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**CHIEF DIRECTORATE:  
PHYSICAL RESOURCE (INFRASTRUCTURE) MANAGEMENT**

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# NORTH WEST SCHOOL INFRASTRUCTURE MAINTENANCE GUIDELINES



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## 1. Introduction

Regarding 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 with maintenance responsibilities must conduct day-to-day and additional responsibilities listed below. District offices should also cover these categories on behalf of Section 20 of the Schools Act.

## 2. Day-to-Day Emergency Maintenance

In collaboration with the Principal, the school governing body is responsible for maintaining 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 they act 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 incidents that necessitate day-to-day maintenance checks.

- Toilet blockages.
- Water leakages, e.g., leaking water pipes, taps, valves, and cisterns.
- Exposed electrical wires.
- Theft.
- Freak conditions, e.g., minor storm damage, riots, or vehicle accidents.

## 3. General Preventative Maintenance

General preventative maintenance is conducted via periodic inspections and preventative maintenance activities, including those steps that contribute to the continued useful 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 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 the stormwater system.
- Servicing and/or upgrading the electrical and intercom systems.
- Reviewing and/or upgrading all specialist function areas.



### 3.1. Roofs, gutters, and downpipes

The state of a building's roof, gutters, and downpipes can be determined quickly by examining them regularly, and these elements should be free of leaves, debris, and other obstructions.

### 3.2. Toilets and Plumbing:

The state of toilets and plumbing (Need To Provide Advice For Non-Water-Borne Systems As Well) is often a matter of concern for the school management since they may be subjected to various causes such as;

- Wash-basin taps left running with the plug-in position.
- Sewage disposal pipes are blocked because toilets are not flushed regularly, various other materials other than toilet paper are used, and a variety of unacceptable items are disposed of through the sewerage system; use the NWED toilet management system.
- Toilet systems are deliberately damaged or vandalised 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.
- Whenever possible, install toilet cisterns on the outside wall, enclosed in ducts, and activated by mechanisms that penetrate the wall.
- Teach learners about the correct usage of toilet facilities and make it clear that strict disciplinary measures will punish any abuse of facilities. 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.

### 3.3. 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 severe that, if an immediate remedy is not available, the consequences may warrant the school's temporary closure, often at a most inconvenient time.

### 3.4. Storm And Rainwater Disposal

Control and monitoring storm and rainwater disposal in buildings, exceptionally long blocks and/or multi-story buildings is essential. If water finds its way down to a building's foundations and footings during a rainfall, it can and often does settle in a minimal 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 essential to regularly check that stormwater drains are not blocked 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 preventive measures may be taken timeously.

### 3.5. 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 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 weather, especially the perpendicular joints (perpends). This permits water penetration with consequent deterioration of the plaster and paintwork.
- Check these joints during the dry season or when something is amiss. Affected pointings should be scraped out and repointed. Only skilled tradesmen should be allowed to do this.

### 3.6. Fire-Fighting Equipment

- "Dry chemical powder" (DCP) pressure cylinders should be strictly controlled annually.
- Suppliers should ensure that the cylinders are serviceable at all times.
- Should the fire-fighting equipment differ from DCP, it should be tested regularly to ensure its effectiveness.

### 3.7. Windows

The state of the 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?

### 3.8. Doors And Locks

Doors and locks are subjected to heavy use and consequent wear and tear, necessitating 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 regularly.



### 3.9. 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 treatment that contains an element that 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, a qualified tradesman may remove the screed between the bordering v-joints and re-screeded.

### 3.10. Wall Surfaces (Other Than Face-Brick)

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

### 3.11. Ceilings

Ceilings require little or no maintenance. A dust layer that settles on top of the ceiling may eventually leave soil marks on the bottom of the ceiling, accentuating the branding.

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

### 3.12. 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 suitable for cement and concrete and prevents cracking due to extreme weather conditions.
- Grass-covered sports fields require extensive care and maintenance. Their condition will depend on the financial position of the school.

### 3.13. Covered Passages (Other Than Floor Surfaces)

Covered passages are subject to natural weathering, damage to columns, roofs, and graffiti. Willful and undisciplined behaviour must be carefully monitored, such as walking and running on galvanised



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.

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

### 3.14. Fixtures And Appliances

The Department provides several 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 closely monitored areas where these fixtures and appliances are present.

### 3.15. 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, defining what is required, and accepting only suitable materials and quality of work.

Therefore, all services required should be clearly defined for competitive tendering. Only recognised 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 willing to assist.

## 4. 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.

### 4.1. Procedures

While the school allocation covers routine planned and unplanned maintenance work, major repairs and maintenance are too expensive for most schools.

In this instance, the NWED district office will assess the request's nature, seriousness, and urgency. If the request warrants an intervention, the NWED district office will dispatch a works inspector to assess the extent of the work. An estimate (job card) will be generated, and a contractor will be appointed to execute the work. Upon completion, a works inspector will assess the work, and the contractor will be paid upon signing off the work by the school principal.





