016 to 2020/2021 financial years, thus over six (6) financial years.

Meaningful funding to provide facilities that comply with the basic functionality issues is after the 2016/2017 financial years when the basic services facilities backlog is eradicated, thus reducing the funding period to four (4) years. An average budget of R585 862 500 annually, will be required.

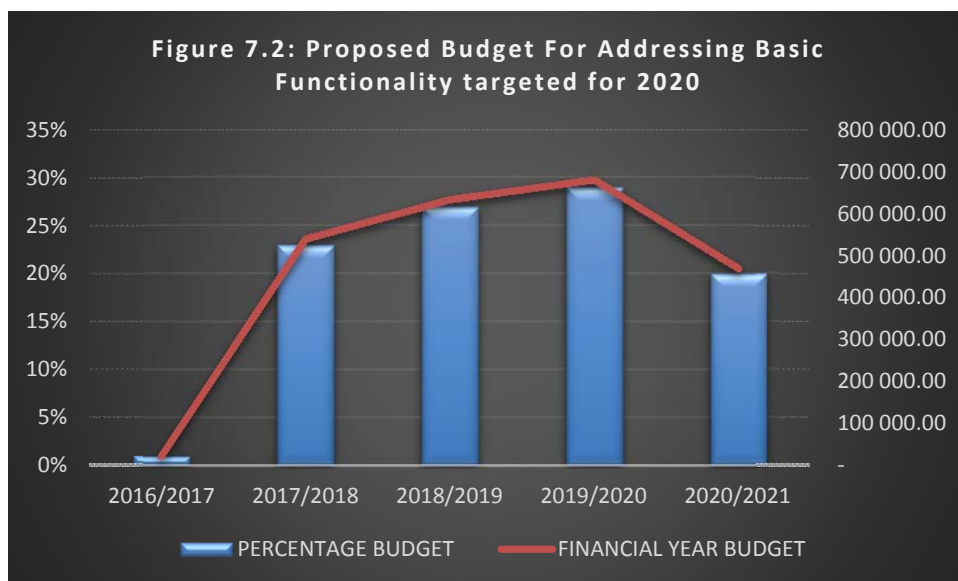
It is advised that for successful addressing of the basic functionality compliance, the Portfolio and Project Management stages of the Infrastructure Delivery Management System (IDMS) have to be correctly implemented. The Alignment Model that talks to the alignment of the infrastructure delivery cycle with the MTEF budget cycle has to be fully adopted. The Portfolio Management and the infrastructure project planning, procurement and design should be done a year ahead of the project implementation.

On the basis of the discussion in the paragraph above, 2016/2017 will be used for the budget preparation process i.e. portfolio management and the infrastructure project planning, design and procurement.

It is proposed that the eradication of Basic Functionality facilities' backlog be implemented in the following:

**Table 7.2: Proposed Funding Strategy for Addressing Basic Functionality Compliance Targeted for 2020**

YEAR	PERCENTAGE BUDGET	FINANCIAL YEAR BUDGET '000
2016/2017	1%	R 23 454
2017/2018	23%	R 539 454
2018/2019	27%	R 633 271
2019/2020	29%	R 680 181
2020/2021	20%	R 469 090
<b>TOTALS</b>	<b>100%</b>	<b>R 2 345 450</b>



### 7.3 Optimum Functionality Compliance Facilities Targeted for 2023

A further funding of **R15,692,847,196** is required to eradicate the backlog for the Optimum Functionality requirements. This funding has to be made over the 2015/2016 to 2023/2024 financial years, thus over nine (9) financial years.

Funding for compliance thereof is envisaged after the 2016/17 financial years given the extent of the basic services budget and affordability. The funding period will then be reduced to seven (7) years. An average budget of **R2,241,835,313** annually, will be required.

