

**NOTICE 1439 OF 2008****DEPARTMENT OF EDUCATION****SOUTH AFRICAN SCHOOLS ACT 84 of 1996****CALL FOR COMMENTS ON NATIONAL MINIMUM UNIFORM NORMS AND STANDARDS FOR SCHOOL INFRASTRUCTURE**

I, Grace Naledi Mandisa Pandor, Minister of Education after consultation with the Council of Education Ministers and in terms of section 5A of the South African Schools Act, 1996 (Act No 84 of 1996), hereby determines National Minimum Uniform Norms and Standards for School Infrastructure, as set out in the Schedule.

All interested persons and organisations are invited to comment on the norms and standards, in writing and to direct their comments to-

The Director-General, Private Bag X895, Pretoria, 0001, for attention: Mrs E Mamathuba, tel 012 312 5954, email [mamathuba.e@doe.gov.za](mailto:mamathuba.e@doe.gov.za), fax 012 312 6058/ 086 554 2241.

Comments must reach the Director-General on or before 23 December 2008.

  
**GRACE NALEDI MANDISA PANDOR, MP**  
**MINISTER OF EDUCATION**  
**DATE: 14-11-2008**

## **SCHEDULE**

# **NATIONAL MINIMUM NORMS AND STANDARDS FOR SCHOOL INFRASTRUCTURE**

### **VOLUME 1**

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**ABBREVIATIONS AND ACRONYMS**

BMP	Basic Minimum Package
CEM	Council of Education Ministers
DoE	Department of Education
ECD	Early Child Development
GET	General Education and Training
FET	Further Education and Training
HEDCOM	Heads of Education Committee
MEC	Members of the Executive Council
MoE	Ministry of Education
NEIMS	National Education Information Management System
ETSDS	Education, Training and skills development system
NCS	National Curriculum Statement
UI	Utilization index
Hs	Total school hours per week
nS	Number of spaces
VUI	Verification of index
TWHLA	Total weekly hours by learning area

## Introduction

1.1. Equality of educational opportunity is one of the principles enshrined in our Constitution. The Ministry of Education (MoE) interpret this principle as entailing equity of both education resource inputs and thus education outcomes. The historical heritage of South Africa's Education, Training and Skills Development System (ETSDS) has been one of institutionalized inequalities. Just before the democratic transition in 1991, the per capita spending on a white child was 350 percent more than on a black child. Consequently, the distribution of key resource inputs that are known to facilitate teaching and learning were skewed.

1.2. Since the democratic transition of 1994, the MoE has endeavored to redress the stark historical inequalities in the distribution of education resource inputs and outcomes. By 2006, the per capita spending on a white child had declined to 22 percent more than what is spent on a black child. This differential is mainly due to fees and other private contributions that are outside the control of the system. While progress is being made, the racial composition of schools still remains a major explanatory factor for student learning outcomes (as evident in the matriculation pass rates) after controlling for socio-economic background and school inputs.

1.3. Historically, one of the most visible forms of inequalities in the provision of resource inputs has been the physical teaching and learning environment; the key elements of which include infrastructure, basic services, equipment, furniture, books and instructional materials. As with other areas of provision, substantial effort has been made to redress these inequalities. This effort notwithstanding, key elements of the physical teaching and learning environment remain insufficient and inequitable across schools. For instance, by 2006, 17 percent of schools were without electricity, 12 percent were without a reliable water source on site, 68 percent were without computers, 80 percent without libraries or library stocks, 61 percent without laboratories and 24 percent had overcrowded classrooms (45 learners or more). To date, there is still a significant backlog of schools that are run in unacceptable and even unsafe physical facilities.

1.4. During 2007, the MoE developed a *National Policy for Equitable Provision of an Enabling School Physical Teaching and Learning Environment (policy document)* to guide sufficient and equitable provision of key elements of the physical teaching and learning environment. These norms and standards follow a formal approval of the national policy by the Council of Education Ministers (CEM). It comprises Volume 1 of the national norms and standards which focuses only on school infrastructure and basic services. Norms and standards for other elements of the physical teaching and learning environment will be prepared at a later stage.

## Legal, Policy and Institutional underpinnings

### *Policy underpinnings*

1.5. The norms and standards presented in this document are underpinned by the above referred *National Policy for Equitable Provision of an Enabling School Physical Teaching and Learning Environment*. The policy comprises 6 strategic and 2 operational policy statements. The first of the 6 strategic policy statements calls for the development of norms and standards for equitable provision of an enabling physical teaching and learning environment as an urgent priority. The national policy further states that national norms and standards will be developed during 2008, fully adopted by the end of 2009, and implemented by 2010. This document is therefore the first step toward the operationalization of the national policy. It presents a draft norms and standards to be discussed and adopted at a national level. As a national instrument, these norms and standards will apply to **ALL** public ordinary schools (excluding hostels) that operate in South Africa, regardless of the ownership. Also, in the process of registering of independent school, The MEC will ensure that such schools oblige the minimum norms as indicated in this document. Further, considering the specificity and diversity for provision of special schools, all special schools shall oblige to these minimum norms as indicated in this document.



*Strategic underpinnings*

1.6. The current sector strategic plan (2008/2012) also identifies the development of national norms and standards as well as the Basic Minimum Package (BMP) for the provision of school infrastructure as the second priority for the period of the plan. Consistent with the policy, the plan sets as a target, the development of the norms and standards within 2008. These norms and standards are therefore also the first step toward the implementation of this aspect of the strategic plan.

*Effectiveness of the norms*

1.7. These norms will be fully adopted by the end of 2009 and will be implemented in a phased manner starting from 2010.

*Legal underpinnings*

1.8. The norms and standards entailed in this document find their legal underpinning in the South African Schools Act of 84 of 1996 as amended which designates the Minister of Education the authority to prescribe minimum norms and standards for the physical teaching and learning environment, after consultations with the Council of Education Ministers (CEM).

1.9. In operational terms, these norms and standards will also impact other relevant national legal frameworks such as the National Education Policy Act 1996 (Act No 27 of 1996) the *Development Facilitation Act, 1995 (Act 67 of 1995)*, *Environmental Management Act, 1998 (Act 107 of 1998)*, *Town Planning and Township Ordinance Act, 1986 (Act 15 of 1986)*, *Water Service Act, 1997 (Act 108 of 1997)*, and the *Intergovernmental Relation Act, 2005 (Act 13 of 2005)* etc.

*Institutional framework*

1.10. The current institutional framework accords the MoE the responsibility for policy development and the monitoring of policy implementation by provinces. Consistent with the current institutional framework, the MoE will retain the responsibility for policy development, for the development of national instruments that facilitate policy implementation of these norms and standards. The MoE will also retain responsibility for periodic review of the norms and standards to ensure currency and contextual responsiveness. As provided for in the national policy, The DoE will oversee and ensure effective implementation and compliance with the norms and standards. This includes the monitoring and evaluation of the implementation of the norms and standards as well as the assessment of their intended impact and outcomes. To best execute its role, the DoE will assess its delivery capacity and that of the Provinces. Based on the results, a capacity development program will be developed and implemented alongside with the implementation of the norms and standards. A key part of the capacity strengthening initiatives will entail the establishment of a new unit dedicated to the provision of elements of the physical teaching and learning environment. The Unit will report directly to the Director General. Provinces will implement the norms and standards. In so doing, Provinces may adapt national norms and standards to their specific contexts within parameters set by the DoE. For instance, the proposed norm for the size of a regular classroom is 48 to 60 square meters. Within this set range of the norm, Provinces may pick a suitable class size. Provincial adaptation of norms and standards will, under no circumstance, lead to a diminution of the minimum norm.

1.11. All other departments that are responsible for national norms and standards for the provision of basic services (construction standards, water, electricity, sanitation, transport, etc.) as well as for construction standards will also support the implementation of these norms.

## Rationale for national norms and standards

### *Responsiveness to sector policies*

1.12. One of the key challenges that prompted the development of these norms and standards is that current provision does not provide a physical teaching and learning environment required to sufficiently support the implementation of core sector policies. As elaborated in Chapter 2 of the national policy, the norms and standards entailed in this document are therefore meant to better facilitate the implementation of core sector policies whose success depends on the adequacy of the physical teaching and learning environment. They are also meant to facilitate the actualization of key sector policy tenets—equity, quality, relevance, efficiency, values—as elaborated in Chapter 3 of the national policy document.

### *Responsive to curricula and pedagogy*

1.13. The current physical teaching and learning environment was also found to be inadequate to facilitate effective delivery of curricula, co-curricula activities, progressive pedagogy implied in national curriculum statement (NCS), effective learning, and community needs. Learners and educators are therefore prime clients, while communities are secondary clients whose needs are to be responded to through these norms and standards.

### *Systematization of priority setting and identification of backlogs in provision*

1.14. The previous lack of national norms and standards was identified among key constraints to a systematic and strategic prioritization of needs regarding core elements of an enabling environment. Lack of clear priorities, constrained the creation/articulation of a nationally consensual definition of backlogs in the provision of all elements of an enabling teaching and learning environment. Lack of consensus on what constitutes priority needs and backlogs in provision risked the attainment of equity in provision. Consensual definitions of priorities and backlogs are particularly critical in the context of South Africa where levels of provision vary substantially and where equity and strategic considerations have to be carefully balanced.

