



GAUTENG SCHOOL INFRASTRUCTURE MAINTENANCE GUIDELINES

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GAUTENG SCHOOLS INFRASTRUCTURE MAINTENANCE GUIDELINES

i Definitions

The following constitutes a breakdown of definitions that are relevant to maintenance planning considerations. Consequently in these guidelines, unless the context otherwise indicates:

“accounting officer” means a person mentioned in Section 36 of the PFMA and includes any person acting as the accounting officer;

“acquisition” means acquire as defined in the relevant provincial land administration law or transfer of custodianship between custodians in that sphere of government;

“best practice” means a desirable and appropriate standard, process, procedure method or system in relation to immovable asset management;

“best value for money” means the optimization of the return on investment in respect of an immovable asset in relation to functional, financial, economic and social return, wherever possible;

“custodian” means a national and provincial department referred to in section 4 represented by the minister of such national department, Premier of a province or MEC of such provincial department, so designated by the Premier of such a province;

“custodianship” means the execution of such functions contemplated in section 4 (2)

“disposal” means any disposal contemplated in the State Land Disposal Act, 1961 (Act no 48 of 1961) or a provincial land administration law;

“immovable asset” means any immovable asset acquired or owned by government, excluding any right contemplated in the Mineral and Petroleum Resources Development Act, 2002 (Act no 28 of 2002);

“immovable asset management” means those management processes which ensure that the value of an immovable asset is optimized throughout its lifecycle;

“immovable asset management guidelines” means the guidelines published by the minister in terms of section 19 which a custodian or user may use to develop its immovable asset management plan;

“immovable asset management plan” means a custodian asset management or a user asset management plan, as the case may be, prepared in accordance with section 6;

“reconfiguration” means the implementation of activities to make changes to the configuration of an immovable asset and thereby changing the functionality of the asset. An example of reconfiguration is to make changes to the internal walls of a building to develop open plan offices. Reconfiguration cannot be classified as maintenance as it comprises changes requested by a user to increase the functionality of

the asset to contribute towards the achievement of service delivery objectives. A User therefore initiates reconfiguration whereas a custodian initiates maintenance;

“renovation” means comprehensive capital works actions intended to bring an immovable asset back to its original appearance. Renovation works do not necessarily extend functionality or the life of the asset, but are necessary for the planned life to be achieved. In such cases, the capital value of the asset is not achieved;

“refurbishment” means comprehensive capital works actions intended to bring an immovable asset back to its original appearance or state or to extend its lifecycle. It may be also required for historical preservation. Refurbishment generally takes place at the end of an asset’s lifecycle to extend the lifecycle and gain further income potential from the asset;

“upgrade” (Extensions, additions) means comprehensive capital works that increases the value of the asset and extend the area or add new functionality of the asset. Upgrades can take place at any time through the lifecycle of the asset and will increase the income potential of the asset;

“MEC” means a member of the Executive Council;

“organ of State” means any department of state or administration contemplated in paragraph (a) of section 239 of the Constitution of the Republic of South Africa, of 1996, but excluding the department or administration in the local sphere of government;

“PFMA” means the Public Finance and Management Act, 1999 (Act no 1 of 1999);

“prescribe” means prescribe by regulation;

“standard” means the minimum standard, process, procedure, method or system in relation to immovable asset management and the life-cycle of immovable assets issued in terms of section 19;

“strategic plan” means the strategic plan of a custodian or user as prescribed in terms of the Public Service Act of 1994, (Proclamation R103 of 1994) and the PFMA;

“surplus” in relation to an immovable asset, means that the immovable asset no longer supports the service delivery objectives of a user;

“treasury” means the National Treasury or a provincial treasury, as defined in section 1 of the PFMA; and

“user” means a national or provincial department that uses or intends to use an immovable asset in support of its service delivery objectives and includes a custodian in relation to an immovable asset that it occupies or intends to occupy represented by the minister of such national department, Premier of a province or MEC of such provincial department, so designated by the Premier of that province.

A 1 INTRODUCTION AND BACKGROUND TO MAINTENANCE

The National Education Infrastructure Management System (NEIMS) by the Department of Basic Education all schools in the country were assessed and surveyed. It consists of standardized assessment instruments, a web-based database and a GIS-based infrastructure management system that will become an integral part of the overall Facilities Management System or FMS to be implemented by the Gauteng Department of Education.

The NEIMS information for Gauteng as well as other internal assessments documented a significant deterioration in the condition of schools owing to poor and even no maintenance. It is therefore important to ensure that GDE continues to improve its maintenance programmes in a structured manner.

It is also imperative that these maintenance guidelines be implemented in line with the provisions of the current legislation and policies (e.g South African Schools Act , Norms and Standards for School Funding).

The Gauteng Department of Education will ensure that each district and school gets training on a set of maintenance guidelines to be implemented IN THE 2014/15 Financial Year.

A.2 OBJECTIVES OF THE GDE'S SCHOOLS INFRASTRUCTURE MAINTENANCE PLANS

The following constitutes a set of Objectives for the GDE with respect to maintenance policies and plans for the province. The GDE should ensure that

- GDE provides clear objectives for the preservation/maintenance of its buildings/immovable assets;
- Maintenance of schools should support teaching and learning in schools
- Update the immovable assets (schools in this case);
- Update the National NEIMS data base as prescribed in the DoRA;
- Identify the officials and or departmental units responsible for the planning, budgeting, preservation, management, recording, monitoring and evaluation of these assets;
- Address the planning, budgeting and implementation of planned preventative and other relevant forms of maintenance on a continuous basis;
- Assess the functional performance of all immovable assets in line with the GIAMA
- Establish its maintenance reporting systems and templates that can be easily accessed by a Facility Management System.

A.3 DIRECTIVES EMANATING FROM THE DEPARTMENT OF BASIC EDUCATION POLICY DOCUMENT ON SCHOOLS INFRASTRUCTURE

The following directives are drawn from the Minimum Uniform Norms and Standards for Public School Infrastructure and referred to as the Regulations were published in the Government Gazette No 37081. The Department of Basic Education requires that each MEC must within a period of twelve months after the publication of the regulations (End November 2014) provide the Minister of Basic Education with detailed plans on the manner in which the norms and standards are to be implemented in each province.

These plans will need to be subject to existing National Treasury regulations and the prescripts of the Infrastructure Delivery Management System (IDMS). More specifically each provincial plan must contain but not be limited to;

- The determination of backlogs per district;
- The submission of short, medium and long term targets and their costs;
- The planning for new schools;
- The establishment of maintenance plans for new and existing schools; and
- Proposals for the procurement, implementation and monitoring of all projects and programmes.