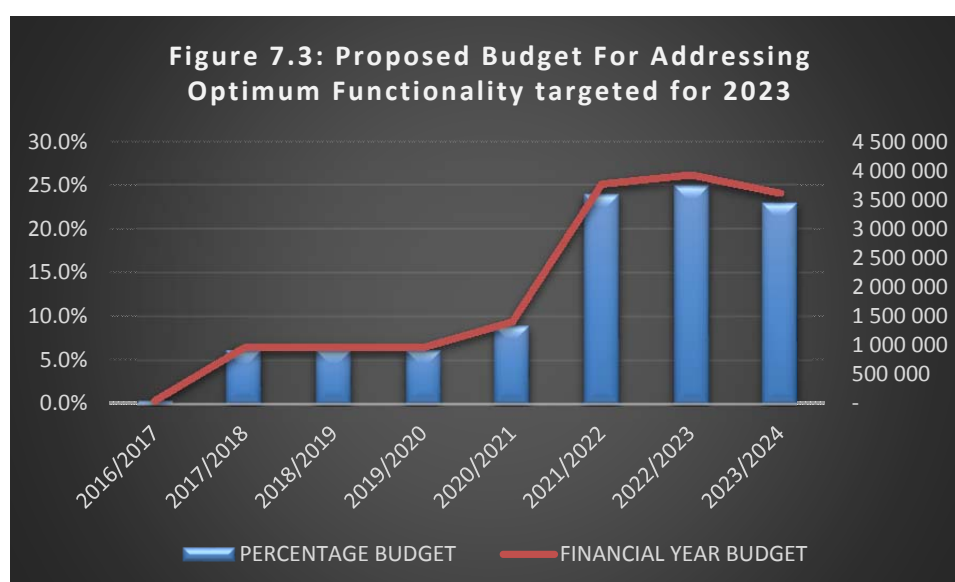
Planning, design and procurement for these projects would be done in the preceding financial year (2016/17) in-line with the Infrastructure Delivery Management System (IDMS).

The following implementation scenario is proposed for the eradication of optimum functionality facilities' backlog:



Table 7.3: Proposed Funding Strategy for Addressing Optimum Functionality Compliance Targeted for 2023

YEAR	PERCENTAGE BUDGET	FINANCIAL YEAR BUDGET
2016/2017	0.4%	R 62 771
2017/2018	6.2%	R 972 957
2018/2019	6.2%	R 972 957
2019/2020	6.2%	R 972 957
2020/2021	9.0%	R 1 412 356
2021/2022	24%	R 3 766 283
2022/2023	25%	R 3 923 212
2023/2024	23%	R3 609 355
<b>TOTALS</b>	<b>100%</b>	<b>R 15 692 847</b>



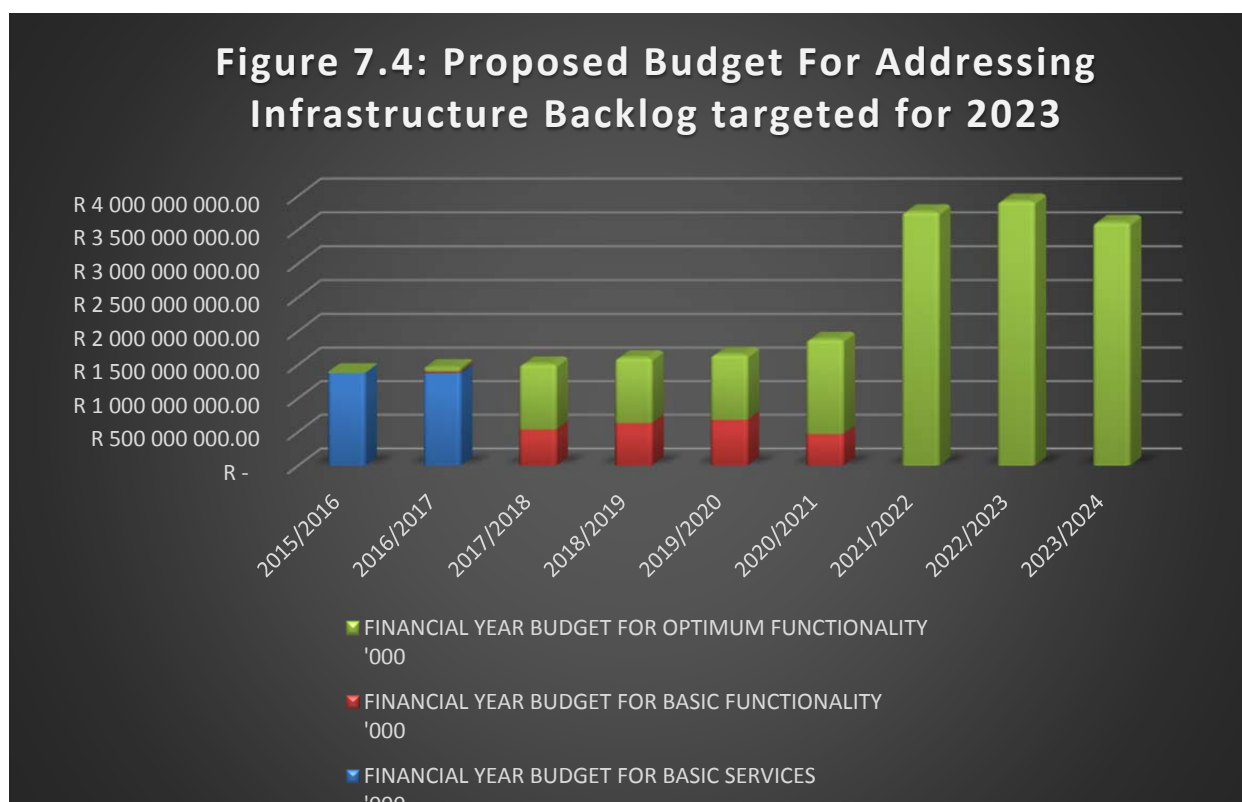
#### 7.4 Overall Budgeting Strategy for Eradication of Infrastructure Backlog