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The SGB will issue a request for service to the district office. The following procedures will be followed towards the 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 school's allocation covers routine planned and unplanned maintenance work, major repairs and maintenance are 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 NWED district office for assistance. In this instance, the NWED district office will assess the request's nature, seriousness, and urgency. If the request warrants an intervention, the NWED district office will dispatch a works inspector to assess the extent of the work. A job card will be generated, and a contractor will be appointed to execute the work. Upon completion, a works inspector will assess the work, and the contractor will be paid upon signing off the work by the school principal.

### 4.2. Procurement And Contracting Arrangements

The following contractual arrangements will be used to streamline the procurement and contracting process:



## Daily, Weekly and Annual School Maintenance Guidelines

- Term contracts for emergency maintenance, water delivery (were 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

### 4.3. Monitoring Framework

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

SGB's: 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 to enable the district to assess the extent to which the maintenance allocation was used.

The district office should compile a report to the district management and Head office indicating the extent to which the maintenance allocation was used.

These reports will also assist the NWED District office in establishing 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)



#### 4.4. 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:

- This year's maintenance or replacement requirements
- The priority level of each maintenance item, the cost of each item, 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 checklists 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 severe problems that the school or community cannot deal with 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. It must be emphasised that action must be taken as soon as a problem is discovered. Minor problems that can be quickly dealt with will become much more significant problems that will be difficult and expensive to deal with if they are not resolved quickly.

#### 4.5. Maintenance funding and accountability

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

The biggest problem to be faced by the maintenance committee will be that of raising sufficient funds to implement the maintenance programme. It will be necessary, therefore, to involve the whole community in fundraising 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 expenditures on maintenance.



The Committee should:

- Set an annual budget (based on the maintenance plan) for maintenance; all expenditures must be based on this budget, and the Committee must approve all expenditures.
- Obtain written quotations 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
- Keep simple but detailed accounts of all expenditures and obtain and keep receipts.

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

## 5. Maintenance Actions and Checklists

### 5.1. General Rules for those using the School.

In collaboration with the parents and SGB, the Committee should develop a list of facility rules. 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 made 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 dampness.
- 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, or 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.



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- 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 for the educators to enforce them.

### 5.2. Daily & Weekly Maintenance Routines

This list of simple daily and weekly maintenance routines 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 and burn the rubbish daily or every week depending upon the amount and bury the ash.

Educators and learners can carry out these routines, and a roster should be organised to share the work fairly.



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DAILY & WEEKLY MAINTENANCE		Week	Responsibility: Class	Action Taken
Maintenance Item				
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				



### 5.3. 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 items listed below can be added as required.

#### On 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 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 no leaks of foul water.
- Check that septic tanks (where applicable) are not complete.
- Check main water supply pipes, outside stand-pipes, and taps for leaks and repair.
- Check that drains are clean and that covers are fixed.
- Check that taps are operating correctly and replace washers and lubricate as necessary.
- Check that any electric pumps are operating correctly
- 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 them as necessary.
- Check external ceilings for damp patches that indicate leaks.
- Remove 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 fixed and not damaged, and 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.



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- 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 correctly fixed, that locks are in working order and that keys have not been lost. Oil hinges handle and lock and adjustable locking plates and bolts as necessary.
- Check that windows are operating correctly. Replace broken panes, oil hinges, check stays, and tighten screws.
- Check that toilets are operating correctly and are not blocked. If overhead cisterns are fitted, check flushing mechanisms, ball-cocks, stop-valves, and fixings of cisterns.
- 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 correctly 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 fitting, ceiling fans, and switches are working, switch and socket covers are correctly fixed and not damaged, and clean light fittings and ceiling fans, as necessary.
- Check furniture for damage and repair or replace it as necessary.

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





Daily, Weekly and Annual School Maintenance Guidelines

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 that septic tanks are not complete.			
Check water pipes and stand-pipes			
Check drains and covers.			
Check taps			
Check electric pumps			
Weed and tidy flowerbeds			



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



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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			



## 5.4. Annual Maintenance Checks

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

### On 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.
- As necessary, check storm drains and outlets for cracks, subsidence, and other damage and repair.
- Check that septic tanks and drains are not complete and if they are empty 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 them as necessary.
- Check main water supply pipes, stand-pipes, and taps for leaks and repair or replace as necessary.
- Check that covers to drains are fixed, not damaged, and replaced, as necessary. Check head walls and concrete surrounds to drains for cracks or damage and repair, as necessary.
- Check that taps, if used, are correctly fixed 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 the tank and clean out if necessary. Repaint tank and stand on a 4-year cycle.
- Check to pave around buildings.
- Check paths and roads within site. Check for subsidence and any surface cracks or damage and repair or replace, as necessary.
- Check walls, fences, and gates for damage and repair or replace them 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, flashings at ridge and eaves, and rust. Paint or replace any damaged sheets or flashings.