A.4 AUTHORITY OR RESPONSIBLE AGENT/S

The GDE (inclusive of the responsibility confers on SGB's) is the responsible authority conducting the planning, budgeting and implementation of asset management and maintenance at schools in the province. GDE will align its maintenance plan with its U-AMP, IPMP's and IPIP.

A.5 DEFINITIONS OF IMMOVABLE ASSET MAINTENANCE/PRESERVATION

The following set of maintenance types have been recognized by the Department as being appropriate to meet the differing conditions and circumstances that characterize the maintenance challenges in the province. The Education Department determines which of the following categories of maintenance are relevant to the specific conditions, capacities and

resources and these are applied in both planned and unplanned forms of maintenance in its respective policies and plans;

A.5.1 Planned Maintenance

This form of maintenance can comprise five different types of maintenance and these include;

5.1.1 Statutory Maintenance

This form of maintenance can apply to both preventative and condition based maintenance where legislation, regulations, standards and Codes of Practice may require specific forms of maintenance to be carried out to provide what in their respective fields are regarded as the minimum form of maintenance required.

5.1.2 Preventative Maintenance

This form of maintenance comprises actions performed to retain an asset in its required condition or standard and sets out to prevent failure by providing systematic inspection and monitoring to detect and prevent deterioration and or failure and includes testing to confirm correct operation.

5.1.3 Scheduled Maintenance

These are actions performed to prevent failure in a predetermined and scheduled manner and these are normally prescribed by a manufacturer of the specific asset concerned.

5.1.4 Condition-based Maintenance

As a result of significant deterioration or failure this form of maintenance is to restore an asset to its required condition or standard. The work could be programmed in terms of condition assessments or alternatively conducted as random additions to the programme based on a prioritized process or system. 9

5.1.5 Backlog Maintenance

This form of maintenance is often referred to as Deferred Maintenance and refers to any maintenance that should have been conducted but for lack of funds or one or other reason it was deferred, cancelled or not carried out. Such maintenance action can be quantified, planned and scheduled and it is therefore classified as planned maintenance.

A.5.2 Unplanned Maintenance

5.2.1 Breakdown Maintenance

5.2.1.1 Normal Breakdowns

Such maintenance is generally unplanned and reactive maintenance that requires action towards restoring an asset to its respective operational condition as a result of unforeseen failure. This action is generally regarded as requiring remedial attention within a working week of 5 days.

5.2.1.2 Emergency Breakdown

Such maintenance is generally unplanned and reactive maintenance that requires action towards restoring an asset to its respective operational condition as a result of unforeseen failure that seriously affects the functioning of the asset. This could constitute a blocked sewer for example and due to the serious implications that could arise from the nature of this breakdown such a breakdown must be attended to within 1 day.

5.2.1.3 Fatal Breakdowns

These breakdowns are those breakdowns that cause serious damage to associated, linking, and or surrounding assets and could cause the loss of a resource such as water or electricity and or could result in a danger to people and loss of life. The status of fatal could fall away and a lower order status assigned to the asset breakdown once the cause of the fatal status is removed, for example:

- A burst pipe could assign a fatal status to a breakdown and once a valve, for example, is closed the fatal status could fall away thereby stopping the loss of a resource such as water; or
- The fatal status of an open electrical wiring system would fall away once the wiring is made safe by switching off the power to that circuit.

These forms of breakdown need to be attended to within 3 hours.

5.2.1.4 Incident Maintenance

Such maintenance is generally unplanned and reactive maintenance that requires action towards restoring an asset to its respective operational and or safe condition as a result of damage from storms, fire, forced entry, vandalism or malicious actions. The timeframe within which such maintenance should be carried out will be determined by the nature and seriousness emanating from the incident. 10

5.2.1.5 Minor Repairs < R500 000

Such maintenance is intended to restore an item to an acceptable condition by the renewal, replacement, or mending of worn, damaged or decayed parts.

A.5.3 Rehabilitation

Such maintenance is intended to restore an asset to its intended useful life.

A.5.4 Major Repairs > R500 000

Such Maintenance is intended to restore an item to an acceptable condition by the renewal, replacement, or mending of worn, damaged or decayed parts.

A.5.5 Renovations

This type of maintenance comprises actions that are carried out to restore an asset, which has deteriorated to an unacceptable condition, to its original “as new” condition.

A.5.6 Minor New Works

This form of maintenance involves minor reconfiguration, additions or new construction work up to the financial limit, which may be revised from time to time.

A.5.7 Replacement

This form of maintenance comprises actions that are carried out to demolish an asset that has been deemed to have reached the end of its life and to replace it with a new asset of a similar size and level functionality.

It is, however, not always appropriate to replace the same size as many classrooms may be undersized and need to be replaced with a structure that meets the departmental norm

A.6 LEGISLATION GOVERNING MAINTENANCE

The following forms of legislation will constitute the legislative framework that will govern and influence the establishment and management of asset management and maintenance policies in each of the nine provinces;

6.1 Public Finance Management Act (PFMA), No. 1 of 1999

6.1.1 The PFMA supports the proper management of assets and their maintenance. According to Section 38(1)(d) of the PFMA, the accounting officer for a department, trading entity or constitutional institution is responsible for the management, including the safeguarding and the maintenance of the assets of the department, trading entity or constitutional institution. As a result, every department, trading entity or

constitutional institution needs an asset management system which is a base for proper planning and budgeting for maintenance.

6.1.2 In addition, section 76(2)(d) of the PFMA also states that National Treasury (NT) may make regulations or issue instructions applicable to departments, concerning the improvement and maintenance of immovable assets. As part of this mandate NT can inform the conditions that influence the nature of conditional grants – such as the Infrastructure Grant to Provinces (IGP). This is done through the Division of Revenue Act (DoRA).

6.2 Government Immovable Asset Management Act (GIAMA), No.19 of 2007

6.2.1 GIAMA provides a framework for the management of immovable assets and will be binding on national and provincial government. The broad aim of the Act is to improve public sector infrastructure asset management.

6.2.2 One of the objectives of GIAMA, among others, is to ensure that there is coordination in the management and use of immovable assets in fulfilling the service delivery objectives of a national or provincial department. The Act promotes the efficient utilisation and maintenance of existing immovable assets. Section 5(1)(d) specifically states that immovable assets that are currently used must be kept operational to function in a manner that supports efficient service delivery.

