

Submission on Norms and Standards for School Infrastructure

2009



Introduction and General Observations

This submission is made in terms of Section 3 (2) [b] {ii} of the Financial and Fiscal Commission Act 25 of 2003 as amended. The Commission welcomes the opportunity to comment on the Norms and Standards for Schools Infrastructure as it is always critical that recommendations of the Commission are sought whenever policies of a financial and fiscal nature are tabled.

The Commission is of the view that the Norms and Standards for Schools Infrastructure will go a long way in strengthening the way in which learners are taught, enhancing teaching effectiveness, as well as improvements in student learning outcomes. In so far as the primary purpose is to promote an equitable provision of an enabling school physical teaching and learning environment should be welcomed by all those that are concerned with consolidating the education system in South Africa.

International research on education shows that better educational attainment and outcomes are achieved when the school environment is well maintained and functionally relevant for that purpose.

The South African government has rapidly increased allocations for education infrastructure investments. The amount for this purpose is estimated to be R17 billion over the 2008 medium term expenditure framework. This is targeted at the eradication of inappropriate and unsafe school structures as well as the maintenance and upgrading of existing schools to appropriate levels. Achieving value for the money, and maximising the opportunities for improved educational outcomes, should be central issues within the government's commitment to service delivery.

In this regard, the norms and standards should ensure that school facilities are designed in relation to spaces or physical facilities for the betterment of the teaching and learning processes. In the same breadth, the Commission notes that it is clear that the demand for schooling is not only influenced by access to physical infrastructure but also by the quality of school management and track record of educational outcomes.

The Commission submits that there is no question that the availability of reading material is a necessary prerequisite for a learner to become a proficient reader. However, recent international evidence finds that the single most important factor in determining whether a child learns to read is the presence of high-quality teachers present in the classroom. If the national goal is to improve the academic performance of learners, guaranteeing that they acquire the basic skills necessary to function in the economy, it may well be that strategies aimed at improving the effectiveness of teaching will be the most cost effective. A similar argument could also be made with respect to various other physical facilities.

With that having been said, the Commission makes the following comments on the principles of the policy:

1. Policy Statement # 1: National Norms and Standards for an enabling environment

Norms and standards should be defined in broad terms as ‘the capital works required to provide education services’. This should (a) define capital expenditure (including issues of project and asset management, which are referred to in later sections; (b) define minimum and optimum standards (including alternative service delivery infrastructure and the variance between provinces); and (c) Institutional roles and responsibilities . This should include all the activities necessary to ensure that the works are delivered effectively, such as feasibility studies, project planning and capacity building to establish sound operational arrangements for the works.

Norms and standards should provide a clear and comprehensive picture (that) consists of snapshots of the education system’s current infrastructure environment and its targeted future environment, as well as a capital investment road map for transitioning from the current to the target environment.

This section while consistent with the Constitutional and other education legislation such as the South African Schools Act mandate for the Minister of Education also raises some potentially problematic issues in relation to expectations. It refers to “minimum and optimum provision” without elaborating what defines optimum. Further while the Commission welcomes the fact that provinces will be allowed to adapt the norms and standards to local circumstances so long as they stay aligned to the national norms and standards, it is not clear what the implications would be for deviating and how the system will control for adverse choices that may be the result of this intervention.

1.1 Intergovernmental Co-ordination

School location and modalities of learner transport are considered in section 1.26 of the norms and standards. The Commission welcomes the content of this section. However, the Commission is also concerned that the role of municipalities with regards to water and electricity reticulation and distribution is not clearly spelt out. Constitutionally, these functions are municipal functions, and they are also important services for the functioning of schools. It should be noted that the level of development in South Africa is uneven where infrastructure for services is non-existent. The question

to ask is: what is the role of municipalities in the implementation of the norms and standards for education infrastructure? In the absence of basic municipal services, what should be the alternative? The effectiveness and the capacity of Public Works to implement education infrastructure needs to be reviewed. Consideration should be given to high capacity/"accredited" municipalities facilitating the maintenance as well as construction of new schools on an agency basis. This should free up capacity for Public Works to only concentrate on areas that do not have the skills and capacity to carry out maintenance and construction of new schools.