Table 7.4 below shows the proposed required budget for eradicating infrastructure backlog in-line with the stipulated targets. This is for Basic Services, Basic & Optimum Functionality and does not include Condition Priority (Maintenance) or other Infrastructure Demands.

Table 7.4 Proposed Yearly Budget Required for Eradicate School Infrastructure Facilities Backlog

YEAR	FINANCIAL YEAR BUDGET FOR BASIC SERVICES '000	FINANCIAL YEAR BUDGET FOR BASIC FUNCTIONALITY '000	FINANCIAL YEAR BUDGET FOR OPTIMUM FUNCTIONALITY '000	TOTAL BUDGET PER FINANCIAL YEAR FOR BACKLOG ERADICATION '000
2015/2016	R 1 378 074	-	-	R 1 378 074
2016/2017	R 1 378 647	R 23 454	R 62 771	R 1 464 873
2017/2018	-	R 539 453	R 972 956	R 1 512 410
2018/2019	-	R 633 271	R 972 956	R 1 606 228
2019/2020	-	R 680 181	R 972 956	R 1 653 137
2020/2021	-	R 469 090	R 1 412 356	R 1 881 446
2021/2022	-	-	R 3 766 283	R 3 766 283
2022/2023	-	-	R 3 923 212	R 3 923 212
2023/2024	-	-	R 3 609 355	R 3 609 355
<b>TOTALS</b>	<b>R 2 756 721</b>	<b>R 2 345 450</b>	<b>R 15 692 847</b>	<b>R 20 795 018</b>

Figure 7.4 below shows the graphical presentation of the proposed financial year's budget required to eradicate basic services backlog by 2016, basic functionality backlog by 2020 and optimum functionality backlog by 2023.



## 7.5 Infrastructure Targets and The Holistic Approach Policy for Provision of Schools Facilities

It is important to note that the budgeting above (Table & Fig 6.4) does not take into account the **holistic approach policy** of providing all the infrastructure that is due at a school once one facility has been prioritized at the school. The required budget for eradicating Basic Services Backlog averages R1,3 Billion per financial year and renders the holistic approach ineffective. However, the Basic and Optimum Functionality Backlog eradication can be implemented concurrently.

## 7.6 Analysis of Addressing the Backlog (Options Analysis)

Two scenarios are analysed into detail in this section. These scenarios include:

- Fixed target dates and funding sought to meet the dates (ideal case).
- Budget in term of current allocation trends plus 5% approximate inflation (worse case).