6.3 Municipal Finance Management Act (MFMA), No. 56 of 2003 and Municipal Systems Act (MSA), No. 32 of 2000

6.3.1 Although operating in another sphere of government, dealing with asset management and maintenance represents a unique set of challenges. To address these, policy makers developed specific legislation for local government in the form of the Municipal Systems Act of 2000, and the Municipal Finance Management Act of 2003.

6.3.2 Section 4(2)(d) of the MSA states that a municipality has the duty to strive to ensure that municipal services are provided to the local community in a financially and environmentally sustainable manner.

6.3.3 The MFMA (section 63) delineates specific duties in respect of asset management, i.e. the safeguarding and maintenance of assets; valuation in accordance with Generally Recognised Accounting Practice (GRAP); maintaining a system of internal control over assets and keeping an asset register.

The lack of an adequate set of guidelines and strategy supporting asset management at the local government sphere and linking in some way to the provincial sphere is currently undermining the performance of the above legislation.

6.4 South African Bureau of Standards: National Building Regulations

These sets of building regulations will set out the regulatory framework that governs construction in all sectors especially at the local government level where building inspectors will need to ensure that

statutory requirements are complied with. With regard to the provision of electricity, provision is made in SABS 10400 of specific requirements for the maintenance standards to be complied with.

6.5 Occupation Health and Safety Act of 1993

GDE shall provide and maintain as far as is practically possible a working environment that is safe and without risk to his/her employees. Each PED will need to establish the necessary

i. Health and Safety committees at each school whose duty it is to address the necessary statutory and regulatory requirements, and

ii. Designated officials to monitor and address the OHS concerns of each facility.

A.7 ROLES AND RESPONSIBILITIES

The following roles and responsibilities have been established and assumed for the School Governing Bodies (SGB's), DBE and the PED's:

B.7.1 Role and Responsibilities of the School Governing Bodies:

In terms of the South African Schools Act, School Governing Bodies need to take responsibility for planned and unplanned maintenance and repairs using the school's fund allocation provided by the Provincial Departments of Education. Maintenance includes planned preventative maintenance and reactive maintenance to address breakdowns and emergencies.

Section 21 School Governing Bodies that have maintenance responsibilities assigned them will need to conduct both day-to-day maintenance responsibilities as well as more serious responsibilities as set out below (these categories are also to be covered by district offices on behalf of Section 20 schools :

A. DAY TO DAY EMERGENCY MAINTENANCE

The school governing body, in collaboration with the Principal, is responsible for the maintenance of the school building and premises. The Principal must designate an educator to take responsibility for maintenance operations. The designated educator reports to the Principal and the School Governing Body on maintenance matters, and he or she acts as the contact with the Provincial Department of Education.

As the name implies, day to day maintenance entails daily running repairs, for example, replacing light bulbs, repairing leaking taps, cleaning blocked drains, repairing locks and door handles and other minor repairs. The following are the sort of incidents that necessitate day to day maintenance checks;

- Toilet blockages;***
- Water leakages, eg leaking water pipes, taps, valves and cisterns;***
- Exposed electrical wires;***

- Theft;
- Freak conditions, eg minor storm damage, riots or vehicle accidents.

B. GENERAL PREVENTATIVE MAINTENANCE

General preventative maintenance is conducted via periodic inspections and preventative maintenance action and this includes those steps which contribute to the continued effective life of a building, even though the building does not pose a threat to life or health. These may include;

- *Repainting and or repairing a roof;*
- *Repainting external surfaces;*
- *Repainting internal surfaces;*
- *Servicing and/or upgrading water supply services, meticulously monitoring the water consumption to ensure that there is no possibility of underground leakage which may cause subsidence or excessive bills for consumption;*
- *Servicing and/or upgrading of the sewage system;*
- *Servicing and/or upgrading of the storm water system;*
- *Servicing and/or upgrading of the electrical and intercom systems;*
- *Reviewing and/or upgrading all specialist function areas.*

Roofs, gutters and downpipes:

Looking at roofs, gutters and downpipes is arguably the quickest way to form an impression of the state of repair or disrepair of a building, therefore it is important that;

- *These elements should be cleaned regularly and be kept free of leaves, debris or other blockages.*

Toilets and plumbing: (Need to provide advice for non water-borne systems as well)

The state of toilets and plumbing is often a matter of concern for the school management, since they may be subjected to a variety of causes such as;

- *Wash-basin taps left running with the plug in position;*

- *Sewage disposal pipes are blocked because toilets are not flushed regularly and various other materials other than toilet paper are used and a variety of unacceptable items disposed of through the sewerage system; use the GDE toilet management system*
- *Toilet systems are deliberately damaged or vandalized and used even though they are inoperative;*
- *Taps, pipes, toilet seats and flaps, mirrors, towel rails, door locks and even doors are continually stolen; and walls are defaced by graffiti;*

It is difficult to offer advice on how such problems may be rectified; however here are some suggestions;

- *Where possible, ensure that the toilet cisterns are on the outside wall, enclosed in a duct and activated by a mechanism that operates through the wall.*
- *Teach learners about the correct usage of toilet facilities and make it clear that any abuse of facilities will be punished by strict disciplinary measures. These must be enforced without exception.*
- *Educate the learners on the correct usage of toilets in general and their own school's toilets in particular as part of their general hygiene education and .*

Sewage disposal

Any malfunctioning of the sewage disposal system must receive urgent attention. Apart from its unpleasantness, it may spread bacteriological infections, often taking on epidemic proportions. A malfunction can be so serious that, if an immediate remedy is not available the consequences may warrant the temporary closure of the school, often at a most inconvenient time.

Storm and rainwater disposal

The control and monitoring of storm and rain water disposal in buildings, especially long blocks and or multi-story buildings is essential. If water finds its way down to a building's foundations and footings during a period of rainfall, it can and often does settle in a very limited area, resulting in cracks in the superstructure. These cracks may develop to such an extent that areas of a building become potentially life threatening.

It is important to regularly check that stormwater drains are not blocked in any way and that gutters and downpipes are clean and serviceable.

During a rainy period, it is important to observe whether the water runoff presents a potential hazard, so that precautionary measures may be taken timeously.

Face-brick surfaces

Most people have the impression that face-brick surfaces require no maintenance. This is not the case. Certain aspects do require fairly frequent maintenance and/or repair.

- *Subsidence can cause cracks in walls which can become dangerous and must be sealed or otherwise attended to, depending on the nature of the cracks.*
- *Often poorly pointed joints do weather, especially the perpendicular joints (perpends). This permits water penetration with consequent deterioration of the inner plaster and paintwork.*
- *Check these joints during the dry season or when something is clearly amiss. Affected pointings should be scraped out and repointed. Only skilled tradesmen should be allowed to do this.*

Fire-fighting equipment

“Dry chemical powder” (DCP) pressure cylinders should be kept under strict control on an annual contract basis.