The Commission submits that energy pricing, scarce water resources and environmental regulation are likely to obtain more attention over the next 10-15 years. In this regard, the Commission recommends that these issues be given more attention in the finalisation of the norms and standards. Furthermore the Commission is of the view that it is important to find a link between the norms and standards for school infrastructure and municipal integrated development plans. The implications of doing so is that there will be a need for stepping up coordination between the education sector, municipalities and indeed other departments such as Water Affairs and Forestry, Transport, Energy and Minerals, etc.

The Commission submits that norms and standards should be part of the Infrastructure Planning Process inclusive of all spheres of government responsible for the provision of school infrastructure. They are inextricably linked to the Educational Policy and Curriculum Statements. Generally norms and standards for schools infrastructure should allude to the following:

- **Capital works planning** (including setting priorities, choosing projects, determining multi-year cost estimates and assessing alternative methods of financing and implementation).
- **Capital budget formulation** (including final project selection, separation of capital and current budget impacts, and multi-year budget projections).
 - *The capital costs which are associated with the provision of education infrastructure include life-cycle cost of providing new infrastructure and rehabilitating such infrastructure which has reached the end of its design life. In this case asset management practices should be encouraged and enforced.*
- **Capital budget execution** (including procurement methods, project monitoring, changes in cost estimates and project completion evaluations)

1.2 Long Term Infrastructure Planning and Real Option Analysis

The norms and standards are silent on the balance between new infrastructure and maintenance. The Commission submits that this should be informed by the rate of utilisation emanating from space norms. In this regard technical planners should always perform real options analysis as part of infrastructure planning. Real options analysis is the analysis of a complex system for the purposes of identifying uncertainty and creating flexibility. Flexibility enables decision-makers to proactively manage risk in order to achieve the education infrastructure's strategic objectives in a cost-effective manner that maximizes the overall education system value.

The Commission submits that infrastructure investment projects usually last for many years; hence the appraisal requires a comparison of the costs and benefits over the entire life of the project. For acceptance, the present value of the project's expected benefits should exceed the present value of its expected costs. The Commission is of the view that in order to maximize the potential value of a project the economic cost of capital should be considered. It is a critical parameter for taking decisions relating to the optimum size of the project and the appropriate timing for implementing an investment. Both are key factors affecting the project's net benefits and its ultimate feasibility. In addition, the choice of technology for a project is influenced by the opportunity cost of capital. Another important decision in project appraisal concerns the size or scale at which a facility should be built. It is seldom that the scale of a project is constrained by technological factors, and economic considerations should be paramount in selecting its appropriate scale.

In general, there is a range of options for improving the performance of facilities, but this should be firmly based within the context of clear accountability to beneficiaries. The education infrastructure funding framework should give incentive for provinces that can build infrastructure economically and efficiently whilst supporting the country's social priorities. The funding framework should also support struggling provinces and penalise those that do not comply with the norms and standards, and funding frameworks. The overall funding framework should be able to encourage departments to explore alternative options within their fiscal allocations. While the framework should have multiple aims (promote structured analysis of funding, procurement and delivery options, gather information to establish whether any option is fiscally affordable and sustainable, and indicate the overall socio-economic impact etc.). The delivery of schools infrastructure is also influenced by the political, economic, physical and cultural environment, therefore:

- There is the need for regulatory and enhancement measures to encourage diversity in the delivery of schools infrastructure. This can take a form on PPP (maintenance PPP especially, Design Build Operate and Transfer (DBOT) and other funding options.
- There is also a need for rational long term planning, especially when it comes to the choice of level of service (LOS) and the speed at which backlogs can be addressed.

2. Policy Area # 2: Systematised Establishment and Prioritisation of Infrastructure Needs

The National Education Infrastructure Management System (NEIMS) should be utilised and upgraded regularly to collate information on location, size, capacity, type of building/school running costs, asset value and performance indicators (e.g. area per pupil, use of space teaching area as percentage of gross area, energy consumption/cost per m², maintenance cost/m², other premises related costs/m², pupils (existing/forecast) as % of standard capacity).

NEIMS should be used to capture useful information which can be used to support decision making in infrastructure planning and programmes. For instance, information from assessments of infrastructure using specific indicators can be used to guide the prioritisation of expenditure in infrastructure capital and maintenance budgets.