### *Ensuring equity of provision*

1.15. In order to ensure equity of provision and to aid the setting of priorities, the national policy provides for minimum and optimum norms and standards. It also presents a gradation of provision which will be used as benchmarks for adequacy of provision further down the line during the planning stage for the intended levels of provision. According to this gradation, schools will be classified as meeting norms and standards for *safety*, *functionality*, and *effectiveness*. During strategic planning, the DoE will determine a target date by which schools will meet each level of provision with an ultimate aim of having **ALL** schools reach an effective physical teaching and learning environment by 2030, or within 20 years of the first year of implementing the norms (2010). Because this is the level where we aim for all schools to reach, this document mainly details the norms and standards for an effective environment. Schools that do not meet *safety* norms will not be tolerated and will be closed with immediate effect. *Safety* norms and standards are therefore regarded as emergency norms and all effort will be made to not have any school at this level beyond the current sector strategy plan period (2012). The aim will be to have all schools meet *functionality* norms and standards as soon as possible (within the first 10 years of implementing these norms or by 2020).

1.16. Collectively, schools that do not meet *safety* and *functionality* norms and standards will be considered as comprising a “backlog” in provision. A “backlog” is therefore operationally defined as entailing schools that do not meet *safety* and *functionality* norms. It should be pointed out that existing schools may fail to meet some aspects of the norms and standards. In such cases, such aspects will be retrofitted into a school to ensure that it fully meets the BMP for a set level of provision (i.e., functional or effective). As noted, our target is to clear the “backlog” in provision within the first 10 years of the implementation of these norms and standards.

1.17. As development imperatives may dictate, schools may be selectively provided for beyond the optimum norms and standards that are expected to provide an environment that enables schools to be effective. The policy allows for this, and refers to this level of provision as *enrichment* norms and

standards. It is expected that from time to time, the nature and mix of inputs that constitute an enriched environment may change depending on strategic country needs that the DoE must respond to. It is also expected that the proportion of schools requiring enriched environments will be strategically decided on by the Ministry of Education, following its normal consultative processes. These special schools fall outside the label of public ordinary schools which comprise the scope of these norms and standards.

1.18. Current examples of schools that meet enrichment norms include Dinaledi schools which focus on science, mathematics, and technology; language arts focus schools, and the proposed sports academies. Detailed articulation of norms and standards for such schools will be elaborated on, and adopted as an addition to the national norms as needs arise.

1.19. These norms and standards presented in this document recognize that non-public schools may often go beyond the effectiveness norms to provide elements of enriched environments. This will continue to be encouraged. The DoE and Provincial Education Departments (PED) will intervene where a non-public school falls below the gradation of provision set to be reached by *ALL* schools within a set period of time.

#### *Responsiveness to planning requirements*

1.20. Because good planning requires a clear sequencing of priorities, the previous lack of norms and standards also significantly contributed to the weak planning for the provision of core elements of the environment. Lack of national norms also made it difficult for South Africa to improve equity in resource inputs and the associated education quality. It is for this reason that the national policy proposes a gradation of levels of provision of the environment which will be used to set provision benchmarks and targets to be reached over time.

#### *Responsiveness to cost management and resource efficiency requirements*

1.21. The previous lack of norms has been found to also make it difficult for the DoE and PED to effectively control and manage the costs of provision and to facilitate efficient use of resources. These norms and standards will therefore enhance cost management and resource efficiency as elaborated in paragraph 5.37 of the policy document. They will guide the development of standardized designs, which in turn will guide the development of cost maps across diverse context of South Africa (ref; par 1.14.14 of the policy document.)

#### **Nature and construct of the norms**

1.22. These norms and standards are developed from two perspectives through which the two genres are generated. The first perspective is that they are as a set of architectural programs which must respond to the needs of the education and training system. Education needs are derived from a range of factors including: teaching spaces defined after a detailed analysis of student enrolment projections, subject matters and learning areas that constitute curricula of different levels of the system, specific activities to be conducted under different subjects, diverse co-curricula activities, etc. These architectural programs will guide the actual designing of required “spaces” by architects who will be contracted by the DoE on a competitive basis.

1.23. Part of the role of the DoE would be to develop a design manual which will elaborate the specifications of each unit of teaching and learning space/accommodation in detail. Architects will use the design manual to guide the development of standardized designs in accordance with Policy Statements # 4 and # 5 of the *National Policy on Equitable Provision of an Enabling Physical Teaching and Learning Environment*.



### *Architectural norms*

1.24. Examples of architectural norms that should guide architectural designs include: minimum and maximum ratio of learners per classroom in a mono-grade and in a multi-grade teaching context, minimum area per learner that allows for dynamic pedagogy and the related movement of learners, furniture and equipment, minimum space per specialized teaching room to allow for safe and effective use of equipment, materials, as well as learner movement, materials and sensitive equipment storage facilities in teaching rooms, minimum lighting, ventilation, distance from chalkboard to allow for comfortable sight by learners, acoustics, access for people with special needs, solidity and durability of construction, etc. They are all that an architect needs in order to design the physical spaces for teaching and learning.

### *Planning norms*

1.25. The second perspective is that these norms are a planning guide. They comprise key aspects which should be taken into account when planning for the provision of the physical teaching and learning environment.

1.26. Examples of *planning norms* include the maximum distance of a school from learners that are eligible to attend that school or distance from a school's catchment area, alternatively, the learners' maximum walking time to school, alternative means of bringing schools close to learners such as hostels and/or learner transportation, location of a school relative to other facilities such as fire stations, bars, shopping centers, hospitals etc, characteristics of land that may serve as a school site, maximum size of a school for purposes of efficient provision and effective management, etc.

### **Process**

1.27. The norms and standards presented in this document were developed in a consultative and participatory manner. In order for them to be responsive to the main client—learners and educators—a large base of curriculum, pedagogy specialists national and provincial officials were consulted as well as physical planners and other infrastructure technical experts and given a chance to operationally define what in their view, constitutes an enabling environment to effectively teach their subjects and to facilitate students learning. With these inputs taken into account, these norms and standards were discussed and approved by the CEM at its meeting of October 6, 2008. They are now ready for public comment during the months of November and December 2008.

1.28. Following public comments, the revised norms and standards will be published as regulations

1.29. The following chapter presents the methodology which was used to derive the norms and standards, specifically, to estimate space requirements.

## Overview of current school types

2.1. In any given country, schools may be classified in a range of ways based on the organization of curricula, levels of schooling, ownership, sponsorship, size, location, etc. These possible classifications can sometimes generate a complexity of school types, and make general regulatory instruments such as norms and standards difficult to articulate and to implement.

2.2. Like in other countries, Public ordinary schools are organized and categorized in a rather complex and overlapping manner. In terms of levels of schooling, they are classified as:

- **GET foundation phase**-----grades R to 3
- **GET intermediate phase**-----grades 4 to 6
- **GET Senior phase**-----grade 7 to 9
- **FET phase in schools**-----grade 10 to 12

2.3. When expressed in terms of sub-sectors, the above phases change and overlap in a different manner. The respective sub-sectors are organized as follows:

- **Primary education**-----grades R to 7
- **General education and training or combined schools**-----grades R to 9
- **Secondary education or combined schools** -----grades 8 to 12.
- **Further education and training**-----grades 10 to 12

2.4. Another category of schools is best described as **combined and incomplete schools**. The reality on the ground is that there are schools that offer an unlimited combination of segments of the phases and sub-sectors outlined above. For instance, there are schools that offer an endless range of combination of grades within the primary school cycle, some offer an endless range of combined primary and secondary school grades, and others offer some combination of GET and FET grades. What is even more complicated is the scale of these schools and the number of learners enrolled in them is unknown. What is known is that they are a significant proportion of the total number of ordinary GET and FET schools covered in the 2006 survey of the National Education Information Management System (NEIMS).

2.5. In terms of size the following types are found:

- **Ultra micro schools**----- (1 - 30 learners; 1 teacher)
- **Micro schools**----- (31 - 50 learners; 1 to 2 teachers)
- **Small schools**----- (51 – 120; up to 2 to 3 teachers)
- **Medium schools**----- (121 – 240; up to 4 to 6 teachers)
- **Medium to large schools**----- (241 – 720; up to 7 to 18 teachers)
- **Large schools**----- (721 – 900; up to 18 to 23 teachers)
- **Mega schools**----- (> 900; 23+ teachers)

2.6. As shown in Table 1, the proportions of the above school sizes relative to the 25,043 public ordinary public schools captured NEIMS is not insignificant. In total, 8 percent of schools have an enrollment of up to 50 learners. Another 15 percent has up to 240 learners. The predominance of ultra micro schools (1 to 30 learners) fall within the primary education phase. Even further, 51 percent of them are in Free State. At the same time, the Free State has the third largest number of mega schools. The two largest and richest metropolis (Gauteng and the Western Cape) hold 56 percent of mega schools.