- *Suppliers should ensure that the cylinders are serviceable at all times.*

Should the fire-fighting equipment differ from DCP’s it should be tested regularly to ensure its effectiveness.

Windows

The state of windows requires regular checking since the following aspects need to be observed;

- *Is the putty at the front and back still intact?;*
- *Are all the panes intact?;*
- *Are the catch handles and stays (peg or other) still serviceable?;*
- *Do the window heads, reveals and sills still seal effectively?;*
- *Is any surface rusted?.*

Doors and locks

Doors and locks are subjected to heavy use and consequent wear and tear which necessitates vigilant attention. Normal wear and tear apart, vandalism has also become a cause for concern and suitable preventative measures should be taken. For example, door hinges and locking mechanisms should be properly oiled at regular intervals.

Floor surfaces

Floor surfaces vary and therefore require different forms of maintenance:

- *Poly Vinyl Chloride (PVC) tiled surfaces should be cleaned with an approved detergent, not polished with a wax polish or other form of treatment that contains an element which dissolves the tile adhesive;*
- *Terrazzo tiled surfaces should preferably be treated with an approved sealer only, simply cleaning them with an approved detergent will also suffice;*
- *Granolithic floor surfaces should preferably be treated with an approved sealer only, but simply cleaning them with an approved detergent will also suffice. Do not apply wax or any other substance that can make the surface slippery. If cracks occur other than in the deliberate V joints they should be filled with an epoxy filler. Alternatively, the screed between the bordering v-joints may be removed by a qualified tradesman and re-screeded;*

Wall surfaces (other than face-brick)

Wall surfaces may vary in both rendering and finishes. Observe all latent defects, as well as defects caused accidentally or through abuse.

Ceilings

Ceilings require little or no maintenance. However dust that settles on top of the ceilings may cause over time soil marks on the bottom of the ceiling accentuating the branding to which the ceiling is fixed.

Water marks, caused by leaks in the roof may also occur. Should that happen the cause (a possible roof leak) must be immediately found and rectified.

Site-works (including paved areas)

This heading includes entrance and other boundary gates, perimeter and other fencing, all playing fields, paved areas, parking, assembly areas, quadrangles, learner walking areas and covered passages.

• *Paved areas, regardless of the surface material, require hosing down with water only. Bear in mind that water is good for cement and concrete, and prevents cracking as a result of extreme weather conditions.*

Grass covered sports fields require extensive care and maintenance. Their condition will depend largely on the financial position of the school.

Covered passages (other than floor surfaces)

Covered passages are subject to natural weathering, damage to columns and roofs and possible graffiti. What must be carefully monitored, is willful and undisciplined behaviour, such as walking and running on galvanized sheet iron roofing, as this damages and bends the sheet iron covering. This may also occur when tradesmen walk on the roof without taking care to walk on those areas directly supported by beams only.

Nobody should be allowed to walk on galvanized sheet iron roofing unless they walk on those areas specifically supported by beams.

Fixtures and appliances

The Department provides a number of fixtures and appliances for school buildings. These include shelving for some storerooms and some classrooms, libraries, cleaners' stores, kitchenettes, laboratories, resource centres, typing classrooms, etc. Other areas also have cupboards and cabinets all of which are purpose made. Because of their construction these units may be subject to abuse. Not only are they costly to replace, but functioning without them hampers various school activities.

The principal should have areas where these fixtures and appliances are present closely monitored.

Electrical installations

Theft of electrical wires and fittings is on the increase. All such installations, including the intercom should therefore be closely monitored. This requires the regular checking of unused areas of the school complex.

Effective maintenance requires the appointment of a person with adequate knowledge and skills to the School Governing Body to manage the processes of calling for tenders and defining what is required as well as accepting only satisfactory materials and workmanship.

It is therefore important that all services required should be clearly defined for the purposes of competitive tendering. Only recognized and accepted tender procedures must be followed. Should any school need technical advice on any building related matter, the Department's technical inspectorate will be only too willing to assist.

INSPECTION AND PREVENTATIVE MAINTENANCE CHECKLIST

It is recommended that the attached Schools Maintenance Checklist be used as a baseline framework for the weekly and annually preventative inspection process to be conducted by each school.

A.7.2 Role and Responsibilities of the Provincial Department of Education

The GIAMA makes it incumbent on custodians and users, as appropriate to their functions, to demonstrate that it is managing immovable assets efficiently and effectively and in such a way as to promote government's immovable asset management objectives. In this context, GDE should:

- Assume full responsibility for the planning, budgeting, procurement, implementation, monitoring and evaluation of its maintenance policy and plan;
- Provide clear objectives in its Policy and Implementation Plan for the preservation/maintenance of its buildings/immovable assets and these should be directed towards;
- Support SGB's both financially and where there is a lack of capacity to execute some of the maintenance categories
- establishing priorities based on the impact of condition on service delivery and risk;
- standards to which immovable assets are to be maintained and these must align with the service delivery of the users;
- ensuring the most effective use of maintenance resources;
- monitoring the performance of the assets to ensure that the maintenance strategies are working;
- ensuring that historic maintenance information exists for the assets;
- putting in place or if able accessing an up to date and GIAMA compliant base-line asset register of its immovable assets (Updated version of the NEIMS, for example);
- identifying at a strategic and operational level those officials and or departmental units responsible for the planning, budgeting, preservation, management, recording, monitoring and evaluation of these assets.
- In its maintenance/preservation policy it will need to address the planning, budgeting, implementation, monitoring and reporting of its planned preventative and other relevant forms of maintenance on a continuous basis;
- Provide support to non-section 21 schools that do not have maintenance responsibilities assigned to them;
- Establish reporting systems and templates that can be easily accessed by the National Department of Basic Education;

A.8. PROCEDURES

A.8.1 School Governing Bodies

8.1.1 Section 21 Schools

In the case of Section 21 schools, the SGB source quotations for the execution of the work from contractors. The SGB follows the procedures as outlined in the AMENDED NORMS AND STANDARD FOR SCHOOLS FUNDING WITH SPECIAL REFERENCE TO 5 (FINANCIAL CONTROLS WHERE SECTION 21 HAVE BEEN ALLOCATED TO SCHOOL GOVERNING BODIES) to acquire the services of a service provider to execute the work. Upon completion, the SGB or a delegated member of the SMT will sign off the work before the SGB pays the service provider.