The Commission submits that long range planning and prioritisation is critical and this thrust needs to be supported. For any township establishment, the Commission submits that there should be a zoning for schools to deal with urbanisation and learner mobility. Secondly, the Commission is of the view that shifting learner populations must be linked to alternative uses for schools in areas where schools are no longer needed and there should also be specific policies on asset disposal of schools.

3. Policy Area # 4: Standardised Architectural Designs

Infrastructure standardisation will greatly enhance education infrastructure delivery, possibly at reasonable costs as plans and structure suiting particular conditions will be standardised. This should be linked to bulk procurement or turnkey projects that will ensure economies of scale relative to individualistic procurement process currently taking place. This will also foster convergence of cost indicators based on costs per square meter which may not vary that much across provinces (save to say, transport and labour costs). This will ensure the maximum value is gained from the investment made. Organisational effectiveness will be greatly improved by the proposed standardisation, allowing

the departments to more readily adapt new emerging technologies that were previously slow to reach school children.

The Commission is of the view that a more general issue that is relevant to many aspects of any norms and standards is the tension between nationally imposed norms and standards, and provincial or local autonomy. The policy statement on architectural design states that all new construction “will follow standardized designs (p. 11).” The size of schools, the configuration and size of rooms within the school are all prescribed in great detail. One important rationale for imposing a national standard on the design of schools is that as long as the funding of new construction is transferred nationally through the provincial equitable share formula or conditional transfers such as infrastructure grants to provinces, neither provincial DOEs, nor school governing bodies will have a strong incentive to construct school buildings cost effectively. For instance, in poor rural villages, where most residents live in very small and simple structures, there is a reasonable expectation that the school buildings might be quite modest. Modest structures are less costly to construct and maintain relative to more sophisticated structures that are likely to be found in urban metropolitan areas.

The Commission submits that while all school construction must meet national standards of accessibility and state-imposed safety standards, there should also be a great deal of variation in the type of structures that are built. What would be a minimally-acceptable building and architectural standard in a suburban community might be considered a luxury school building in a poor rural community. This is not to imply that rural areas should by nature be treated as deserving of second rate structures but rather that a certain degree of reality check based on environmental and social-economic realities of a community is required. The decision on the type of school should be left with the province so long as minimum requirements are met.

The Commission further submits that alternative service provisions be considered such as rainwater harvesting for schools in semi rural / peri-urban areas that may not have waterborne services and the critical use of bio-digesters for non sewer facilities among other items at this stage. The Commission also suggest that some sustainable development mechanisms be implemented as Pilots in some instances, such as renewable energy for electricity generation .In addition, there should be a consideration of feeding programmes in disadvantaged schools as well as introducing agri and aqua-farming to enhance food security.

The Commission is of the view that standards of equity suggest that all learners in South Africa are entitled to equal school facilities. However, there is little question that this goal can only be achieved by devoting a great deal of money to school construction. International empirical evidence suggests that in cases where equity standards have been met, they have occurred through “levelling up.” In the context of school construction, this would mean that standards of school construction that are acceptable in middle-income communities are reflected in the national norms and standards. The consequence is that the resources South Africa devotes to school construction would be substantially greater if decisions on the *actual* as opposed to *minimum* standards for school construction remained a provincial and community decision. The latter is still a national decision.

4. Policy Area # 5: Management and Maintenance

Any additional infrastructure that is rolled out by the education sector (schools) implies that there will be more facilities to maintain. This in turn implies that maintenance budgets should show an increasing trend that is in line with the growth in infrastructure spending. Provinces that have significant maintenance backlogs should in fact be increasing spending on maintenance even more rapidly. When assessing the province’s allocations to capital spending, attention should be paid to the relationship between spending on new infrastructure and spending on maintenance. Maintenance in the provincial education budgets is often an area that gets cut when there is pressure from other sectors. However the long term cost to both the fiscus and the economy of delaying maintenance is very high and so trends in these budgets need to be monitored carefully.

The Commission submits that the norms and standards as they are currently put are inadequately aligned with the Government Immovable Assets Act (GIAMA). The Act speaks to life cycle costs of asset management, and requires that planned maintenance costs be included in construction proposals for the useable life of the asset; and that both construction and maintenance costs be used to compare one alternative to another. Maintenance norms are therefore quite important and are currently under-addressed. Overall, provinces do undertake maintenance projects in schools but in a disjointed and uncoordinated manner. There is no standardised policy guideline on School Infrastructure Maintenance Strategy.

