

## APPENDIX A-XI

### MAINTENANCE AS A TOOL FOR MITIGATION

This Appendix is based on the work of Alwyn T Wason

#### 6 Checklist and Frequencies for Maintenance Operations

Three tables are presented covering:

- The building interior;
- The building exterior;
- The compound.

The following abbreviations are used in the tables

Frequency	Operator
<b>I:</b> Immediately	<b>C:</b> General cleaners
<b>D:</b> Daily	<b>MS:</b> Maintenance staff
<b>W:</b> Weekly	<b>SS:</b> Hospital Superintendent
<b>Q:</b> Quarterly	<b>SA:</b> Hospital Administrator
<b>A:</b> Annual	<b>G:</b> Gardener

- Notes: 1 For **frequency** the maximum period is given.  
2 For **operator** the person named is the one responsible for seeing that the operator is carried out.

##### 6.1 Building Interior

Spaces	Frequency	Operator
<b>Washrooms and Toilet</b>		
Inspect and report deficiencies	D	C/MS
Wash floors, toilet bowls, urinals, wash basins with disinfectant and deodorant	D	C
Order replacements	I	SS/SA
Replace broken elements	Q	MS
Repair	I	SS
Paint	A	MS

<b>Corridors and Wards</b>		
Inspect and report deficiencies	D	C
Wash walls	W	C
<b>Ceilings, Interior Roofs, Canopies</b>		
Inspect and report deficiencies	A	MS
Repaint	Every 4 weeks	MS
<b>Laboratories and other Technical Areas</b>		
Clean all counters. Floors and walls	D	MS
<b>Plumbing</b>		
Inspect and report deficiencies	D	MS
Repair or replace defective pieces	I	SS
<b>Internal Communication System</b>		
Inspect all internal communications to ensure that the system is functioning properly and report defects.	Q	SS
<b>Electricity</b>		
Inspect electricity wiring on a room by room basis and report deficiencies.	Q	MS
<b>Furniture</b>		
Repair or replace broken elements	A	MS

## 6.2 Building Exterior

Spaces/Materials	Frequency	Operator
<b>Wood</b>		
Inspect panels, louvers, railings and Report deficiencies	A	MS
Replace all broken wood louvers	D	SS
Replace other damaged elements	Q	SS
Clean and paint marked surfaces	A	MS

<b>Windows</b>		
Inspect and report deficiencies	D	MS
Remove broken glass louvers or panes (see above also)	I	MS
Order replacement s for broken glass And other elements	I	SS
Replace broken elements	Q	MS
Grease and oil louvre operators or handles	A	MS
Replace broken wire –mesh grills	Q	SS/MS
Wash windows	Q	C/MS
<b>Doors and Frames and Partitions</b>		
Inspect and repot deficiencies	Q	MS
Oil hinges etc.	A	MS
Replace defective and broken hardware	I	SS
Repair or replace defective doors and / or frames	I	SS
<b>Stairs and Balconies</b>		
Sweep stairs and balconies	D	C
Wash stairs, walls and rails	Q	C
Clean metal work of rust and coat with primer and paint	A	MS
Sand and paint wood railings or posts	Every 2 years	MS
<b>Roofs and Gutters</b>		
Inspect and report deficiencies	A	MS
Repair and replace roof sheets and gutters as required	W	SS
<b>Metal Panels</b>		
Inspect	A	MS
Wash and remove graffiti	A	MS
Clean rust and repaint	Every 2 years	MS

### 6.3 Compound

<b>Spaces/Materials</b>	<b>Frequency</b>	<b>Operator</b>
<b>Gardening</b>		
Clean flower beds	W	G
Watering and fertilise plants	D	G
Remake plant beds	Q	G
Prune plants, trim hedges	M	G
Grass playing fields	As required	G
Cut grass	W	G
<b>Fence</b>		
Inspect and report deficiencies	Q	MS
Repair	Q	MS
Paint	every 2 years	MS
<b>Walkways and Courtyards</b>		
Sweep	D	C
Clear litter and rubbish	D	C
<b>Drainage Ditches</b>		
Clean routinely	W	C
Clear blockages caused by excessive rain	I	MS
Repair damage drains	A (in August)	MS
<b>Water Mains</b>		
Inspect and report deficiencies	Q	MS
Maintain earth cover	Q	MS
Repair breaches/leaks	I	MS
<b>Septic Tank</b>		
Inspect and report deficiencies	A (In August)	MS
Clean and flush out	Every 4 years	MS
Repair	I	SS
<b>Erosion near Structures</b>		
Inspect and report deficiencies after heavy rainfall	Q and as required	MS
Return soil, grass area, re-direct water source	Q and as required	MS
Repair eroded area	I	SS
<b>Rubbish Bins</b>		
Empty drums and burn (or carry away) rubbish	D	C
Inspect and replace bins if necessary	A	MS

**7 Proposal Monthly Report Form**

To: Hospital Administrator

Report of the Maintenance Division

For the month of: .....

Submitted by: .....

Date: .....

Trade	Area or Class	Work done	Material Cost	Labour Cost	Remarks
<b>Carpentry</b> Doors Windows Roof Floors					
<b>Masonry</b>					
<b>Electricity</b>					
<b>Plumbing</b>					
<b>Painting</b>					
<b>Other trades</b>					

**8 Guidelines for Maintenance Checklists**

In reporting deficiencies, the maintenance staff or handyman should be guided by the following *aides-memoire*. It should be noted that the guides which are given here are not intended to be exhaustive. They will, however, focus inspection on the critical areas.