While the schools allocation covers routine planned and unplanned maintenance work, major repairs and maintenance are generally too expensive for most schools. School Governing Bodies are therefore encouraged to take out building insurance using the school fund allocation as provided for in the South African Schools Act.

In the event of the school not in possession of insurance cover or not able to cover the costs (due to the fact that the costs exceed the maintenance allocation to the school or in the event of the allocation being exhausted) the school could log a request to the GDE maintenance Unit for assistance. In this instance the GDE maintenance unit will assess the nature, seriousness and urgency of the request. If the request warrants an intervention, the GDE maintenance Unit will dispatch a works inspector to assess the extent of the work. A job card will be generated and a contractor appointed to execute the work. Upon completion, a works inspector will assess the work and upon signing off of the work by the school principal, the contractor will be paid.

8.1.1 Section 20 Schools

In the case of Section 20 schools, the SGB will issue a request for service to the district office. The following procedures will be followed towards execution of the work.

Steps	What	Responsibility
Identify maintenance need	Submit request	School (SMT & SGB)
Assessment of scope of work	Assessment	Works Inspectorate where applicable / Completion of standard job card by school
Source quotation / request nomination from Contractor Roster database / identify relevant	Quotations	District Procurement Unit

Steps	What	Responsibility
Term contractor		
Nominate Contractor and issue appointment letter	Approval	Head Office Procurement
Site handover	Execution	Works Inspectorate
Sign-off completed work	Sign-off	School Principal or delegated person
Completion of payment certificate and submission for payment	Payment	Works Inspectorate / District

While the schools allocation covers routine planned and unplanned maintenance work, major repairs and maintenance are generally too expensive for most schools. If the costs exceed the maintenance allocation to the school or in the event of the allocation being exhausted) the school could log a request to the GDE maintenance Unit for assistance. In this instance the GDE maintenance unit will assess the nature, seriousness and urgency of the request. If the request warrants an intervention, the GDE maintenance Unit will dispatch a works inspector to assess the extent of the work. A job card will be generated and a contractor appointed to execute the work. Upon completion, a works inspector will assess the work and upon signing off of the work by the school principal, the contractor will be paid.

A.9. PROCUREMENT AND CONTRACTING ARRANGEMENTS

In order to streamline the procurement and contracting arrangements, the following contractual arrangement will be used:

- Term contracts for emergency maintenance, water delivery (where required in emergencies, emptying of septic tanks and placement of chemical toilets, and delivery of chemical toilets (as and when required
- Maintenance Roster Database to appoint contractors

A.10. MONITORING FRAMEWORK

The following monitoring and evaluation reporting systems will need to be continued where systems have already been introduced.

GDE: These include the IRM, IYM and the agreed upon maintenance reporting templates from the DBE.

SGB's: In the case of Section 21 schools, a monthly report on the maintenance services provided, the cost per service, the school maintenance budget, the expenditure to date and the variance should be

submitted to the district office in order enable the district to assess the extent to which the allocation for maintenance was adequately used.

In the case of Section 20 schools, the district office should compile a report to the district management and Head office indicating the extent to which the allocation for maintenance was adequately used.

These reports will also assist the GDE Maintenance Unit to establish whether requests from schools warrant intervention and prevent the unit from assisting schools whilst adequate resources are available in terms of the maintenance allocations to the schools (both section 21 and section 20)

SECTION B

B.1 Maintenance Planning

The maintenance sub-committee should develop a maintenance plan for their school and this manual will assist in doing this. The SGB should sign-off the maintenance plan.

The committee should then prepare a maintenance plan on a 4-year cycle that must be updated annually. The annual plan will show:

- What parts of the school will require maintenance or replacement that year.
- The level of priority of each maintenance item, the cost of each item and who will do each job and when.
- A budget based on the maintenance plan showing what expenditure will be required that year.

The maintenance plan should contain check-lists for inspections and preventative maintenance actions that should take place at weekly, monthly and yearly intervals (see below).

The committee should keep records of maintenance inspections, actions taken to rectify any faults found and the cost of putting them right. A system should also be put in place for reporting to the district education authorities more serious problems that cannot be dealt with by the school or community to the district education.

The committee should prepare a set of rules for staff, learners and parents using the facilities and display these prominently (see below). Staff should ensure that learners follow these rules.

An action list should also be displayed prominently to remind staff and pupils of the regular maintenance and cleaning actions required of them. It must be emphasized that action must be taken as soon as a problem is discovered. Small problems that can be easily dealt with will become much larger problems that will be difficult and expensive to deal with if they are not resolved quickly.

B.2 Maintenance funding and accountability

The funds that the school receives from government for maintaining the school will be insufficient for the work required and in order maintain the buildings properly the committee will have to raise additional funds.

The biggest problem to be faced by the maintenance committee will probably be that of raising sufficient funds to implement the maintenance programme. It will be important therefore to involve the whole community in fund raising and getting volunteers to assist with labour: the school is for the use of the community's children after all!

The committee's treasurer will be responsible for all expenditure on maintenance.

The committee should:

- Set an annual budget (based on the maintenance plan) for maintenance; all expenditure must be based on this budget and the Committee must approve all expenditure.
- Obtain written quotations (Section 21) for any maintenance work that has to be carried out by skilled workers such as plumbers and electricians; payment to be made only on successful completion of the work and a receipt obtained.
- Request a maintenance service from the district (Section 20)
- Keep simple but detailed accounts of all expenditure and obtain and keep receipts for all expenditure.

The maintenance expenditure and programme should be fully transparent and presented at SGB meetings as well as the AGM.

B.3. GENERAL RULES FOR THOSE USING THE SCHOOL

The Committee should in collaboration with the parents and SGB develop a list of rules pertaining to the use of the facility. Below is a proposed list of rules for those using the school that should be prominently displayed and enforced. These rules will help keep the school clean and well looked after and make the school more inviting for the children and more conducive to effective learning. The Maintenance Committee can add further rules as required.

- Keep all rooms clean and tidy.
- Keep the buildings locked when not in use.
- Do not lean on walls.
- Do not write on walls.
- Keep furniture away from walls.
- Do not throw rubbish on the floor or around the building; all rubbish should be put into rubbish bins or pits and later burned.
- Do not stack anything against external walls (either inside or outside) as this could encourage damp.
- Do not use toilets when water is not available.
- Do not throw anything down toilets or sinks.
- Always turn off taps so that they do not drip.
- Open and close water taps carefully and do not force them either way.
- Always turn off lights when not needed.