4.1 Devolution of Responsibility for Schools Maintenance

The Commission submits that devolution of school infrastructure and/or maintenance decisions is to be encouraged. However, there should be systems put in place to report on spending per school as currently in many provinces this is simply not happening. Without the requisite information systems, accountability may be compromised. Thus, there should be a synchronisation of improved information systems (especially in relation to maintenance and condition based assessment) and devolution of authority.

There needs to be a concerted effort to improve ongoing, regularly updated information about maintenance. This includes reasons why spending and service delivery outcomes were not achieved: how construction and maintenance failures can be reduced, how the risk and consequences of failure can be minimised and how costs can be managed.

Generally, schools maintenance plans should be informed by the condition and functionality assessments. Key information should be aggregated into provincial infrastructure asset management plans which will in turn assist provincial wide investment planning.

4.1.1 Levels of Accountability

- a) Accountability for facility management and maintenance should be strengthened at three levels
- b) Schools Governing Bodies through School Principals will have increased influence on how their schools are maintained and upgraded.
- c) Education District Offices will have accountability for supporting School Principals in planning and implementing asset improvements. Capacity development and accountability – must be written into their job descriptions and performance contracts.
- d) The Provincial Education Departments will have accountability for policy, strategic planning and resource allocation, and monitoring value for money achieved.

4.3 School Facilities Maintenance Contracts

The Commission makes a submission that schools maintenance should be delivered through two types of services contracts:

- a) School Facilities Maintenance Contracts which maintain the fabric of school buildings, and
- b) School Building Services and Equipment Contracts, which maintain specialist equipment such as science laboratory equipment

Operations and maintenance are the activities related to the performance of routine, preventative, predictive, scheduled, and unscheduled actions aimed at preventing equipment failure or decline with the goal of increasing efficiency, reliability, and safety. A preventive maintenance programme refers to the organised and planned performance of routine maintenance activities in order to prevent system or production problems or failures from occurring. Maintenance contracts are more desirable because they provide clients with the analysis of service requirements and establish service contracts for clients and period contracts for use by all clients registered to use contracts.

4.3.1 Implementation of Term Contracts

Under the term contracts the contractors guarantee a fixed schedule of services and rates for schools over an agreed period. The contractors will invoice schools directly for all work carried out. District offices should get involved in the:

- a) Monitoring of contractors and their programmed services to ensure all necessary work is carried out in a timely and professional way.
- b) Support to resolve any disputes between schools and the contractor.
- c) Regular contact with both the contractor and schools to discuss any issues.

The ability and capacity of District Office(s) officials to perform the task must be embedded in their job description and performance contracts should be standardised around two basic models

- a) Streamlined and Provincial Education Departments directed maintenance contracts.
- b) Provincial-wide facilities management contracts in rural areas where distance requirements dictate value will be best achieved by lumping schools in districts into a holistic facilities management approach designed to meet local requirements.
- c) Emergency contracts for storm repair/accidents will also be required.

4.4 Budgeting and Funding Options

Option 1: Direct funding to Schools. School Principal will direct maintenance. Let Provinces publish in the Budget Statements allocation for maintenance for each school.

Option 2: Direct funding to Schools. District offices support Schools through procurement of service providers and lumping of contracts, School Principal directs maintenance

Option 3: Provincial Education Departments directed Condition Based Maintenance using the National Education Infrastructure Maintenance Strategy. District Offices and School Principals to direct priorities

Option 4: Develop a database of term contractors and let the Provincial Education Departments award contracts per districts or municipalities. This will transfer greater risk to Contractors.

These options are dependent on the direct maintenance contract between the school (governing body?) and contractor, the capacity of the principal and the governing body to do this; as well as the capacity of oversight by District Offices.