Table 1: Ordinary public schools by province and size									
Schools offering any combination of primary school grades									
Province	Schools	Learners	% 1-30 Learners	% 31-50 Learners	% 51-120 Learners	% 121-240 Learners	% 241-720 Learners	% 721-900 Learners	% >900 Learners
Eastern Cape	2442	593234	9	7	21	29	28	3	4
Free State	1170	315329	51	9	6	3	12	6	3
Gauteng	1345	1014915	0	0	2	5	40	19	3
Kwa Zulu Natal	3770	1594081	2	2	7	19	54	8	7
Limpopo	2561	1002246	5	2	7	19	56	6	6
Mpumalanga	1230	551195	8	5	13	10	41	9	13
North West	1048	401827	7	6	12	18	40	7	10
Northern Cape	354	122778	9	9	21	17	27	6	11
Western Cape	959	516055	5	7	12	11	31	11	23
<b>Total</b>	<b>14879</b>	<b>6111660</b>	<b>9</b>	<b>4</b>	<b>10</b>	<b>17</b>	<b>41</b>	<b>8</b>	<b>11</b>
Schools offering any combination of secondary school grades									
Province	Schools	Learners	% 1-30 Learners	% 31-50 Learners	% 51-120 Learners	% 121-240 Learners	% 241-720 Learners	% 721-900 Learners	% >900 Learners
Eastern Cape	846	405988	1	1	8	18	49	9	13
Free State	231	185316	0	0	0	2	42	18	38
Gauteng	503	571088	0	0	0	1	13	15	72
Kwa Zulu Natal	1494	898993	0	0	3	13	50	12	22
Limpopo	1320	666271	0	0	3	16	59	10	11
Mpumalanga	426	322669	0	0	0	4	47	17	32
North West	292	189974	0	0	4	11	47	12	27
Northern Cape	104	63895	0	2	4	9	47	19	21
Western Cape	311	297897	0	0	0	1	26	16	57
<b>Total</b>	<b>5527</b>	<b>3602091</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>11</b>	<b>47</b>	<b>13</b>	<b>26</b>
Schools offering any combination of both primary and secondary school grades									
Province	Schools	Learners	% 1-30 Learners	% 31-50 Learners	% 51-120 Learners	% 121-240 Learners	% 241-720 Learners	% 721-900 Learners	% >900 Learners
Eastern Cape	2442	1039609	0	0	2	16	71	6	4
Free State	288	144630	3	1	10	13	45	13	15
Gauteng	146	106196	0	0	1	10	40	19	30
Kwa Zulu Natal	573	281462	0	1	5	15	58	8	11
Limpopo	128	50490	4	5	18	14	45	7	8
Mpumalanga	277	160102	0	1	5	13	51	12	18
North West	426	162270	3	4	12	23	44	5	9
Northern Cape	154	75805	0	3	10	12	51	10	14
Western Cape	203	128031	2	0	2	7	56	10	22
<b>Total</b>	<b>4637</b>	<b>2148595</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>15</b>	<b>61</b>	<b>8</b>	<b>9</b>
Source: 2006 NEIMS									

2.7. Overlaying the above-outlined school types, schools are classified by location as either **urban, peri-urban or rural schools**. The very classification of these locations (i.e., what is urban vs what is peri-urban) is in itself contentious, making a consensual classification of schools along this dimension problematic.

2.8. Over and above schools are also classified in terms of quintiles in terms of the National Norms and Standards for School Funding.

2.9. The current multiplicity of school types within the country, presents a serious challenge to any effort to develop norms and standards that can be applied in a systemic, equitable and transparent manner. Yet, both quality and equity imperatives dictate that a mechanism(s) for ensuring adequacy and equity of provision is developed; thus these norms and standards.

2.10. Beyond the unmanageable range of school types, the range in school size also presents a daunting challenge in the application of national norms and standards. In particular, the scale of micro primary schools (13%) makes the application of norms and standards financially not viable, at least not without raising the unit cost within these schools to levels that are untenable. While sufficient and equitable provisioning for these schools is not financially viable, learners who attend them have equal right to equity of resource inputs and of learning outcomes.



2.11. On the other extreme, and though outside the scope of this document, the scale of mega primary schools (11%) and mega secondary schools (14%), risks effective management of these schools. While it is financially viable to sufficiently resource these schools, their potential mismanagement may weaken processes required to mobilize provided resources into learning outcomes. At the end of the day, adequate provisioning of both micro and mega schools may be resource inefficient, albeit, for very different reasons. These tensions are only a part of what these norms and standards intend to resolve.

### Creating school prototypes

2.12. In order to bring school types into some manageable range that allows for the application of norms and standards, these norms provide a narrow range of school prototypes against which sufficiency and equity of provision will be approximated over time. The development of a menu of prototypes is called for under *Policy Action # 5.91 of Policy Statement # 4 of the National Policy on Equitable Provision of an Enabling Teaching and Learning Environment*.

2.13. Like all prototypes, the prototypes created herein will, as the norms and standards are implemented, represent the majority of South African schools. As the name suggests, they will become a typical school. These typical schools will become a point of reference, which is currently lacking, for determining minimum and optimum norms and standards for the provision of elements of an enabling physical teaching and learning environment. Later when a strategy for provision is developed, they will become the context against which to benchmark levels of provision to be attained over time. They will also provide a context for benchmarking efficiency of resource provision and utilization.

2.14. As in all life contexts, there will be outliers from these prototypes. However, the policy stance is to keep these outliers to the bare minimum as indeed outliers should be. In rare cases where such schools are unavoidable, their establishment and/or retention will be a matter of a deliberate and strategic decision and not haphazard as it is now the case. Such establishment and/or retention will be made at the discretion of the relevant Provincial Member of the Executive Council (MEC) who will for each case report to the Minister motivating why such a discretion was made

2.15. Most countries classify schools into three prototypes, primary, middle and secondary schools. This may sound the best option in general. However, such a classification would lead to an overlap of the primary and secondary school levels which ordinarily, require very different types and levels of resources. It may also lead to duplication of resources provided for the secondary level as the upper end of middle schools and secondary schools may require similar resources such as laboratories, specialized workshops, library stocks, etc. It may also lead to underutilization of specialized secondary level teachers who would have to be deployed to both the upper end of middle schools and to secondary schools.

2.16. In order to allow for resource pooling and optimum resource efficiency, schools will be classified into two **prototypes, primary and secondary schools**. These two prototypes are overlaid with school size, ensuring that a typical school has a threshold of size that makes it financially viable and that assures learners equity of resource inputs. On the upper end, a limit of school size is set, that should ensure effective manageability, and better chances of mobilizing resource inputs into expected outcomes. As outlined below the overlay of level and size of school generates 6 school types but not necessarily, 6 substantive levels of provision. For instance, a small primary school will have the same resources as a large primary school. What will differ will be the scale of provision (e.g. the number classrooms, toilets, size of administration block etc.) and the mode of provision (eg., while a large primary school may have a library, the small one will have a multi-media room, in the rare event there is a micro school, it will have library stocks in class or delivered by a mobile library or a school book books that ensure that stocks are periodically renewed). In essence, the substantive provision will remain equitable and sufficient across board.

2.17. All schools will be mono-grade. The establishment and/or retention of multi-grade schools will be made at the discretion of the relevant Provincial Member of the Executive Council (MEC) who will for each case report to the Minister motivating why such discretion was exercised.



2.18. For that reason, these norms and standards do not include multi-grade schools. However, the norm of mono-grade schools does not preclude the use of multi-grade teaching as a pedagogical approach.

2.19. In defining the prototypes, the **urban/rural** classifications were deliberately excluded because of the fundamental belief that, all things being equal, and in the name of equity, there should be no differences in the level of provision across urban and rural locations.

2.20. Combined schools and intermediate schools will also be phased out in terms of the new prototypes. The establishment and/or retention of such schools will be made at the discretion of the relevant Provincial Member of the Executive Council (MEC) who will for each case report to the Minister motivating why such discretion was exercised.

2.21. The following will be the types of schools:

*Primary school prototype offering grades R – 7 (age group 5-12)*

- Small primary school with minimum capacity of 135 learners and maximum capacity of 310 learners with 1 class per grade.
- Medium primary school with a minimum capacity of 311 learners and a maximum capacity of 620 learners with 2 classes per grade.
- Large primary school with minimum capacity of 621 learners a maximum capacity of 930 learners with 3 classes per grade.

*Secondary school prototype offering grades 8 – 12 (age group 13-17)*

- Small secondary school with minimum capacity of 200 learners and a maximum capacity of 400 learners with 2 classes per grade.
- Medium secondary school with a minimum capacity of 401 learners and a maximum capacity of 600 learners, with 4 classes per grade.
- Large secondary school with minimum capacity of 601 learners and maximum capacity of 1000 learners with 5 classes per grade.

2.22. All schools will be provided with a certificate showing the capacity of the school in terms of size and prototype. The certificate will be issued by the HOD of the respective province.

2.23. As part of its oversight role, the DoE will keep constant watch of these changes using the NEIMS facility to record school size “real time”. On their part, Provinces will develop and circulate to schools, clear procedures for expansion of school size which principal should oblige. Such procedures will ensure that no school expands beyond a level that begins to threaten compliance with provision norms and standards. They will also circulate to schools, clear procedures for reporting significant declines in school size.

**Defining types of spaces required in a school**

2.24. The second step in the methodology was to create categories of key spaces required by each school. These spaces are categorized as *core education spaces*, *education support spaces*, and *administration spaces*. A detailed description of these spaces is presented in Chapter 3 under space norms.

*Core education spaces*

2.25. Core education spaces refer to teaching spaces like classrooms, laboratories, workshops, storage areas for teaching and learning materials and sensitive equipment, etc., and critical spaces that are essential for the use of learners like toilets, libraries, and playgrounds.