### 7.6.1 Fixed Target Dates and Funding Sought to Meet the Dates (Ideal Case Scenario)

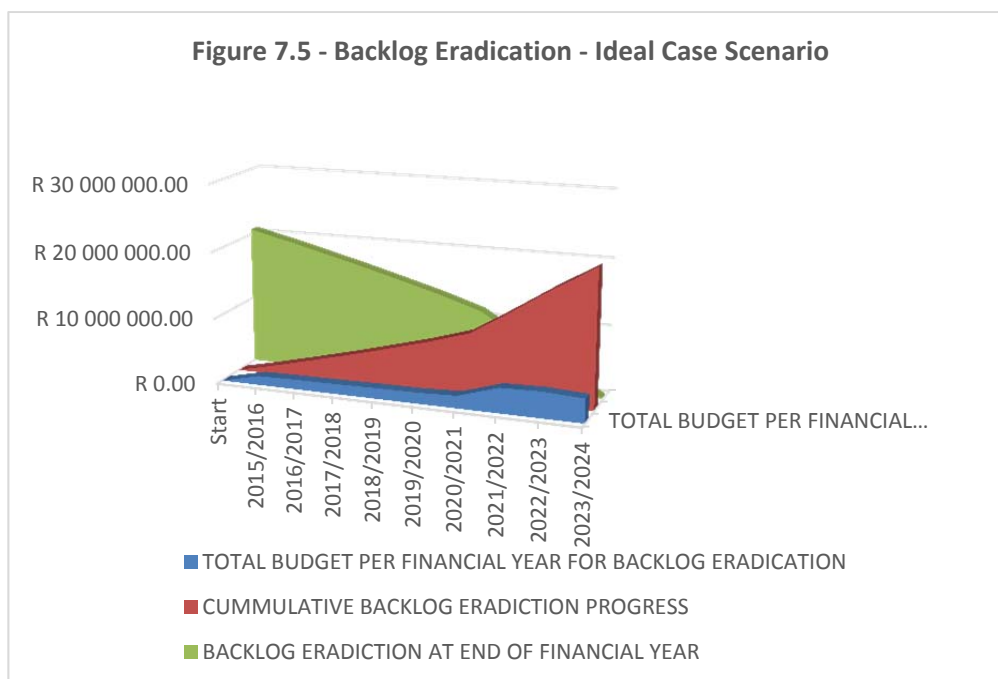
The ideal case scenario is when all conditions are favourable for eradication of backlogs within targeted dates in the following;

- Sufficient funding
- Full HR Capacity with optimum performance
- Sufficient Implementing Agents that are able to implement the envisaged Infrastructure Programmes.
- Capable contractors adhering to time, quality output and budgets
- Implementation in line with IDMS principles

Table 7.5 and Figure 7.5 below show how this scenario is implemented.

Table 7.5 : Proposed Yearly Budget Required To Eradicate School Infrastructure Facilities Backlog Within Stipulated Target Dates.

	TOTAL BUDGET PER FINANCIAL YEAR FOR BACKLOG ERADICATION '000	CUMMULATIVE BACKLOG ERADICATION PROGRESS	BACKLOG ERADICATION AT END OF FINANCIAL YEAR
Start	R 0,00	R 0,00	R 20 795 018
2015/2016	R 1 378 074	R 1 378 074	R 19 416 944
2016/2017	R 1 464 873	R 2 842 947	R 17 952 071
2017/2018	R 1 512 410	R 4 355 357	R 16 439 661
2018/2019	R 1 606 228	R 5 961 585	R 14 833 433
2019/2020	R 1 653 137	R 7 614 722	R 13 180 296
2020/2021	R 1 881 446	R 9 496 168	R 11 298 850
2021/2022	R 3 766 283	R 13 262 451	R 7 532 567
2022/2023	R 3 923 212	R 17 185 663	R 3 609 355
2023/2024	R 3 609 355	R 20 795 018	R 0,00
<b>TOTAL</b>	<b>R 20 795 018</b>	<b>-</b>	<b>-</b>