5. Policy Area # 6: Diversification of Funding Sources

Given the amount of money needed to eradicate infrastructure backlogs in South Africa, the policy proposes that there must be a diversification of funding sources. Currently schools infrastructure funds are sourced from the Provincial Equitable Shares and Infrastructure Grant to Provinces and to a particular extent, donor funding. There is a space for diversification of funding sources but that should be treated with caution. Debt instruments such as securitisation, guarantees from commercial banks lending to schools, national and international lenders and NGO/Donor funds, and leverage private purchasing power should be considered due process of the law, especially Section 214 of the Constitution (Act 108 of 1996) as amended. In essence, any debt instruments will have to be co-ordinated by the National Treasury.

Therefore leveraging private finance is important but not an end in itself, nor is it a single solution to all education infrastructure problems. Financing is one of several items which must be addressed in order to meet every school needs for improved infrastructure. Of paramount importance, is the need address school infrastructure challenges generally, focusing mainly on improved projects financing for schools infrastructure and the strengthening of institutional delivery capacity.

The Commission submits that where a department's capital budget increases very rapidly, the analyst needs to assess whether the necessary capacity and processes are in place to ensure the funds will be spent efficiently and effectively.

6. Policy Area # 7: Demonstrated Delivery Capacity & Policy Area # 8: Systematised Procurement Management and Procedures for the Sector

Norms and standards are not clear as to who takes the final responsibility for the provision of infrastructure. Is it National Department of Education, Provincial Education Departments, Provincial Departments of Public Works and/or other Implementing agents?

The Commission is of the view that the discussion on Supply Chain Management should relate also to Broad Based Black Economic Empowerment (BBBEE) programs. Whilst the Commission subscribes to the argument for a trade-off between (1) greater diversity and participation by black entrepreneurs in the construction industry and (2) price, there have been instances where BEE appointments have resulted in compromised structural integrity and safety of learners. The Commission does not support such practices that have the potential to place the Department at risk in terms of civil litigation.

Where the department wants to share the responsibility for infrastructure delivery, then there is a need for the service delivery agreements (SDA) that will govern the relationship between the Provincial Departments of Education and Public Works Departments as well as other Implementing Agents. All these agencies must deliver infrastructure as prescribed in the norms and standard. The SDA is necessary to clearly spell out the roles and responsibilities of each Department.

6.1 Education Infrastructure Development Agency

The Commission is not convinced that the Department's motivation for the creation of a separate agency is cogent enough. (1.14.22 and 4.152) In particular, the agency is conceived as a temporary institution which can dissolve as demand dissipates. The Commission submits that self-liquidating institutions are very rare. Furthermore there are labour law implications which have not been thoroughly analysed in the norms and standards document.

The department responsible for the delivery of provincial infrastructure should develop needs assessment for Capital and Maintenance Works. This should be certified by the Accounting Officer with the advice of the Implementing Agent. The Implementing Agent must provide the Education Department with minimum maintenance standards for infrastructure and with schedules for the required planned routine and preventative maintenance. Condition and Functionality assessments should be developed and incorporated within the Infrastructure Asset Management system(s). Maintenance functions should be devolved to the cost centre where there is capacity to carry out the function. Provincial departments must monitor how cost centres are using maintenance funding to

ensure that they achieve value for money. Over time the Education department should develop its own technical capacity to undertake infrastructure delivery. Investment analysis studies and needs assessments will inform priorities for projects based on the norms and standards.

7. Comments on Thematic Education Provisioning Issues

7.1 Schools Security

The Commission is pleased to note that school security is dealt with (2.20 and 4.10.1). However the focus is on the structural integrity of the buildings (i.e. classes falling down) and neglects the present day reality that schools also need to be defended from the criminal element, especially in urban areas where gangsterism and violence are rife within schools. The Commission is concerned about (in particular) girl learners who face the chance of being raped within school facilities as a result of inadequate lighting, and so forth.

7.2 Special Needs Schools

The Commission submits that while Special Needs Schools are referred to, little is said about mainstreaming those special needs kids who have abilities into standard public schools. Here access (e.g. physically disabled learners) needs to be considered.

7.3 Monitoring and Evaluation

Finally, the Education Department will need to develop indicators that will make it easy to understand the physical state of infrastructure adequately supports high quality education. Such indicators should also make it easier to establish whether infrastructure enables occupants to be comfortable and productive.