*Administrative spaces*

2.26. These refer to all spaces for direct use by a school administration and educators such as school principals' offices, storage rooms, printing rooms, staff rooms, etc. They also refer to spaces that are meant for student use but fall under the management of a school professional staff and/or educators. Example is a pastoral care centers and sick bays.

*Support education spaces*

2.27. Support education spaces are those that are also for the learners' usage, but are not critical for the core functions of a school to progress smoothly. Examples include food gardens, sports fields, assembly halls, school kitchen, etc.

**Estimating core education space requirements by prototype**

2.28. As noted, the norms and standards presented in this document are intended to create a physical teaching and learning environment that facilitates effective delivery of curricula and co-curricula activities. The NCS organizes the GET curriculum into learning areas and the FET curriculum into subject groups such as natural sciences, language, economic and management sciences etc. The list of subject groups and learning areas is the NCS is presented in Table 2. This list comprises the first step toward estimating teaching and learning space requirements of the national curriculum.

2.29. The NCS classifies FET subjects groups into core and electives. All students have to enroll for 4 core subjects (2 languages, mathematics/numeracy, and life orientation) and 3 electives. All electives account for 12 contact hours or 4 hours per elective. To avoid multi-counting of hours for elective subjects, Table 2 below shows hours for only 3 electives and zeroes thereafter.

2.30. Norms and standards are also meant to facilitate the execution of specific activities used to deliver the broad curriculum presented in Table 2. Such activities may include direct whole class lectures, individualized instruction, group work, peer teaching, laboratory experiments, independent learning etc.

*Current time allocations across curricula and grades*

2.31. For the third step, we consider the time allocations across curricula. The combined knowledge of the curriculum, time allocations and school size will later be used to estimate space requirements and rate of use. Table 2 therefore also presents current time allocations across curricula and grades.

Table 2: Time allocation by grade and subject group/learning area													
Subject group and learning area	Grades												
	R	1	2	3	4	5	6	7	8	9	10	11	12
	Weekly time allocation (hours)												
Literacy / Language	9	9	9	10	7	7	7	7	7	7	9	9	9
Numeracy / Math	8	8	8	9	5	5	5	5	5	5	5	5	5
Life Orientation	6	6	6	6	2	2	2	2	2	2	2	2	2
Natural Sciences	0	0	0	0	3	3	3	3	4	4	4	4	4
Social Sciences	0	0	0	0	3	3	3	3	3	3	4	4	4
Technology	0	0	0	0	2	2	2	2	2	2	0	0	0
Economic / Management	0	0	0	0	2	2	2	2	2	2	4	4	4
Arts and Culture	0	0	0	0	2	2	2	2	2	2	0	0	0
Breaks, Assemblies, Extramural	12	12	12	10	9	9	9	9	8	8	7	7	7
Total hour per week	35	35	35	35	35	35	35	35	35	35	35	35	35

*Estimating education space requirements by grade and curricula activities*

2.32. In developing these norms and standards, curricula experts and pedagogues were invited to provide a detailed analysis of the most common activities they use to deliver their respective subjects / learning areas. Detailed descriptions of the types of spaces, facilities, equipment and learning materials required for effective delivery were also provided. It should be noted that the estimates of time allocated to activities will need ongoing refinement.

2.33. The fourth step develops a generic matrix for estimating the nature and number of education spaces required per subject group/ learning area by grade. The matrix also estimates the time per week spent in each type of space and the utilization index for each space. Figure 1 presents the matrix.

Figure 1: Generic matrix for estimating education space requirements and utilization index

Number of groups per grade: (2)

LEARNING AREAS	Grades (g)					Estimated weekly hours per education space
	R	G1	G2	...	G7	



*Application of matrix to estimate core education space requirements per prototype*

2.34. Tables 3 to 8 below, provide an estimate of core education spaces required for each school prototype.

**Table 3 : Number of education spaces for a small primary school**

With total enrolment :310 students, 7 groups of 40 learners and 1 group of 30 Grade R learners @  
1 Group per grade

LEARNING AREAS	Grades									Estimated weekly hours per education space											
	R	G 1	G 2	G 3	G 4	G 5	G 6	G 7		(TWHLA)	Classrooms	Grade R Facility	Science Lab.	Media Centre/Library	Multipurpose classroom	Computer Room	Multimedia centre	Multipurpose Room	Media Centre/Library	Open Areas	
	Weekly hours by learning area																				
Literacy / Language	9	9	9	10	7	7	7	7	65	56	9										
Numeracy / Math	8	8	8	9	5	5	5	5	53	53											
Life Orientation	6	6	6	6	2	2	2	2	32	16	6						10				
Natural Science	0	0	0	0	3	3	3	3	12	8		4									
Social Sciences	0	0	0	0	3	3	3	3	12	12											
Technology	0	0	0	0	2	2	2	2	8	8											
Economic / Management	0	0	0	0	2	2	2	2	8	8											
Arts and Culture	0	0	0	0	2	2	2	2	8	8											
Breaks, Assemblies, Extramural	12	12	12	10	9	9	9	9	82								20			64	
Total weekly hours per education space	35	35	35	35	35	35	35	35	28	169	15	4	0	0	0	30	0	0	0	64	
Total school hours per week											35	35	35	35	35	35	35	35	35	35	35
Estimated utilization index = UI											0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Estimated number of spaces (nS)= ( Hs /35/UI )											6.9	0.6	0.1	0.0	0.0	0.0	1.2	0.0	0.0	0.0	2.6
Round number of spaces = RnS											7	1	0	0	0	0	1	0	0	0	3
Verification of UI ( VUI) = ( Hs /35/RnS )											0.7	0.7	0.7	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.7
											0	0	1	0	0	0	0	0	0	0	0

**Table 4: number of education spaces for a medium primary school**

With total enrolment :620 students, 14 groups of 40 learners and 2 group of 30 Grade R learners @  
2 Groups per grade

	Grades									Estimated weekly hours per education space									
	R	G1	G2	G3	G4	G5	G6	G7	R - 7										
LEARNING AREAS	Weekly hours by learning area									Classrooms	Grade R Facility	Science Lab.	Media Centre/Library	Multipurpose classroom	Computer Room	Multimedia centre	Multipurpose Room	Media Centre/Library	Open Areas
Literacy / Language	18	18	18	20	14	14	14	14	130	112	18								
Numeracy / Math	16	16	16	18	10	10	10	10	106	90	16								
Life Orientation	12	12	12	12	4	4	4	4	64	42	12					10			
Natural Science	0	0	0	0	6	6	6	6	24	20		4							
Social Sciences	0	0	0	0	6	6	6	6	24	24									
Technology	0	0	0	0	4	4	4	4	16	13		3							
Economic / Management	0	0	0	0	4	4	4	4	16	16									
Arts and Culture	0	0	0	0	4	4	4	4	16	16									
Breaks, Assemblies, Extramural	24	24	24	20	18	18	18	18	164							20			64
Total weekly hours per education space	70	70	70	70	70	70	70	70	560	333	46	7	0	0	0	30	0	0	64
Total school hours per week										35	35	35	35	35	35	35	35	35	35
Estimated utilization index = UI										0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Estimated number of spaces (nS)= ( Hs /35/UI )										13.59	1.88	0.29	0.00	0.00	0.00	1.22	0.00	0.00	2.61
Round number of spaces = RnS										14	2	0	0	0	0	1	0	0	3
Verification of UI ( VUI) = ( Hs /35/RnS )										0.68	0.66	1.25	0.00	0.00	0.00	0.70	0.00	0.00	0.70

**Table 5: Number of educational spaces required for a large primary school**

With total enrolment :930students, 21 groups of 40 learners and 3 group of 30 Grade R learners @  
3 Groups per grade

	Grades									Estimated weekly hours per education space										
	R	G1	G2	G3	G4	G5	G6	G7												
LEARNING AREAS	Weekly hours by learning area										Classrooms	Grade R Facility	Science Lab.	Media Centre/Library	Multipurpose classroom	Computer Room	Multimedia centre	Multipurpose Room	Media Centre/Library	Open Areas
Literacy / Language	27	27	27	30	21	21	21	21	195	168	27									
Numeracy / Math	24	24	24	27	15	15	15	15	159	135	24									
Life Orientation	18	18	18	18	6	6	6	6	96	78	18									
Natural Science	0	0	0	0	9	9	9	9	36	22		14								
Social Sciences	0	0	0	0	9	9	9	9	36	36										
Technology	0	0	0	0	6	6	6	6	24	18					6					
Economic / Management	0	0	0	0	6	6	6	6	24	24										
Arts and Culture	0	0	0	0	6	6	6	6	24	24										
Breaks, Assemblies, Extramural	36	36	36	30	27	27	27	27	246								60	30	156	
Total weekly hours per education space	105	105	105	105	105	105	105	105	840	505	69	14	0	0	6	0	60	30	156	
Total school hours per week										35	35	35	35	35	35	35	35	35	35	
Estimated utilization index = UI										0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	
Estimated number of spaces (nS)= ( Hs /35/UI )										20.61	2.82	0.57	0.00	0.00	0.24	0.00	2.45	1.22	6.37	
Round number of spaces = RnS										21	3	1	0	0	0	0	2	1	6	
Verification of UI ( VUI) = ( Hs /35/RnS )										0.69	0.66	0.40	0.00	0.00	0.00	0.00	0.70	0.00	0.74	