- Do not slam doors and windows; shut them carefully.
- Do not throw stones or other objects or kick balls onto roofs, especially tiled roofs as this will cause leaks.
- Do not hammer nails into walls; if hooks are required, get a carpenter to fix a length of wood to the wall and screw hooks into this.
- Keep animals out of the school grounds where possible.
- Do not wash clothes or pots near clean water storage (where applicable)
- Keep drinking/clean water storage tanks (where applicable) covered.
- Report all problems with buildings or school grounds to a member of the Maintenance Committee or the principal.

Ensure that all educators discuss the rules in class and explain the importance of respecting them.

Make sure that both educators and learners understand the rules; for learners to adhere to the rules and the educators to enforce them.

B.4. DAILY & WEEKLY MAINTENANCE ROUTINES

This is a list of simple daily and weekly maintenance routines that will help keep the buildings in good condition. The Maintenance Committee can add to them as required.

- Sweep and wash all floors and verandas daily.
- Clean and wash down toilets every day.
- Clean wash-basins and sinks if fitted every day.
- Clean termite tunnels off walls as soon as they appear.
- Check that all buildings are secure at the end of every day.
- Move all furniture every week and clean the floors below.
- Clean dirty marks off walls every week.
- Clean windows every week.
- Cut the grass around the buildings every week especially during the rainy season.
- Clean storm-drains around the buildings every week especially during the rainy season.
- Collect rubbish every day and burn the rubbish daily or every week depending upon the amount and bury the ash.

These routines can be carried out by educators and learners and a roster should be organised so that the work is shared fairly.

CHECKLIST FOR DAILY & WEEKLY MAINTENANCE ROUTINES

DAILY & WEEKLY MAINTENANCE			
Maintenance Item	Week	Responsibility: Class	Action Taken
Sweep and wash all floors and verandas			
Clean and wash all toilets			
Clean wash-basins and sinks			
Clean off any termite tunnels from walls			
Lock all doors at the end of the school day			
Move all furniture and clean floors			
Clean dirty marks off walls			
Clean all windows			
Cut grass around the buildings			
Clean out all storm-drains			
Collect and burn all rubbish			

B.5. MONTHLY MAINTENANCE CHECKS

Every month, a more detailed inspection should be made of the school buildings and grounds by a member of the Maintenance Committee and the following items should be checked and any necessary remedial actions carried out. The list below rther items can be added as required.

In the grounds:

- Trim any trees or shrubs close to the buildings.
- Collect any rubbish from around the buildings and the grounds and burn and bury the rubbish.
- Check for termite tunnels and remove; dig out any termite nests that are found around the buildings.
- Remove all rubbish from storm-drains around buildings and check outlets for blockages.
- Check that covers to inspection chambers and septic tanks are in place and not damaged and that there are not any leaks of foul water.
- Check that septic tanks (where applicable) are not full.
- Check main water supply pipes and outside stand-pipes and taps for leaks and repair as necessary.
- Check that drains are clean and that covers are fixed.
- Check that taps are operating properly and replace washers and lubricate as necessary.
- Check that any electric pumps are operating properly
- Weed and tidy up any flowerbeds/gardens.

Outside the buildings:

- Remove any leaves or rubbish from the roofs.
- Check tiled roofs for loose tiles and re-fix as necessary.
- Check roofs finished with corrugated steel or fibre-cement sheets for loose nails or screws and tighten, seal or replace as necessary.
- Check external ceilings for damp patches that indicate leaks.
- Remove any leaves or rubbish from gutters and down-pipes especially during the rainy season.
- Check outside walls and underside of roofs for insect nests and cobwebs and sweep clean.
- Check veranda floors for loose or broken tiles or cracks. Replace any loose or broken tiles and make good any cracks.
- Check that external light fittings and switches are working, switch covers are properly fixed and not damaged; clean light fittings as necessary.
- Check that roof ties and any structural bolts or other fixings to roofs, walls and verandas are securely fixed.

Inside the buildings:

- Check walls and ceilings for insect nests and cobwebs and sweep clean.
- Check ceilings for damp patches that indicate roof leaks.
- Check floors for loose or broken tiles or cracks. Replace any loose or broken tiles and make good any cracks.
- Check that doors are closing properly and not touching the floor; check that door handles and striking plates are fixed properly, that locks are in working order and that keys have not been lost. Oil hinges, handles and locks and adjust locking plates and bolts as necessary.
- Check that windows are operating properly. Replace broken panes, oil hinges, check stays, tighten screws, etc.
- Check that toilets are operating properly and are not blocked. If overhead cisterns are fitted, check flushing mechanisms, ball-cocks, stop-valves, fixings of cisterns, etc.
- Check that water tanks in toilets are not leaking. Check wastes and waste-pipes for blockages and leaks; check taps for faulty washers and dripping.
- If wash-basins and sinks are fitted, check that they are properly fixed to the wall or worktop. Check wastes and waste-pipes for blockages and leaks; check taps for faulty washers and dripping.
- Check that light fittings, ceiling fans and switches are working, switch and socket covers are properly fixed and not damaged; clean light fittings and ceiling fans as necessary.
- Check furniture for damage and repair or replace as necessary.

Any faults noted should be reported to the Maintenance Committee or to the Principal and rectified as soon as possible.

CHECKLISTS FOR MONTHLY MAINTENANCE CHECKS

MONTHLY MAINTENANCE CHECKS: SCHOOL GROUNDS			
Maintenance Item	Responsibility	Problem	Action Taken
Trim trees and shrubs			
Collect rubbish and burn/bury			
Check for termite tunnels and nests			
Clean storm-drains and outlets			
Check covers to inspection chambers and septic tanks			
Check septic tanks are not full			
Check water pipes and standpipes			
Check drains and covers			
Check taps			
Check electric pumps			
Weed and tidy flowerbeds			

MONTHLY MAINTENANCE CHECKS: BUILDINGS EXTERNAL			
BUILDING:			
Maintenance Item	Responsibility	Problem	Action Taken
Clean off roof			
Check tiled roof for loose tiles			
Check fixings to corrugated steel or fibre-cement roof			
Check external ceilings for damp			
Clean any gutters and down-pipes			
Clean outside walls and undersides of roofs			
Check veranda floors			
Check all roof fixings			
Check external electrical installation			

MONTHLY MAINTENANCE CHECKS: BUILDINGS INTERNAL			
BUILDING:			
Maintenance Item	Responsibility	Problem	Action Taken
Clean off walls and ceilings			
Check ceilings for damp patches			
Check floors			
Check doors			
Check window panes			
Check any window mechanisms			
Check toilets			
Check water tanks			
Check wash-basins and sinks			
Check electrical installation			
Check furniture			

B.6. ANNUAL MAINTENANCE CHECKS

Every year, the school grounds and buildings should be thoroughly inspected by a member of the Maintenance Committee and the following items should be checked and any necessary remedial actions carried out.