8. Recommendations

- The Commission makes the following recommendations with regards to the Norms and Standards for Schools Infrastructure: -

8.1. Policy Statement # 1: National Norms and Standards for an enabling environment

- The Commission recommends that norms and standards should be part of the Infrastructure Planning Process inclusive of all spheres of government responsible for the

provision of school infrastructure. Norms and standards should be inextricably linked to the Educational Policy and Curriculum Statements.

- The Commission submits that energy pricing, scarce water resources and environmental regulation are likely to obtain more attention over the next 10-15 years. In this regard, the Commission recommends that these issues be given more attention in the finalisation of the norms and standards.

8.2 *Policy Area # 2: Systematised Establishment and Prioritisation of Infrastructure Needs*

- The Commission recommends that the National Education Infrastructure Management System (NEIMS) should be utilised and upgraded regularly to collate information on location, size, capacity, type of building/school running costs, asset value and performance indicators
- The Commission recommends that long range planning and prioritisation is critical and this thrust needs to be supported. For any township establishment, the Commission submits that there should be a zoning for schools to deal with urbanisation and learner mobility.
- The Commission recommends that the varying learner populations must be linked to alternative uses for schools in areas where schools are no longer needed and there should also be specific policies on asset disposal of schools.

8.3 *Policy Area # 4: Standardised Architectural Designs*

- The Commission submits that while all school construction must meet national standards of accessibility and state-imposed safety standards, there should also be a great deal of variation in the type of structures that are built. The decision on the type of school should be left with the province so long as minimum requirements are met.
- The Commission further submits that alternative service provisions be considered such as rainwater harvesting for schools in semi rural / peri-urban areas that may not have waterborne services and the critical use of bio-digesters for non sewer facilities among other items at this stage. The Commission also suggest that some sustainable development mechanisms be implemented as pilots in some instances.

8.4. *Policy Area # 5: Management and Maintenance*

- The Commission is concerned that the norms and standards as they are currently put are inadequately aligned with the Government Immovable Assets Act (GIAMA). The Act speaks to life cycle costs of asset management. Generally, schools maintenance plans should be informed by the condition and functionality assessments. Maintenance norms are therefore quite important and are currently under-addressed.
- The Commission submits that devolution of school infrastructure and/or maintenance decisions is to be encouraged where there is capacity to do so.

8.5. *Policy Area # 6: Diversification of Funding Sources*

- The Commission recommends that leveraging private finance is important but not an end in itself, nor is it a single solution to all education infrastructure challenges. Of paramount importance is the need address school infrastructure challenges generally, focusing mainly on improved budgeting for schools infrastructure and the strengthening of institutional delivery capacity.

8.6 *Policy Area # 7: Demonstrated Delivery Capacity & Policy Area # 8: Systematised Procurement Management and Procedures for the Sector*

- Norms and standards are not clear as to who takes the final responsibility for the provision of infrastructure.
- The Commission is of the view that the discussion on Supply Chain Management should relate also to Broad Based Black Economic Empowerment (BBBEE) programs. In the same breadth, The Commission does not support such practices that have the potential to place the Department at risk in terms of civil litigation.
- Where the department wants to share the responsibility for infrastructure delivery, there is a need for the service delivery agreements (SDA) that will govern the relationship between the Provincial Departments of Education and Public Works Departments as well as other Implementing Agents.
- The Commission recommends that the effectiveness and the capacity of Public Works to implement education infrastructure needs to be reviewed .Consideration should be given to high capacity/"accredited" municipalities facilitating the maintenance as well as construction of new schools on an agency basis .This should free up capacity for Public Works to only

concentrate on areas that do not have the skills and capacity to carry out maintenance and construction of new schools.

8.7 *Education Infrastructure Development Agency*

- The Commission is not convinced that the Department's motivation for the creation of a separate agency is cogent enough. There are labour law implications which have not been thoroughly analysed in the norms and standards document.

8.9 *Special Needs Schools*

- The Commission is concerned that too little is said about mainstreaming those special needs learners who have abilities into standard public schools. Here access (e.g. physically disabled learners) needs to be considered.

8.10 *Monitoring and Evaluation*

- The Commission submits that the Education Department will need to develop indicators that will make it easy to understand the role physical state of infrastructure in adequately supporting high quality education. Such indicators should also make it easier to establish whether infrastructure enables occupants to be comfortable and productive.