**Table 6: Number of educational spaces required for a small secondary school**

With total enrolment :400 students, 10 groups of 40 learners @ 2 Groups per grade

	Grades						Estimated weekly hours per education space									
	8	9	10	11	12	0										
LEARNING AREAS	Weekly Hours by Learning Area						(TWHLA)	Classrooms	Science Lab.	Social Sciences Room	Arts and Culture Room	Computer Room	Gathering Room	Multipurpose classroom	Media Centre/Library	Open Areas
Literacy / Language	14	14	18	18	18	82	82									
Numeracy / Math	10	10	10	10	10	50	50									
Natural Sciences	8	8	8	8	8	40	25	15								
Social Sciences	6	6	8	8	8	36	20		16							
Technology	4	4	0	0	0	8	8									
Economic / Management	4	4	8	8	8	32	32									
Life Orientation	4	4	4	4	4	20	15							5		
Arts and Culture	4	4	0	0	0	8	8									
Breaks, Assemblies, Extramural	16	16	14	14	14	74								14	20	40
Total weekly hours per education space	70	70	70	70	70	350	240	15	16	0	0	0	0	19	20	40
Total school hours per week								35	35	35	35	35	35	35	35	35
Estimated utilization index = UI								0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Estimated number of spaces (nS)= ( Hs /35/UI )								9.8	0.61	0.65	0	0	0	0.78	0.82	1.63
Round number of spaces = RnS								10	1	1	0	0	0	1	1	2
Verification of UI ( VUI) = ( Hs /35/RnS )								0.7	0.7	0.7	0	0	0	0.7	0.7	0.7



**Table 7: Number of educational spaces required for a medium secondary school**

With total enrolment :600 students, 15 groups of 40 learners @ 3 Groups per grade

	Grades						Estimated weekly hours per education space									
	8	9	10	11	12	0										
LEARNING AREAS	Weekly Hours by Learning Area						(TWHLA)	Classrooms	Science Lab.	Social Sciences Room	Arts and Culture Room	Computer Room	Gathering Room	Multipurpose classroom	Media Centre/Library	Open Areas
Literacy / Language (1)	21	21	27	27	27	123	123									
Numeracy / Math	15	15	15	15	15	75	75									
Natural Sciences	12	12	12	12	12	60	40	20								
Social Sciences	9	9	12	12	12	54	30		24							
Technology	6	6	0	0	0	12	8					4				
Economic / Management	6	6	12	12	12	48	48									
Life Orientation	6	6	6	6	6	30	20							10		
Arts and Culture	6	6	0	0	0	12	12									
Breaks, Assemblies, Extramural	24	24	21	21	21	111								21	30	60
Total weekly hours per education space	105	105	105	105	105	525	356	20	24	0	4	0	31	30	60	
Total school hours per week							35	35	35	35	35	35	35	35	35	35
Estimated utilization index = UI							0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Estimated number of spaces (nS)= ( Hs /35/UI )							14.5	0.82	0.98	0	0.16	0	1.27	1.22	2.45	2.45
Round number of spaces = RnS							15	1	1	0	0	0	1	1	2	2
Verification of UI ( VUI) = ( Hs /35/RnS )							0.7	0.7	0.7	0	0	0	0.7	0.7	0.7	0.7

**Table 8: Number of educational spaces required for a large secondary school**

With total enrolment :1000 students, 25 groups of 40 learners @ 5 Groups per grade

	Grades						Estimated weekly hours per education space									
	8	9	10	11	12	0										
LEARNING AREAS	Weekly hours by learning area						(TWHLA)	Classrooms	Science Lab.	Social Sciences Room	Arts and Culture Room	Computer Room	Gathering Room	Multipurpose classroom	Media Centre/Library	Open Areas
Literacy / Language (1)	35	35	45	45	45	205	205									
Numeracy / Math	25	25	25	25	25	125	125									
Natural Sciences	20	20	20	20	20	100	60	40								
Social Sciences	15	15	20	20	20	90	70		20							
Technology	10	10	0	0	0	20	10				10					
Economic / Management	10	10	20	20	20	80	80									
Life Orientation	10	10	10	10	10	50	30							20		
Arts and Culture	10	10	0	0	0	20	20									
Breaks, Assemblies, Extramural	40	40	35	35	35	185								14	20	40
Total weekly hours per education space	175	175	175	175	175	875	600	40	20	0	10	0	34	20	40	
Total school hours per week								35	35	35	35	35	35	35	35	35
Estimated utilization index = UI								0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Estimated number of spaces (nS)= ( Hs /35/UI )								24.5	1.63	0.82	0	0.41	0	1.39	0.82	1.63
Round number of spaces = RnS								25	2	1	0	0	0	1	1	2
Verification of UI ( VUI) = ( Hs /35/RnS )								0.7	0.7	0.7	0	0	0	0.7	0.7	0.7

### Defining levels of provision

2.35. The fifth and last step in the methodology was to define levels of provisioning as already mentioned, these norms and standards operationally define levels of provision as meeting norms and standards that make a school a *safe, functional, or effective* teaching and learning environment.

2.36. They also recognize that for strategic reasons, schools may be provided for beyond the effectiveness level to rich an enriched level of provision. The circumstance within which this may happen, and attendant caveats are spelt out in the policy document and not subject to elaboration here. For this document , it suffice to note that a consensual and operational definition of levels of provision is critical for ensuring equity, enabling strategic planning and target setting, and to facilitate monitoring and evaluation of the implementation of norms and standards.

2.37. Because as stated, *safety* norms are the bare minimum allowable for a school to remain open, and this level of provision is not meant to be sustained beyond the current strategic plan period, this document does not define the BMP for *safety*. Suffice it to say that the BMP is basically a 'negative list' of what an operating school should not have like: caving structures that pose danger to learners,

structures without roofing, temporary structures that do not meet South Africa's health standards, total lack of water source, lack of ablution blocks that meet South Africa's health standards, etc.

2.38. Because *enrichment* norms are not where we intend an ordinary GET and FET school to be in terms of provision, and because the appropriate level of provision for these schools will be on a case-by-case basis, these norms and standards also do not define the BMP for this level of provision.

2.39. Norms and standards for a functional level of provision are minimum tolerable level of provision. Conceptually, the *functional* level of provision is that which allows the core functions of a school to run without undue interruption or inconvenience. Or, one could say, is the level of provision without which a school would be dysfunctional. Examples of dysfunctionality that arises from insufficient provision include: excessive overcrowding that results from an inadequate teaching spaces, and that render teaching and learning very difficult, lack of staffrooms which makes it difficult for teachers to work during school hours when classes are in session or which lead teachers to 'chase' learners from classrooms if staff meetings have to be ran within teaching hours, lack of administration blocks where school principals can sit and work while school in session, lack of kitchen or cooking space which lead to learners being 'chased' out of classes if cooking has to proceed during rainy seasons, etc.

2.40. A key criterion for defining the BMP for *functional* provision was that it should include all elements without which core functions of a school would be disrupted and, for which there is no substitute. For instance, a school may not have a science laboratory, but a science kit could be used as a reasonable substitute to facilitate teaching. There may be no library, but students could visit a close by community library, or classrooms may have a section where library stocks are kept and are reasonably accessible to learners. A school with a functional level of provision may not have a science laboratory but it must have an alternative way of providing learners an experience as similar to that of a laboratory as possible. Examples of such substitutes could be science kits and, as a last resort, virtual laboratories. Another way to look at it is that a *functional* level of provision affords the system time to plan without dramatically risking the core principle of equal educational opportunity.

2.41. The *effectiveness* level of provision is the optimum norms and standards. It comprises all facilities that most educators would agree is necessary for them to effectively support student learning. Its BMP would entail all necessities that constitute a functional level of provision plus what is required as optimum provision.

2.42. The following chapter presents the norms and standards for core education spaces as well as for all other elements of the physical teaching and learning environment described earlier. The chapter also details BMPs for the *functional* and *effectiveness norms and standards*.

## Planning Norms

### *Catchment area*

3.1. A catchment area is the area to be served by a school. It defines the distance between a school and the community it is serving. At full implementation of the norms, every school will be required to have a catchment area to the radius of up to 3 kms. A total walking distance to and from school will be up to 6 kms. Learners who fall beyond the set catchment area will be provided with either transport or hostel accommodation on a progressive phased and pro-poor sequence. To this end, the MoE will finalize the scholar transport policy as well as develop a school hostel policy.

### *School Site*

3.2. School site refers to the actual physical location of a school. It also entails the total space a school required to adequately accommodate all its facilities. This includes both covered and uncovered areas. The geographical location of a school should be part of the serious considerations for locating a school site. Other considerations should include environmental factors such as: air temperature, air humidity, air movement and temperature of the surrounding surfaces

### *Size of school site*

3.3. The minimum site will be 2.8h for primary schools and 4.8h for secondary schools. MEC may deviate below minimum without infringing the conduciveness of learning and teaching environment. Such deviation will be reported to the Minister indicating the reason for the deviation.

### *Location of a school site*

3.4. School sites will not be located next to cemeteries, business centers, railway stations, taxi ranks, sewage, hotels and next to busy roads. The location of the school should ensure easy accessibility to roads, sewage lines, basic services etc.