**7.6.2 Budget in term of Current Allocation Trends Plus 5% Approximate Inflation.**

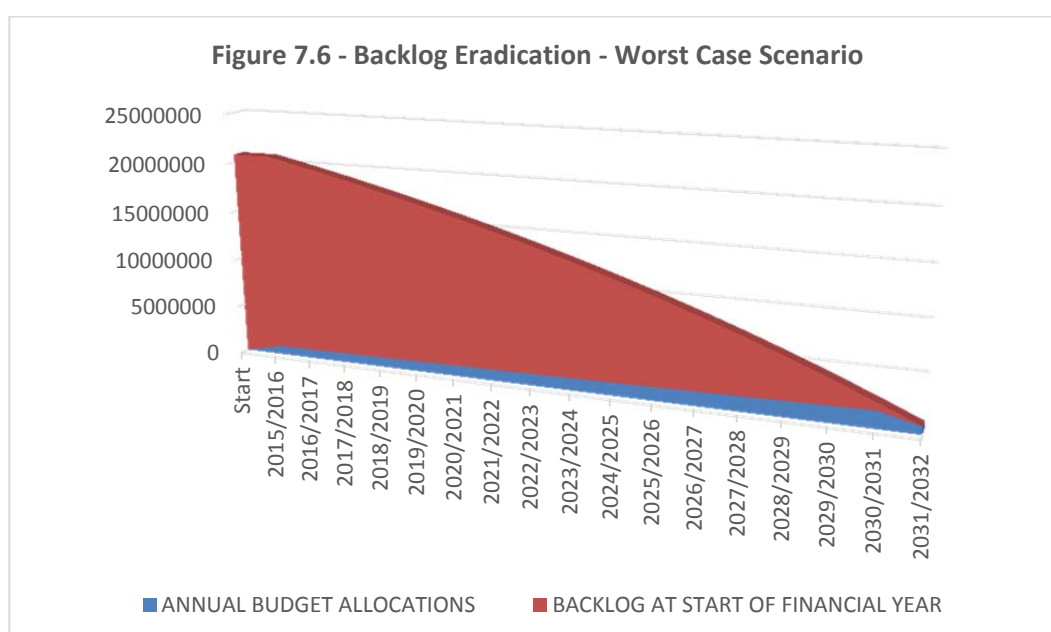
In the worst case scenario, the envisaged 2015/2016 financial year budget allocation will be used as baseline. This budget allocation was originally envisaged to be **R992 Million** (EIG, Dinaledi, Technical Recap & ES) but indication are that it will be reduced to R846 Million due to a 5% cut in EIG and withdrawal of R105 Million (ES). Commentary on known prevailing factors on future allocations have also been provided and factored in.

This scenario results in the eradication targets not being honoured.

Table 7.6 and Figure 7.6 below show the backlog will be reducing at a constantly increasing budget allocation. It will take **seventeen (17)** years to eradicate the facilities backlog.

Table 7.6 Eradicate School Infrastructure Facilities Backlog With 2015/2016 Budget Allocation as Base Year and Increasing with 5% Inflation Rate Annually - Target Dates not Fixed

	ANNUAL BUDGET ALLOCATIONS	BACKLOG AT START OF FINANCIAL YEAR	COMMENTS
Start	-	R 20 795 018	
2015/2016	R 846 534	R 19 948 484	Originally R992 Mil, 5% cut on EIG budget plus R105Mill in ES
2016/2017	R 888 861	R 19 059 623	Average 5% budget increments
2017/2018	R 933 304	R 18 126 320	As above
2018/2019	R 979 969	R 17 146 351	As above
2019/2020	R 1 028 967	R 16 117 383	As above
2020/2021	R 1 080 416	R 15 036 968	As above
2021/2022	R 1 134 437	R 13 902 531	As above
2022/2023	R 1 191 158	R 12 711 373	As above
2023/2024	R 1 250 716	R 11 460 656	As above
2024/2025	R 1 313 252	R 10 147 404	As above
2025/2026	R 1 378 915	R 8 768 490	As above
2026/2027	R 1 447 860	R 7 320 629	As above
2027/2028	R 1 520 253	R 5 800 376	As above
2028/2029	R 1 596 266	R 4 204 110	As above
2029/2030	R 1 676 079	R 2 528 030	As above
2030/2031	R 1 759 883	R 768 147	As above
2031/2032	R 768 147	R 0	As above
	<b>R 20 795 018</b>		



## 8. HUMAN RESOURCE REQUIREMENTS TO ADDRESS SCHOOL INFRASTRUCTURE FACILITIES BACKLOG ERADICATION

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### 8.1 General

The facilities backlogs and condition maintenance issues do not only require financial budget to meet the targets but sufficient technical and management personnel. These are important in ensuring successful delivery of the set infrastructure targets.

The organizational structure in **Figure 8.1** below shows the current Mpumalanga Department of Education Physical Resources and Facilities Planning directorate. Infrastructure is delivered through this Directorate which comprises of the following;

- **Physical Resources Planning Sub-Directorate** deals with the planning for and the registration of schools.
- **Physical Facilities Sub-Directorate** deals with the implementation of projects and the infrastructure monitoring and reporting.
- **Financial Services Sub-Directorate** processes payments for service providers and implementing agents. They are also responsible for financial reporting and grant performance monitoring.

MDoE currently engages the services of a Programme Management Unit (PMU) who are contracted for a period of three (3) years from 2013 May to 2016 April. The PMU services are funded through the Education Infrastructure Grant (EIG).