In the grounds:

Trim any trees or shrubs that are close to the buildings; remove any that are so close that they are endangering foundations.

- Check for termite nests and dig out any that are found.
- Check storm-drains and outlets for cracks, subsidence and other damage and repair as necessary.
- Check that septic tanks and drains are not full and if they are empty them or construct new ones.
- Check covers to inspection chambers and septic tanks and replace if damaged or re-set if loose.
- Check soil drains for leaks or damage and repair or replace as necessary.
- Check main water supply pipes and stand-pipes and taps for leaks and repair or replace as necessary.
- Check that covers to drains are fixed and not damaged and replace as necessary. Check head walls and concrete surrounds to drains for cracks or damage and repair as necessary. .
- Check that taps if used are fixed properly and working and replace washers and lubricate as necessary or follow the maintenance instructions in the handbook.
- Check that electric pumps if fitted are working, follow maintenance instructions in the handbook or summon an electrician to make any repairs.
- Check external water tanks and stands for leaks, rust or other damage and repair, re-fix or replace as necessary. Check inside of tank and clean out if necessary. Re-paint tank and stand on a 4-year cycle.
- Check paving around buildings.
- Check paths and roads within the site. Check for subsidence and any surface cracks or damage and repair or replace as necessary.
- Check walls or fences and gates for damage and repair or replace as necessary.

Outside the buildings:

- Check tiled roofs for loose tiles or ridge or hip pieces. Replace any loose or damaged tiles, ridge or hip pieces.
- Check corrugated steel or fibre-cement roofs for loose nails or screws, loose or damaged sheets, loose flashings at ridge and eaves, rust, etc. Paint or replace any damaged sheets or flashings.
- Check any gutters and down-pipes for blockages, damage, rust, etc and repair or replace as necessary.
- Check all fascias and barge-boards for rot, loose fixings or termite damage and re-fix, repair or replace as necessary. Re-paint all exposed woodwork on a 4-year cycle.

- Check that roof ties and any structural bolts or other fixings to roofs, walls and verandas are securely fixed and tightened.
- Check external ceilings for indications of roof leaks, sagging or broken panels, loose cover strips, etc and repair, replace or re-fix as necessary. If leaks are evident, repair roof or roof fixings as necessary.
- Check brickwork walls for cracks, spalling plaster, etc and repair as necessary. Note that large cracks to walls might indicate foundation movement or subsidence and foundations should be investigated immediately and remedial action such as underpinning undertaken if necessary. Small cracks should be monitored to see if they are getting larger which might again indicate foundation problems. In either case get the advice of a properly qualified engineer as soon as possible.
- Check external electrical installations.
- Check walls for cracks, subsidence, lifting screeds, broken or loose tiles, etc and repair or cut out and make good or replace as necessary.
- Mobile classrooms: Check steel cladding for rust and loose fixings and replace or tighten as necessary. Remove all rust and prime exposed steelwork before re-painting.
- Check timber for rot and damage and re-fix, repair or replace.

Inside the buildings:

- Check internal ceilings for indications of roof leaks, sagging or broken panels, loose cover strips, etc and repair, replace or re-fix as necessary. If leaks are evident, repair roof or roof fixings as necessary.
- There should be a panel in the ceiling allowing access to the roof and someone should go into the roof space and check the roof and ceiling timbers for signs of leaks, rot or insect attack. Remove or cut out and replace any affected timber having first treated it against insect attack before it is fixed.
- Check floors for cracks, subsidence, lifting screeds, broken or loose tiles, etc and repair or cut out and make good or replace as necessary.
- Check timber floors for rot and damage and re-fix, repair or replace boards or joists as necessary.
- Check timber wall panels for rot or termite damage and repair, replace, re-paint or touch up as necessary. Prime all new or exposed timber before painting.
- Check skirtings for damage and rot and repair, re-fix or replace as necessary.
- Check that doors are closing and locking properly; check all locks, striking plates, handles, bolts and fixings. Check doors and frames for rot and insect or other damage. Ref-fix, tighten, repair and replace as necessary.
- Check windows and frames for insect and other damage and repair, re-fix or replace as necessary. Check fixings to hinges, bolts and stays and re-fix or tighten as necessary. Replace any broken panes of glass.
- E applicable, check that timber or metal shutters are operating properly. Check frames and panels for rot and damage and repair or replace as necessary. Check hinges, bolts, stays and padlocks and re-fix, tighten and replace as necessary.
- Check that toilets are operating properly and are not blocked. If cisterns are fitted, check flushing mechanisms, ball-cocks, stop-valves, fixings of cisterns, etc. Check all pipes for leaks. Repair or replace any leaking or broken fittings.
- Check that that floor drains, wash-basins and sinks if fitted are operating properly. Check wastes and waste-pipes for blockages and leaks; check taps for faulty washers

and dripping; check fixings of basins and sinks, etc. Check splash-backs for leaks and re-seal as necessary. Repair or replace any leaking or broken fittings.

- Check any water tanks for leaks or damage. Check inside of tanks and clean out if necessary. Check wastes and waste-pipes for blockages and leaks; check taps for faulty washers and dripping. Repair or replace any leaking or broken fittings and seal around top of tank where it meets the wall if necessary.
- Check complete electrical installation for safety. Check that light fittings, ceiling fans and switches are working, switch and socket covers are properly fixed and not damaged and that earth wires and earth rods are properly fixed. If any repairs or replacements are necessary, employ a properly qualified electrician to carry out the work.
- Check chalkboards, whiteboards, pinboards, shelves, worktops, wall tiles and other fixtures and fittings for damage and re-fix, repair or replace as necessary.
- Check furniture for damage and repair or replace as necessary.

Carry out a thorough inspection following the above guidelines after a storm or natural disaster.

The inspection in this case should concentrate on the roof, structural walls and floors and on services, particularly water and electricity supplies.