### *Identification of school site*

3.5. School sites will have name board indicating the name and contact details of a school, GPS coordinates and whether a school is a fee charging or no fee school

### *Other characteristics of a school site*

#### *These should include but not limited to:*

- 3.6. The slope of the site should not exceed 15 degrees.
- 3.7. A school should not be situated within a radius of 3km around the community it serves.
- 3.8. Sites with servitudes must be avoided but if servitude is imposed, the buildings and sports field should be planned in such a way that the servitude will not affect normal school activities.
- 3.9. School sites should preferably be rectangular with the longest sides facing North and South.
- 3.10. In case where a school is located next to a river a 1:50 year flood line crosses a school site must be considered, sufficient ground should be available above the flood line for the erection of school building.
- 3.11. At least 50% of the perimeter of school site should be fronted by a street, and should not be adjacent to residential or other sites.
- 3.12. Soil conditions should be such that the buildings and sports field may be provided at minimum cost. Turf, clay dolomite, rocky soil should be avoided. Excavated areas and areas formerly used as refuse sites are all unsuitable as sites for schools.

### *School size*

3.13. School size refers to the minimum and maximum number of learners that a school can accommodate. These norms and standards propose the minimum number of learners in a primary school



as 135 learners with a maximum number of 810 learners. For secondary schools a minimum number will be 200 and maximum will be 1000 learners. This means that a school cannot admit learners more than its set capacity. The table below shows the allowable minimum and maximum size per prototype.

Table 9: Minimum and maximum capacity of a school			
Prototype	Sub-prototypes	Minimum size	Maximum size
PRIMARY SCHOOL	Small	135	310
	Medium	311	620
	Large	621	930
SECONDARY SCHOOL	Small	200	400
	Medium	401	600
	Large	601	1000

- 3.14. In cases where a school falls below and above the norm strategic intervention will be taken by the MEC to either merge or divide a school for viability and efficiency. Mergers and sub divisions will be subject to consultation. Alternative solution like learner transport or hostels will be used to facilitate the compliance with size norm. The establishment and/or retention of schools below and above the norm will be made at the discretion of the relevant Provincial Member of the Executive Council (MEC) who will for each case report to the Minister motivating why discretion was exercised.

#### *School security*

- 3.15. At a bare minimum school will be provided with appropriate fencing around a school, outbuildings and sports field with the minimum height of 1.8m.
- 3.16. School building will be provided with some form of security. The basic minimum will be burglarproofs in all educational spaces. The optimum will be alarm system and guards.
- 3.17. School buildings will have a fire rating of 30 minutes (this to be understood as the minimum time before partial collapse of the structural elements takes place).
- 3.18. Fire extinguishers will be provided at a ratio of at least one for every 150 m<sup>2</sup>. This ratio will be increased to one every 50m<sup>2</sup> in laboratories and similar areas. The provision of fire extinguishers will conform to local as well as international regulations on the provision of such.

#### *Basic services*

- 3.19. *Sanitations:* All schools will be provided with adequate sanitation facilities that promote health and hygiene standards that comply the National Building Regulations and Water Service Act, 1997 (Act 108 of 1997). The choice of appropriate sanitation technology to be used will be made at the discretion of the MEC after all environmental assessments have been made. Plain pit and bucket latrines will not be acceptable.
- 3.20. *Water:* All schools will be provided with minimum/basic water supply as stated in Section 3 of the Water Service Act, 1997 (Act 108 of 1997). As in case of sanitation the choice of appropriate water technology to be used will be made at the discretion of the MEC after all environmental assessments have been made. No school is allowed to function without portable clean water.

3.21. *Electricity:* All schools will be provided with some form of electricity in accordance with the National Building Regulation. In this case also the choice of appropriate source of electricity to be used.

3.22. *Connectivity:* All schools will be provided with some form (wired or wireless) of connectivity for communication purposes. The choice of technology will be made at the discretion of the MEC. The following communication tools will be provided, telephone, fax, internet access, intercom reticulation/public address system.

*Statement on basic services*

#### Architectural Norms and standards

##### *Size of education spaces*

3.23. Table 10 to 12 provides the minimum and maximum size of education and administration spaces. The size of these spaces will be the same across prototypes.

Table 10 : Size norms for core education spaces		
Core Educational spaces	Unit size m <sup>2</sup>	
	Minimum	Maximum
Classrooms	48	60
Grade R facility	60	80
Science laboratory	60	80
Social Sciences rooms	60	80
Computer rooms	60	80
Arts and culture room	60	80
Multipurpose	60	80
Technology room	60	80
Media Centre	80	120
Ablution facilities for learners	0.06	0.11
Storage Areas	12	15
Agricultural Management Practices room	60	80
Agricultural Technology room	60	80
Agricultural Sciences room	60	80
Dance Studies room	60	80
Design design room	60	80
Dramatic Arts room	60	80
Music room	60	80
Visual Arts room	60	80
Civil Technology room	60	80
Electrical Technology room	60	80
Mechanical Technology room	60	80
Engineering Graphics and Design room	60	80
Hospitality Studies room	60	80

**Table 11: Size norms for administration spaces**

ADMINISTRATION SPACES	Unit size m <sup>2</sup>	
	Minimum size	Maximum size
Principal's office	15	20
Deputy Principals office	12	15
Deputy Principal 2 office	12	15
Administration Office	15	20
Reception area	12	15
Toilets for Teachers	0.06	0.11
Storage Areas	12	15
Strong room	6	10
Printing room	10	15
Staff room	48	60
Pastoral care room with sick rooms and counseling room	10	15
HODs offices	12	15
Kitchenette	12	20

**Table 12: Size norms for educational supporting spaces**

Education supporting spaces	Unit size m <sup>2</sup>	
	Minimum size	Maximum size
Food garden	15	20
Tuckshop	12	15
/Kitchen	15	20
Nutrition Center /Food Storage	12	15
/Dining Room (Multipurpose)	80	120
Security room	3	6
General Purpose Hall	120	180
Sports grounds		
Parking space		
Caretaker Room	12	15
Storage Areas	12	15
Toilets	0.06	0.11
Walk ways (covered)		
Assembly area		
Staff quarters (where there is a need)/living quarters		
Hostels		

Staff quarters will be provided in accordance with applicable Public Service Regulations.

*Space norms and standards by prototype and level of provision*

3.24. Tables 13 – 18 provide minimum and maximum space norms and standards by prototype; ( or functional and effectiveness space norms by prototype)

Table 13: Small primary school						
Education spaces	Functionality norms			Effectiveness norms		
	No of units	Unit size m <sup>2</sup>	Sub-total	No of units	Unit size m <sup>2</sup>	Sub-total
<b>CORE EDUCATION SPACES</b>						
Classrooms	7	60	420	7	60	420
Grade R facility	1	75	75	1	75	75
Multimedia centre	1	120	120	1	120	120
Multipurpose Classroom	0	120	0	1	120	0
Toilets for Learners ( no of toilet seats)						
Storage Areas	0	15	0	0	15	0
<b>Sub - Total</b>			<b>615</b>			<b>615</b>
<b>ADMINISTRATIVE SPACES</b>						
Principal	1	20	20	1	20	20
Administration Office	1	20	20	1	20	20
Reception area	0	15	0	0	15	0
Toilets for Teachers						
Storage areas	1	15	15	1	15	15
Strong room	1	10	10	1	10	10
Printing room	0	15	0	1	15	15
Staff room	1	60	60	1	60	60
Pastoral care 1. counseling room	0	15	0	1	15	15
2. sick rooms	0	15	0	1	15	15
HODs offices	0	15	0	0	15	0
Kitchenette	1	20	20	0	20	0
<b>Sub-Total</b>			<b>145</b>			<b>170</b>
<b>EDUCATION SUPPORTING SPACES</b>						
food garden	0	20	0	1	20	20
/Kitchen	1	20	20	1	20	20
Nutrition Center /Food Storage	1	15	15	1	15	15
/Dining room	0	120	0	0	120	0
Security room/Guard room	0	6	0	1	6	6
Multipurpose center that can also be used for indoor sport	0	180	0	1	180	180
Sports grounds( net ball /volley and soccer /rugby ball	1 netball 1 soccer ball			1 netball, 1 volley ball 1 soccer ball, 1 rugby		
Parking space	12 parking spaces			12 parking spaces		
Caretaker Room	0	15	0	1	15	15
Storage Areas	0	15	0	1	15	15
<b>Sub-Total</b>			<b>35</b>			<b>265</b>
<b>Total net áreas</b>			<b>795</b>			<b>1050</b>
<b>Circulation and walls (30%) hall included</b>			<b>239</b>			<b>315</b>
<b>Total gross areas</b>			<b>1034</b>			<b>1365</b>
<b>learners</b>			<b>320</b>			<b>320</b>
<b>Unit area</b>			<b>3.2</b>			<b>4.3</b>