The directorate previously had the services of a Technical Advisor funded by DBE. This service ceased in March 2014 and is currently being resuscitated.

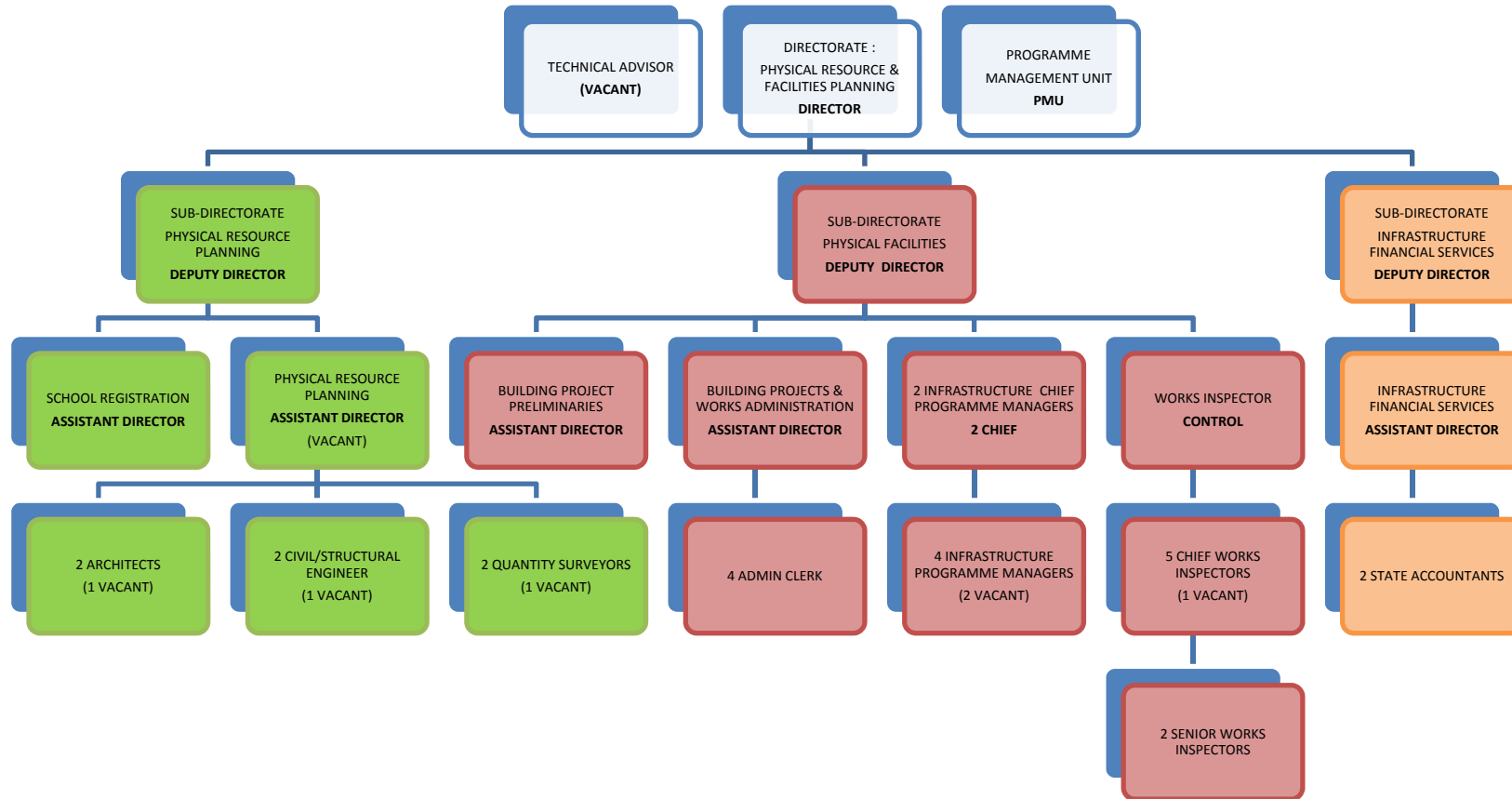


Figure 8.1: MDoE Physical Resources and Facilities Planning Directorate Organogram

## 8.2 Current Status on Human Resource Capacity

The Directorate currently has 19 filled positions out of the 34 in its approved structure.