CHECK LISTS FOR ANNUAL MAINTENANCE CHECKS

ANNUAL MAINTENANCE CHECKS: SCHOOL GROUNDS			
Maintenance Item	Responsibility	Problem	Action Taken
Trim trees and shrubs			
Check for termite nests and remove			
Check storm-drains and outlets for damage			
Check that septic tanks and drains are not full			
Check covers to inspection chambers and septic tanks			
Check soil drains for damage			
Check water pipes and stand-pipes			
Check wells for damage			
Check and maintain hand-pumps			
Check and maintain electric pumps			
Check water tanks and stands			
Check paving round buildings			
Check paths and roads			
Check walls, fences and gates			

ANNUAL MAINTENANCE CHECKS: BUILDINGS EXTERNAL			
BUILDING:			
Maintenance Item	Responsibility	Problem	Action Taken
Check tiled roofs			
Check corrugated steel or fibre-cement roofs			
Check any gutters and down-pipes			
Check all fascia boards			
Check all roof fixings			
Check external ceilings			
Check walls for cracks, damage, etc			
Check veranda floors			
Check external electrical installations			
Steel-framed buildings:			
Check all steel frames			
Check any steel cladding (mobiles)			
Check veranda floors			

ANNUAL MAINTENANCE CHECKS: BUILDINGS INTERNAL			
BUILDING:			
Maintenance Item	Responsibility	Problem	Action Taken
Check ceilings			
Check roof structure			
Check floors			
Check skirtings			
Check doors, frames and hardware			
Check windows, frames and hardware			
Check any shutters			
Check toilets			
Check floor drains, wash-basins and sinks			
Check water tanks			
Check complete electrical installation			
Check chalkboards and other fittings			
Check furniture			

B.6. SCHOOL GROUNDS

The school grounds will require maintenance and the most important areas are:

- Rubbish disposal
- Large trees and shrubs.
- Storm drains around the buildings and around the site.
- Septic tanks and drains.
- Wells and pumps.
- Main water supply pipes, water storage tanks and stands.
- Paving around buildings.
- Paths around the site.
- Retaining walls on the site.
- Fences, walls and entrance gates.

Rubbish disposal

Keep the site neat and tidy. Collect any rubbish and leaves left around the site and burn them and then bury or otherwise dispose of them. Position rubbish bins around the site and empty these regularly and burn or dispose of the rubbish.

Trees, shrubs and vegetation

Keep any grassed areas cut short especially during the rainy season. Keep any planted areas weeded, planted and during the dry season if the school has a good water supply, watered. If the school does not have a dependable water supply then consider planting with drought-resistant plants.

If there is any evidence of termites found at any time in the buildings, then find the nests in the grounds and dig them and out and destroy them.

Do not allow large shrubs and trees to grow close to buildings and trim or cut down any that are growing in close proximity to buildings. Do not allow thick, uncontrolled vegetation to grow on the site as this can harbour the mosquitoes that carry dengue fever.

Storm drains

The storm drains around the buildings and other drains around the site need to be cleaned out every week and the outlets checked for blockages especially during the rainy season.

Inspect the drains for cracks, subsidence and ponding (ie collecting water) and other faults every year. Repair any small cracks using sand/cement mortar (1:3 mix).

If any large cracks or subsidence is found in any of the drains then demolish the affected part and re-build it either with concrete (1:2:4 mix) or with bricks to match the existing.

If areas of the drain retain water and form ponds, then bring them up to level with sand/cement mortar (1:3 mix) using a level or a line, so that the water will drain away.

Fill and level any depressions on the site that can retain water. Any pools of water can breed the mosquitoes that carry malaria.

Soil pipes, septic tanks and French drains

Inspect the lines of the soil pipes from the toilets to the septic every month to make sure that covers to inspection chambers are in place and are not broken and that pipes are not leaking. Replace any broken inspection covers (see Construction Manual) and re-set any loose ones in sand/cement mortar (1:3 mix).

If there is evidence of any leaks in the pipes (wet soil or smells) a plumber should be asked to dig up the pipe and repair it.

Inspect all septic tanks every month to ensure that the tops are not cracked or loose. Replace or re-set any cracked or loose tops using sand/cement mortar. Check the vent pipes to the septic tanks to ensure that they are properly fixed and not blocked.

At some point, the septic tank will fill up and will have to be pumped out by a special tanker.

The French drains will also fill up eventually and will then not allow the water from the septic tanks to drain away. The area of ground around the top of the septic tank will probably become waterlogged and a new soakaway will have to be built and the septic tank connected to it.

Main water supply pipes, water storage tanks and stands

The main water supply pipe and any outside standpipes or taps should be checked every month for leaks. If there are any leaks to pipes they should be repaired as described in plumbing above and similarly any taps that are leaking should have their washers changed or be replaced as described above.

If there is a high-level water storage tank, check this every month for leaks. There may be leaks around the inlet and outlet pipes and if there is, the inlet pipe will have to be turned off, the tank will have to be drained and the pipe or pipes disconnected.

Re-fit the pipes using larger washers and plumbers' tape around the thread of the pipe and sealant around the joint. Note that PVC pipes should not be used for inlet and outlet pipes to high-level water tanks as they are not very strong and will become brittle when exposed to sunlight. Galvanised steel pipes are stronger and will last longer.

Check the tank stand for rust every year and brush down any rusty parts with a steel brush, remove any rust and re-paint the stand with primer where the steel has been exposed and one or two coats of oil paint. Re-paint the whole stand every 4 years maximum and clean out the tank every two years.

Paving around buildings

Check the paving around the buildings every month to see if they have cracked or subsided. Any large cracks or depressions can be dangerous to children and can let water into the foundations.

Small cracks in paving can be made good with mortar (1:3 mix) and larger ones with concrete (1:2:4 mix). If the paving starts subsiding this will probably be because the base that they have been laid on has not been consolidated properly or has been made of soft and unsuitable material. It can however be associated with subsidence of the buildings foundations and this should be checked. If it seems that the foundations are subsiding then a properly qualified engineer should be asked to inspect them.

Retaining walls

If the site slopes, there may be retaining walls constructed to retain the soil around buildings or play areas.

Check the retaining walls every month for cracks that will indicate that the walls are moving or subsiding. If the cracks get bigger and the walls are higher than 1.2 metres, an engineer should be consulted about repairs.

If the walls are lower than 1.2 metres and are more than 3 metres away from any building, they could be taken down very carefully (but not in the rainy season), the soil behind dug out, replaced and well consolidated and the wall re-built (see Construction Manual).

Fences, walls and gates

Check any fences, walls and gates month and repair them as necessary as they are important for security and for keeping out cows, sheep and goats. It is not possible to give details of possible repairs as the construction will vary widely between schools.

However, check any steel fences or gates for rust and re-paint them every 4 years maximum. Oil any moving parts and hinges to steel gates and ensure that they work freely.

Check any steel mesh fences regularly and repair them as necessary. Strengthen or replace as necessary steel posts and tension wires.