Table 14: Medium primary school						
Education spaces required	Functionality norms			Effectiveness norms		
	No of units	Unit size m <sup>2</sup>	Sub-total	No of units	Unit size m <sup>2</sup>	Sub-total
<b>CORE EDUCATION SPACES</b>						
Classrooms	14	60	840	14	60	840
Grade R classroom	2	75	150	2	75	150
Multimedia centre	1	120	120	1	120	120
Multipurpose Classroom	0	120	0	1	120	120
Science laboratory	1	80	80	1	80	80
Toilets for learners ( no of toilet seats)						
Storage areas	1	15	15	1	15	15
<b>Sub-total</b>			<b>1205</b>			<b>1310</b>
<b>ADMINISTRATIVE SPACES</b>						
Principal's office	1	20	20	1	20	20
Deputy principal's office	1	15	15	1	15	15
Administration Office	1	20	20	1	20	20
Reception area	0	15	0	1	15	15
Toilets for teachers						
Storage Areas	0	15	0	1	15	15
Strong room	1	10	10	1	10	10
Printing room	0	15	0	1	15	15
Staff room	1	60	60	1	60	60
Pastoral care 1. counseling room	0	15	0	1	15	15
2. sick rooms	1	15	15	0	15	0
HODs offices	2	15	30	4	15	60
Kitchenette	0	20	20	1	20	20
<b>Sub-total</b>			<b>190</b>			<b>265</b>
<b>EDUCATION SUPPORTING SPACES</b>						
food garden	0	20	0	1	20	20
/Kitchen	1	20	20	1	20	20
Nutrition Center /Food Storage	1	15	15	1	15	15
/Dining room	0	120	0	1	120	120
Security room/Guard room	0	6	0	1	6	6
Multipurpose center that can also be used for indoor sport	0	180	0	1	180	180
Sports grounds( net ball /volley and soccer /rugby ball	1 netball 1 soccer ball			1 netball, 1 volley ball 1 soccer ball, 1 rugby		
Parking space	22 parking spaces			22 parking spaces		
Caretaker Room	0	15	0	1	15	15
Storage Areas	0	15		1	15	15
<b>Sub-total</b>			<b>35</b>			<b>391</b>
<b>Total net areas</b>			<b>1430</b>			<b>1966</b>
<b>Circulation and walls (30%) hall included</b>			<b>429</b>			<b>589.8</b>
<b>Total gross areas</b>			<b>1859</b>			<b>2555.8</b>
<b>Learners</b>			<b>620</b>			<b>620</b>
<b>Unit area</b>			<b>3.0</b>			<b>4.1</b>

Table 15: Large primary school						
Education spaces required	Functionality norms			Effectiveness norms		
CORE EDUCATION SPACES	No of units	Units size m <sup>2</sup>	Sub-total	No of units	Units size m <sup>2</sup>	Sub-total
Classrooms	21	60	1260	21	60	1260
Grade R classroom	3	75	225	3	75	225
Multimedia centre	1	120	120	0	120	0
Multipurpose Classroom	1	120	80	2	120	240
Computer room	0	80	0	1	80	80
Library centre	0	80	0	1	80	80
Science Laboratory	1	80	80	1	80	80
Toilets for Learners ( no of toilet seats)						
Storage Areas	1	15	15	1	15	15
<b>Sub-total</b>			<b>1700</b>			<b>2700</b>
<b>ADMINISTRATIVE SPACES</b>						
Principal's office	1	20	20	1	20	20
Deputy principal's office	1	15	15	1	15	15
Administration Office	1	20	20	1	20	20
Reception area	0	15	15	1	15	15
Toilets for Teachers						
Storage Areas	1	15	15	1	15	15
Strong room	1	10	10	1	10	10
Printing room	0	15	15	1	15	15
Staff room	1	60	60	1	60	60
Pastoral care 1. counseling room	1	15	15	1	15	15
2. sick rooms	1	15	15	1	15	15
HODs offices	2	15	30	4	15	60
Kitchenette	0	20	20	1	20	20
<b>Sub-total</b>			<b>250</b>			<b>280</b>
<b>EDUCATION SUPPORTING SPACES</b>						
food garden	0	20	0	1	20	20
				1		
/Kitchen	1	20	20	1	20	20
Nutrition Center /Food Storage	0	15	0	1	15	15
/Dining room	0	120	0	1	120	120
Security room/Guard room	0	6	0	1	6	6
Multipurpose center that can also be used for indoor sport	0	180	0	1	180	180
Sports grounds( net ball /volley and soccer /rugby ball	1 netball 1 soccer ball			1 netball, 1 volley ball 1 soccer ball, 1 rugby		
Parking space	30 parking spaces			30 parking spaces		
Caretaker Room	1	15	15	1	15	15
Storage Areas	0	15	0	1	15	15
<b>Sub-total</b>			<b>35</b>			<b>391</b>
<b>Total net areas</b>			<b>1985</b>			<b>3371</b>
<b>Circulation and walls (30%) hall included</b>			<b>595.5</b>			<b>1011.3</b>
<b>Total gross areas</b>			<b>2580.5</b>			<b>4382.3</b>
<b>Learners</b>			<b>930</b>			<b>930</b>
<b>Unit area</b>			<b>2.7</b>			<b>4.7</b>

Table 16: Small secondary school						
Education spaces required	Functionality norms			Effectiveness norms		
CORE EDUCATION SPACES	No of units	Unit size m <sup>2</sup>	Sub-total	No of units	Units size m <sup>2</sup>	Sub-total
Classrooms	10	60	600	10	60	600
Computer room	1	80	80	1	80	80
Media centre	1	80	80	0	80	0
Multipurpose Classroom	0	120	0	1	120	120
Science Laboratory	1	80	80	1	80	80
Social Science room	1	80	80	1	80	80
Toilets for Learners ( no of toilet seats)						
Storage Areas	0	15	0	1	15	15
<b>Sub-Total</b>			<b>920</b>			<b>975</b>
<b>ADMINISTRATIVE SPACES</b>						
Principal's office	1	20	20	1	20	20
Deputy principal's office	1	15	15	1	15	15
Administration Office	1	20	20	1	20	20
Reception area	0	15	0	1	15	15
Toilets for Teachers						
Storage Areas	0	15	0	1	15	15
Strong room	1	10	10	1	10	10
Printing room	0	15	0	1	15	15
Staff room	1	60	60	1	60	60
Pastoral care 1. counseling room	0	12	0	1	12	12
2. sick rooms	1	15	15	1	15	15
HODs offices	1	15	15	2	15	30
Kitchenette	1	20	20	1	20	20
<b>Sub-Total</b>			<b>175</b>			<b>247</b>
<b>EDUCATION SUPPORTING SPACES</b>						
food garden	0	20	0	1	20	20
/Kitchen	1	20	20	1	20	20
Nutrition Center /Food Storage	0	15	0	1	15	15
/Dining room	0	120	0	1	120	120
Security room/Guard room	0	6	0	1	6	6
Multipurpose center that can also be used for indoor sport	1	180	180	1	180	180
Sports grounds( net ball /volley and soccer /rugby ball	1 netball 1 soccer ball			1 netball, 1 volley ball 1 soccer ball, 1 rugby		
Parking space	15 parking spaces			15 parking spaces		
Caretaker Room	1	15	15	1	15	15
Storage Areas	0	15	0	1	15	15
<b>Sub-total</b>			<b>215</b>			<b>391</b>
<b>Total net areas</b>			<b>1310</b>			<b>1613</b>
Circulation and walls (30%) hall included			<b>393</b>			<b>483.9</b>
<b>Total gross areas</b>			<b>1703</b>			<b>2096.9</b>
<b>Learners</b>			<b>400</b>			<b>400</b>
<b>Unit area</b>			<b>4.2</b>			<b>5.2</b>

Table 17: Medium secondary school						
Education spaces required	Functionality norms			Effectiveness norms		
CORE EDUCATION SPACES	No of units	Units size m <sup>2</sup>	Sub-total	No of units	Units size per m <sup>2</sup>	Sub-total
Classrooms	15	60	900	15	60	900
Computer room	1	80	80	2	80	80
Media centre	0	80	0	1	80	80
Multipurpose Classroom	1	120	120	2	120	240
Science Laboratory	1	80	80	1	80	80
Social Science room	1	80	80	1	80	80
Toilets for Learners ( no of toilet seats)						
Storage area	1	15	15	1	15	15
<b>Sub-total</b>			<b>1275</b>			<b>1475</b>
<b>ADMINISTRATIVE SPACES</b>						
Principal's office	1	20	20	1	20	20
Deputy principal's office	1	15	15	1	15	15
Administration Office	1	20	20	1	20	20
Reception area	0	15	0	1	15	15
Toilets for Teachers						
Storage Areas	0	15	0	1	15	15
Strong room	1	10	10	1	10	10
Printing room	0	15	0	1	15	15
Staff room	1	60	60	1	60	60
Pastoral care 1. counseling room	0	12	0	1	12	12
2. sick rooms	0	15	0	1	15	15
HODs offices	2	15	30	4	15	15
Kitchenette	1	20	20	1	20	20
<b>Sub-total</b>			<b>175</b>			<b>277</b>
<b>EDUCATION SUPPORTING SPACES</b>						
Food garden	0	20	0	1	20	20
/Kitchen	1	20	20	1	20	20
Nutrition Center /Food Storage	0	15	0	1	15	15
/Dining room	1	120	120	1	120	120
Security room/Guard room	0	6	0	1	6	6
General Purpose Hall	1	180	180	1	180	180
Sports grounds( net ball /volley and soccer /rugby ball	1 netball 1 soccer ball			1 netball, 1 volley ball 1 soccer ball, 1 rugby		
Parking space	20 parking spaces			20 parking spaces		
Caretaker Room	0	15	0	1	15	15
Storage Areas	0	15	0	1	15	15
<b>Sub-total</b>			<b>320</b>			<b>391</b>
<b>Total net area</b>			<b>1770</b>			<b>2143</b>
Circulation and walls (30%) hall included			<b>531</b>			<b>642.9</b>
<b>Total gross areas</b>			<b>2301</b>			<b>2785.9</b>
<b>Learners</b>			<b>600</b>			<b>600</b>
<b>Unit area</b>			<b>3.8</b>			<b>4.6</b>