The current vacant positions are as follows:

1. Assistant Director: Resource Planning
2. Architect: Resource Planning
3. Admin Clerk: Resource Planning
4. Civil/Structural Engineer: Resource Planning
5. Quantity Surveyor: Resource Planning
6. Infrastructure Programme Managers (2 Posts): Physical Facilities
7. Senior Admin Officer: Building Project Preliminaries
8. Admin Officer: Building Project Preliminaries
9. Admin Clerk: Building Project Preliminaries
10. Admin Clerk (2 Post): Building Project and Works Administration
11. Chief Works Inspector: Works Inspection
12. Works Inspector: Works Inspection
13. Admin Clerk: Works Inspection

MDoE is experiencing challenges in procuring the prescribed personnel for vacant technical positions and retaining existing personnel. This is evident in the resignations and failure to find suitable candidates despite advertising the same on more than two occasions within 12 months.

## 8.3 Human Resources Procurement and Improvement Proposal.

In terms of the DoRA, the directorate requires 52 posts to function at an optimum level. The approved current structure has 34 posts, 18 of which are filled as discussed in 8.2 above.

Improvement on HR capacitation shall be done in two levels;

- Filling of vacant but currently approved positions.
- Increasing HR capacity in line with the DoRA requirements (outstanding posts, 18/52).
  - To advertise and fill the **IDMS Strategist** position (same level as the IDIP Technical Assistant) to oversee and ensure that infrastructure implementation is executed within the IDMS prescripts.
  - Optimise the use of available positions for Works Inspectors, etc. as there is sufficient supply of suitable candidates in the job market.



## 9. CONCLUSIONS AND RECOMMENDATIONS

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### 9.1 Accuracy of Quantification of the Facilities' Backlog.

The Survey was conducted in 2011 and the baseline data is 3 years old. Some instances may be different at the time that they are executed and will be subject to verification upon implementation of the projects.

### 9.2 Accuracy of Costing of the Infrastructure Backlogs.

The costs of the backlog are based on unit costs of the standard school infrastructure completed in February 2014.

The cost of standard VIP toilets utilized in our previous version estimated at R49,000.00 per unit has since been replaced by Enviro-loo toilets at a cost of R79,000 per unit.

A provision of 5% has been added as a contingency to backlog cost to counteract unforeseen circumstances. The final sum is variable subject to the period it takes to eradicate the backlog, the economic conditions prevailing at that time, etc.

### 9.3 Backlog Implementation Strategy

In addressing the discussed facilities backlog, MDoE reiterates its commitment to achieve the targets set out by DBE in terms of the norms and standards goals.

The backlog eradication strategy outlined is in accordance with the norms and standards time frames set by DBE and is based on two scenarios;

- An ideal scenario where all conditions are favourable (budget allocation, service provider commitment, HR capacitation etc) and thus conditions are on par with the outlined targets to eradicate the backlog by 2023/24 financial year.
- Worst case scenarios based on the current trends and budget allocations projecting total eradication in 2031/32.

#### 9.3.1 *Ideal Case Scenario*

**Water and Sanitation** Implementation targets may not be achieved given the urgency and the prevailing implementation conditions, hence it requires a more robust intervention. It is therefore recommended that implementation be guided by the following to achieve the 2016 targets;

- Using independent implementing agents like Mvula Trust, etc.
- Utilisation of contractors with a grading of 5 - 9GB/CE meeting a stringent prequalifying criteria
- Contracts awarded in clusters based on school location

- Cluster value to determine targeted contractor designation in CIDB Gradings.
- Provincial economic growth principles (Youth and SMMEs Development, CRDP, etc).

### 9.3.2 *Worst Case Scenario*

Given the country's prevailing low economic growth, the indication of budget cuts and the current budget allocation, etc. eradication will most likely be of the worst case scenario. It is therefore recommended that the following guidelines be adopted to increase the budget impact on the backlog eradication;

- Project prioritization informed by the norms and standards only
- Suspension of all other infrastructure sub-programmes except;
  - Maintenance Programmes to prevent deterioration of existing infrastructure
  - Storm Damaged Schools Programmes as part of maintenance and rehabilitation of damaged infrastructure
  - New schools in fast growing areas based the SERO Report provided there is funding
- Improvement of planning processes and the UAMP to enable access to the Incentive Grant for funding pressure relief
- Adherence to the policy framework regarding matching the EIG Funding with the Equitable Share