<b>Spaces/Materials</b>	<b>Good</b>	<b>Bad</b>
<p>(a) Washrooms and Toilets</p> <ul style="list-style-type: none"> <li>• Check to see if the walls are cracked</li> <li>• Where the walls are made of rubble stone see if mortar is in good condition</li> <li>• Check to see if items such as soap holders and toilet paper holders are in place and are in working order</li> </ul>	<p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p>
<p>(b) Corridors and Wards</p> <ul style="list-style-type: none"> <li>• Examine the floors to see if the concrete has been damaged in any way so that persons walking in the corridors or wards may trip</li> <li>• Check to see if the walls are damaged and need repairing</li> </ul>	<p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p>
<p>(c) Ceilings, Interior Roofs, and Canopies</p> <ul style="list-style-type: none"> <li>• See if the ceilings and the undersides of the roofs and canopies have any watermarks which indicate leaks in the roof</li> <li>• See if any timber supports are rotten</li> <li>• Where the roof supports are of steel, check to see if there is any rust</li> <li>• See if any ceiling tiles need replacing</li> </ul>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

<b>Spaces/Materials</b>	<b>Good</b>	<b>Bad</b>
<p>(d) Plumbing</p> <ul style="list-style-type: none"> <li>• Check to see if there is any water on the floor</li> <li>• If there is, examine the wash basin to see if it is plugged</li> <li>• Examine the WC to see if the bowl is cracked</li> <li>• See if the tank is cracked</li> </ul>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

<ul style="list-style-type: none"> <li>• Check to see if the toilet seat cover is broken</li> <li>• See if the flush handle or pull chain is broken</li> <li>• See if toilet bowl is fixed properly to the floor so that it does not rock when being used</li> <li>• See if the sewer pipe is properly fixed to the toilet and that there is no leaking at the joint</li> </ul>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>(e) Electricity</p> <ul style="list-style-type: none"> <li>• See if all light bulbs are working and that all are in place</li> <li>• See if the wall plates are in good condition</li> <li>• See if the wall switches or pull switches are working</li> <li>• See if wall outlets are working</li> </ul>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>(f) Windows</p> <ul style="list-style-type: none"> <li>• See if the windows can close securely</li> <li>• See if the window operators are in good condition and are working</li> <li>• See if the bolts and locks are in working condition</li> <li>• See if the timber surrounding the windows is rotten and should be replaced</li> <li>• See if the windows leak even when closed</li> </ul>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

Space/Material	Good	Bad
<p>(g) Doors and Frames and Partitions</p> <ul style="list-style-type: none"> <li>• See if the doors can close properly</li> <li>• See if the bolts and locks are in place and are working</li> <li>• See if the door frame is in good condition and that the timber is not rotten</li> </ul>	<p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p>

<ul style="list-style-type: none"> <li>• Where the door is a wood door (brace and batten) see that the door has not warped</li> <li>• Check the partitions to see if the walls are in good condition</li> <li>• Report any loose mortar in a rubble wall</li> <li>• Report any cracked wall</li> </ul>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>(h) Roof and Gutters</p> <ul style="list-style-type: none"> <li>• Check roofs for leaks</li> <li>• Check gutters for holes</li> <li>• Check gutter brackets to see if they are broken or rusted</li> </ul>	<p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p>
<p>(i) Fence</p> <ul style="list-style-type: none"> <li>• With a chain link fence, check to see if the fence is broken</li> <li>• See if the fence posts are firmly in the ground</li> <li>• With a timber fence, check for rotten timber</li> </ul>	<p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p>
<p>(j) Water mains</p> <ul style="list-style-type: none"> <li>• Check ground to see if there are any wet spots which would indicate a leaking water main</li> </ul> <p>See if the water main is properly buried beneath the ground, or is well protected by concrete</p>	<p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p>



<b>Spacers/Materials</b>	<b>Good</b>	<b>Bad</b>
<p>(k) Septic tank</p> <ul style="list-style-type: none"> <li>• Check to see if the tank has been cleaned in the last three years</li> </ul> <p>See if the access covers fit properly, are in good condition and can be removed for cleaning</p> <p>If the access covers can be opened too easily, members of the public may remove the covers willfully</p> <p>See if the holders for the covers will cause people to trip. The holder should be recessed with just enough room for a pickaxe blade to get under the holder.</p> <p>See if the inlet pipe is firmly fixed to the tank and that there is no leak</p> <p>Where there is a soak-away check to see if the pipe to the soak-away is firmly bedded</p> <p>See if there is any odour around the tank. If there is, the tank needs cleaning or another soak-away should be dug</p> <p>Where there are tile fields, check to see if the pipes (tiles) are exposed. They should be well below ground level</p> <p>See if the tiles are working and that there is no water on the ground around the pipes</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>(l) Erosion near Structures</p> <ul style="list-style-type: none"> <li>• Examine the ground around the buildings to see if the rain water has removed any material - soil or stones</li> </ul> <p>Check around the pipes to see if the pipes that were buried are still properly buried</p> <p>Check around telephone or electricity poles on the property to see whether the rain water has removed soils around the bottom of the poles</p>	<p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p>