Table 18: Large secondary school						
Education spaces required	Functionality norms			Effectiveness norms		
CORE EDUCATION SPACES	No of units	Units size m <sup>2</sup>	Sub-total	No of units	Units size m <sup>2</sup>	Sub-total
Classrooms	25	60	1500	25	60	1500
Computer room	1	80	80	2	80	160
Media centre	0	80	80	0	80	0
Multipurpose Classroom	0	120	0	1	120	120
Science Laboratory	1	80	80	2	80	160
Social Science room	1	80	80	1	80	80
Library room	0	80	0	1	80	80
Toilets for Learners ( no of toilet seats)						
Storage areas	1	15	15	1	15	15
<b>Sub-total</b>			<b>1835</b>			<b>2100</b>
<b>ADMINISTRATIVE SPACES</b>						
Principal's office	1	20	20	1	20	20
Deputy Principal's office	1	15	15	1	15	15
Deputy Principal's office	1	15	15	1	15	15
Administration Office	1	20	20	1	20	20
Reception area	0	15	0	1	15	15
Toilets for Teachers						
Storage Areas	0	15	15	1	15	15
Strong room	1	10	10	1	10	10
Printing room	0	15	15	1	15	15
Staff room	1	60	60	1	60	60
Pastoral care 1. counseling room	1	12	12	1	12	12
2. sick rooms	0	15	0	1	15	15
HODs offices	3	15	45	6	15	90
Kitchenette	0	20	0	1	20	20
<b>Sub-total</b>			<b>227</b>			<b>322</b>
<b>EDUCATIONAL SUPPORTING SPACES</b>						
food garden	0	20	0	1	20	20
/Kitchen	1	20	20	1	20	20
Nutrition Center /Food Storage	0	15	0	1	15	15
/Dining room	1	120	120	1	120	120
Security room/Guard room	0	6	0	1	6	6
General Purpose Hall	1	180	180	1	180	180
Sports grounds( net ball /volley and soccer /rugby ball	1 netball 1 soccer ball			1 netball, 1 volley ball 1 soccer ball, 1 rugby		
Parking space	30 parking spaces			30 parking spaces		
Caretaker Room	0	15	0	1	15	15
Storage Areas	0	15	0	0	15	15
<b>Sub-total</b>			<b>320</b>			<b>391</b>
<b>Total net areas</b>			<b>2382</b>			<b>2813</b>
<b>Circulation and walls (30%) hall included</b>			<b>714.6</b>			<b>843.9</b>
<b>Total gross areas</b>			<b>3096.6</b>			<b>3656.9</b>
<b>Learners</b>			<b>1000</b>			<b>1000</b>
<b>Unit area</b>			<b>3.09</b>			<b>3.7</b>

**Table 19: Summary of norms and standards for primary schools**

	Small Primary school		Medium Primary School		Large Primary School	
Education spaces required	Functionality norms	Effectiveness norms	Functionality norms	Effectiveness norms	Functionality norms	Effectiveness norms
<b>Education spaces</b>						
Classroom	7	7	14	14	21	21
Grade R facility	1	1	2	2	3	3
Multimedia centre	1	1	1	1	0	0
Multipurpose classroom	0	1	0	1	1	2
Science laboratory	1	1	1	1	1	1
Computer room	0	0	0	0	1	1
Library centre	0	0	0	0	1	1
Toilets for learners						
Storage area	0	0	1	1	1	1
<b>Administrative space</b>						
Principal's office	1	1	1	1	1	1
Deputy Principal's office	0	0	1	1	1	1
Administration office	1	1	1	1	1	1
Reception area	0	0	0	1	1	1
Toilets for teachers						
Storage area	0	1	0	1	1	1
Strong room	1	1	1	1	1	1
Printing room	0	1	0	1	0	1
Staff room	1	1	1	1	1	1
Pastoral care / counseling room	0	1	0	1	1	1
/ sick room	1	1	1	1	1	1
HODs office	0	1	2	4	2	4
Kitchenette	0	0	0	1	0	1
<b>Education Supporting spaces</b>						
Food garden	0	1	0	1	0	1
Tuck shop	0	1	0	1	1	1
/ kitchen	1	1	1	1	1	1
Nutrition centre / Food storage	0	1	1	1	1	1
/ dining room	0	0	0	1	0	1
Security room	0	1	0	1	0	1
General Purpose Hall	0	1	0	1	0	1
Sports grounds	1 netball 1 soccer ball	1 netball, 1 volley ball 1 soccer ball, 1 rugby	1 netball 1 soccer ball	1 netball, 1 volley ball, 1 soccer ball, 1 rugby	1 netball 1 soccer ball	1 netball, 1 volley ball 1 soccer ball, 1 rugby
Parking space						
Caretaker room	0	1	0	1	0	1
Storage areas	0	1	0	0	1	1

Table 20: Summary of norms and standards for secondary schools						
	Small Secondary school		Medium Secondary School		Large Secondary School	
	Functionality norms	Effectiveness norms	Functionality norms	Effectiveness norms	Functionality norms	Effectiveness norms
<b>Education spaces required</b>						
<b>Educational spaces</b>						
Classrooms	10	10	15	15	25	25
Computer room	1	1	1	2	1	2
Media centre	0	1	0	1	0	1
Multipurpose classroom	0	1	1	2	1	2
Science laboratory	1	1	1	1	1	2
Social science room	0	1	1	1	1	1
Toilets for learners (no of toilets seats)						
Storage area	0	1	0	1	1	1
<b>Administrative space</b>						
Principal	1	1	1	1	1	1
Deputy principal	0	0	1	1	1	1
Deputy principal	0	0	0	0	1	1
Administration office	1	1	1	1	1	1
Reception area	0	1	0	1	1	1
Toilets for teachers						
Storage areas	0	1	0	1	1	1
Strong room	1	1	1	1	1	1
Printing room	0	1	0	1	0	1
Staff room	1	1	1	1	1	1
Pastoral care 1: counseling room	0	1	0	1	1	1
2: Sick room	1	2	1	2	2	2
HODs offices	1	2	2	4	3	6
Kitchenette	1	1	1	1	1	1
<b>Supporting spaces</b>						
Food garden	0	1	0	1	0	1
/ kitchen	1	1	1	1	1	1
Nutrition centre	0	1	1	1	1	1
/ food storage						
/ dining room	0	1	0	0	0	0
Security room	0	1	0	1	1	1
General purpose hall	0	1	0	1	0	1
Sports grounds	1 netball 1 soccer ball	1 netball, 1 volley ball 1 soccer ball, 1 rugby	1 netball 1 soccer ball	1 netball, 1 volley ball 1 soccer ball, 1 rugby	1 netball 1 soccer ball	1 netball, 1 volley ball 1 soccer ball, 1 rugby
Parking space / bays						
Caretaker room	0	1	0	1	0	1
Storage area	0	0	0	0	0	0

#### Classroom size

3.25. This denotes the total capacity a class can hold. The norms for a classroom size will be as follows:

- Grade R ..... 30
- For all other prototype ..... 40
- For specialized FET subjects..... 25 – 40
- For science laboratories ..... 40

*Average space per learner*

3.26. Sitting space denote the square meters each child will occupy within different types of teaching space.

- Grade R ..... 2.6m<sup>2</sup>
- Ordinary primary and secondary schools ..... 1.2- 1.5m<sup>2</sup>
- For specialised FET subjects and labs..... 1.5- 2m<sup>2</sup>
- For learners with disability ..... 2.4m<sup>2</sup>

*Lighting*

3.27. Lighting includes artificial and natural lighting required in all type of spaces for effectiveness. This is measured in lux. Lighting norms will be as follows:

- Artificial illumination (the amount of light falling on a surface) should be:
  - for classrooms, libraries and offices.....200 lux
  - For art rooms and other specialized areas.....300 lux
- The lighting level above any given surface must be controllable (i.e. variable from 200 to 700 lux).
- The area within which a given level cannot be varied (the light-zone) shall not be larger than 50 sq.m.
- Individual light sources capable of providing 150 to 500 lux must be available for specific activities (power outlets should be available at least every 10 sq.m).

*Acoustics*

3.28. Acoustics refers to noise level within a set space. The following will be norms for noise levels.

- An "open space" should not be smaller than 300 sq.m<sup>2</sup>.
- In relation to the size of the space, the quantity and quality of the absorbing surfaces must be designed with the objective of providing a general background noise of 40 to 50 decibels db (with the space fully occupied).
- Reverberation (echo) must be dealt with, in relation to the volume of the space and the quality of the surrounding surfaces. Too "live" spaces must be avoided and a rather low reverberation time achieved: approx. 0.6 to 0.7 seconds.
- Classroom must not be located next to the sports field.

*Comfort levels*

3.29. All school facilities will be adapted to for learners with disability and will facilitate access and functionality in accordance with White paper on inclusive education.

*Sports facilities*

3.30. All schools will be provided with the basic minimum space for soccer/rugby and a space for netball or volley ball. For maximum norms one sport field for soccer or rugby and one for netball/volleyball field size provided should be that of an athletics track. Initially the target will be confined to poor schools without any type of sporting fields