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- Check any gutters and down-pipes for blockages, damage, rust, 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. Repaint 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 roof leaks, sagging or broken panels, and loose cover strips and repair, replace or re-fix if leaks are evident—repair roof or roof fixings, as necessary.
- Check brickwork walls for cracks, spalling plaster 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, indicating foundation problems. In either case, get the advice of a suitably qualified engineer as soon as possible.
- Check external electrical installations.
- Check walls for cracks, subsidence, lifting screeds, broken or loose tiles, repair or cut out, and make good or replace, as necessary.
- Mobile classrooms: Check steel cladding for rust and fixings and replace or tighten as necessary. Remove all rust and prime exposed steelwork before repainting.
- Check timber for rot, damage, and re-fix, repair or replace.

### Inside the buildings:

- Check internal ceilings for roof leaks, sagging or broken panels, loose cover strips, etc. and repair, replace or re-fix if leaks are evident, repair roof or roof fixings, as necessary.
- A panel in the ceiling should allow 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., repair or cut out, and make good or replace, as necessary.
- Check timber floors for rot, damage, and re-fix, repair or replace boards or joists, as necessary.
- Check timber wall panels for rot or termite damage and repair, replace, repaint, or touch up, as necessary. Prime all new or exposed timber before painting.
- Check skirtings for damage, rot, and repair, re-fix or replace, as necessary.
- Check that doors are closing and locking correctly; 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.



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- E applicable, check that timber or metal shutters are operating correctly. Check frames and panels for rot, 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 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 the top of the 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 repairs or replacements are necessary, employ a 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 it, 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 services, particularly water and electricity supplies.



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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			



Checklists For Annual Maintenance Checks

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:			





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Check all steel frames					
Check any steel cladding (mobiles)					
Check veranda floors					



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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			



## 5.5. School Grounds

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

- Rubbish disposal
- Large trees and shrubs.
- Storm drains around the buildings and 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. Collect any rubbish and leaves left around the site, 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 watered during the dry season if the school has a good water supply. If the school does not have a dependable water supply, consider planting with drought-resistant plants.

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

Do not allow large shrubs and trees to grow close to buildings, and trim or cut down any growing close 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 must be cleaned weekly, and the outlets checked for blockages, especially during the rainy season.

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

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



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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 ensure 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 monthly 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 septic tanks' vent pipes to ensure they are correctly fixed and not blocked.

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

The French drains will also eventually fill up and will not allow the water from the septic tanks to drain away. The area of ground around the top of the septic tank will 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 outside stand-pipes or taps should be checked monthly for leaks. If there are any leaks to pipes, they should be repaired as described in the plumbing section 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 monthly for leaks. There may be leaks around the inlet and outlet pipes; if there are, 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 pipe's thread 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 strong and will become brittle when exposed to sunlight. Galvanised steel pipes are more robust and will last longer.

Check the tank stand for rust every year, brush down any rusty parts with a steel brush, remove any rust, and repaint the stand with primer where the steel has been exposed and one or two coats of oil paint. Repaint the whole stand every 4 years maximum and clean 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 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 be because the base they have been laid on has not been appropriately consolidated or made of soft and unsuitable material. It can be associated with subsidence of the building's foundations, which should be checked. If the foundations are subsiding, a properly qualified engineer should be asked to inspect them.

### **Retaining walls**

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

Check the retaining walls monthly for cracks that indicate that the walls are moving or subsiding. If the cracks get bigger and the walls exceed 1.2 metres, an engineer should be consulted about repairs.

In the case of walls lower than 1.2 metres and 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 essential for security and keeping out cows, sheep, and goats. It is impossible to give details of repairs as the construction will vary widely between schools.

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

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

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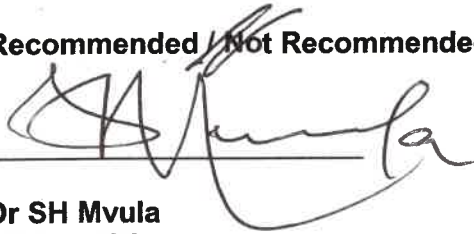


15 MAY 2024

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**Mr. M.P.S. Makwela**  
Chief Director  
Infrastructure Management

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Date

**Recommended / Not Recommended by:**

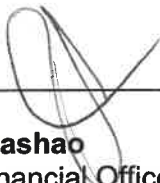


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**Dr SH Mvula**  
DDG: IMGS  
North West Department of Education

20/5/24  
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Date

Comments:  
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**Recommended / Not Recommended by:**



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**Mr. H Mashao**  
Chief Financial Officer  
North West Department of Education

23/5/24  
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Date

Comments:  
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**Approved / Not Approved by:**



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**Mr. M. Sheshibe**  
Acting Head of Department  
North West Department of Education  
Comments:  
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27-05-2024  
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