INTRODUCTION
This plan contains the contingency procedures for the Mid-Western Regional General Hospital Technical Services Department / Estate Maintenance Department in relation to failure of all or part of plant and equipment under the...
control of the Technical Services Department / Estate Maintenance Department. This plan contains procedures specific to the Regional General Hospital. The Regional General Hospital is a 450 bed acute hospital.

These procedures aim to provide an operational structure to eliminate, as far as possible, emergencies from plant failures in the hospital.

The philosophy adopted by the Technical Services Department / Estates Maintenance Department is that problems arising from plant or equipment failure will not cause patients to be decanted out—with from the hospital and that the hospital will remain open and in operation. The contingency plan procedures provide work-around solutions, where possible, including services going independent or manual.

This document contains the following procedures for the Technical Services Department / Estates Maintenance Department:

- Procedures for going manual / independent on plant and equipment
- Procedures for failure of system to operate
- Procedures for resuming normal operations

There are systems within the hospital under the control of the Technical Services Department / Estates Maintenance Department, considered to be hospital wide i.e. serving the site. The Technical Services Department / Estates Maintenance Department will be prepared to discharge normal operations and provide continued service and operation of equipment under the department’s control.

Such systems include:

- Sterilizers
- Laundry, Catering & Critical Air Conditioning
- Medical Gases
- Lifts
- BMS and Boilers
- Fire, Security and Nurse Call
- Utilities
- Communications
- Medical Physics

The contingency procedures are contained within Section 2- Hospital Wide Systems.

**Action Cards**

Action Cards will be included as Section 4. Action Cards will define the actions required by the Technical Services Department / Estates Maintenance Department to ensure equipment is fixed in a timely manner.

All action cards will be dated and controlled. The Action Cards will be held in the services office.
Scope
The procedure applies to the Mid-West Regional General Hospital only.

Responsibility
It is the responsibility of the Technical Services Department to ensure this procedure is implemented.

PROCEDURE

Hospital Wide Systems

1.0 INTRODUCTION & DESCRIPTION

1.1 Hospital wide systems are those fixed supply systems fitted throughout the site and common to many departments these include the following:
- Sterilizers
- Laundry
- Catering
- Air Conditioning
- Medical Gases
- Lifts
- BMS & Boilers
- Fire
- Security
- Nurse Call
- Utilities
- Communications
- Medical Equipment

1.2 Some of the above systems are, for the purposes of this plan, considered to be site wide as well as departmental therefore there are procedures in place for Estates Maintenance Department services on a site wide basis as well as reference to individual departments. These areas include:
- Laundry
- Medical Gases
- Lifts
- Fire
- Security
- Nurse Call
- Utilities
2.0 STERILISERS
This part contains contingency procedures for the sterilisers at the Mid-Western Regional Hospital.
Refer to Section 4 for Action Cards.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with sterilisers.

2.1 LOCATION OF EQUIPMENT

<table>
<thead>
<tr>
<th>Asset ID</th>
<th>Equipment</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10133</td>
<td>PACS 2000 Autoclave</td>
<td>C.S.S.D.</td>
</tr>
<tr>
<td>10216</td>
<td>PACS 2000 Autoclave</td>
<td>C.S.S.D.</td>
</tr>
<tr>
<td>10273</td>
<td>PACS 2000 Autoclave</td>
<td>C.S.S.D.</td>
</tr>
<tr>
<td>12384</td>
<td>Disinfecter8666 Washer/Dryers</td>
<td>C.S.S.D.</td>
</tr>
<tr>
<td>10203</td>
<td>Disinfecter8666 Washer/Dryers</td>
<td>C.S.S.D.</td>
</tr>
<tr>
<td>12383</td>
<td>Disinfecter8666 Washer/Dryers</td>
<td>C.S.S.D.</td>
</tr>
<tr>
<td>12382</td>
<td>Medisafe Instrument cleaner</td>
<td>C.S.S.D.</td>
</tr>
<tr>
<td>12386</td>
<td>Getinge Dryer</td>
<td>C.S.S.D.</td>
</tr>
<tr>
<td>10958</td>
<td>Falcon 30 Autoclave</td>
<td>Microbiology/Media</td>
</tr>
<tr>
<td>10941</td>
<td>Kestrel Autoclave</td>
<td>Microbiology</td>
</tr>
<tr>
<td>10218</td>
<td>Boxer 400L Autoclave</td>
<td>Microbiology</td>
</tr>
</tbody>
</table>

2.2 TYPE OF SYSTEM
There are two types of electrically powered autoclaves in the Regional Hospital:

1. Autoclaves that need an external steam and air supply, such as those in C.S.S.D.

2. Autoclaves that have an internal steam boiler, such as those in Microbiology.

Washer/dryers: The washer/dryers are electrically powered but require an external steam supply.

The Medisafe instrument cleaner is an ultrasonic system and the Getinge dryer works on a hot air system.

2.3 DESCRIPTION OF SYSTEM
C.S.S.D. Autoclaves
The autoclave cycle is based on a system of electrical supply, compressed air, vacuum and steam.
A vacuum pump which is part of the machine is used to pull the air from the chamber to create a vacuum.

Steam is then fed into the chamber which contains the pack to be sterilised until the chamber is full of steam. It is the high temperature of the steam that brings the temperature in the chamber up to the required sterilizing temperature.

Compressed air is used to enable the solenoid valves to operate at different stages of the cycle. It is also used to operate the door through means of a pneumatic cylinder.

The autoclaves can run on a few different cycles.

**Microbiology autoclaves**
The cycle of these autoclaves is similar to above but they have an internal steam boiler and do not need a compressed air supply.

**Washer/dryers**
The washer/dryers are used to wash and dry used instruments before they are wrapped to be autoclaved.

Steam is required to heat the water to the required temperatures and the cycle is controlled electrically.

These can be run on different cycles.

Getinge dryer: This is used for drying instruments. It is based on a system of hot air heated by electric elements being circulated by fans. It can be set to different drying temperatures.

**Instrument cleaner**
Medisafe instrument cleaner: This is used for cleaning small instruments and is based on ultrasonic principles.

2.4 **DESCRIPTION OF BACKUP SYSTEM**

If an individual autoclave or washer/dryer fails there are others that can be used as each machine operates separately.

2.5 **NUMBER AND TYPE OF SUPPLIES FEEDING SYSTEMS**

There are two Steam generators (Beevor and Wee Chieftan) feeding the autoclaves.

There are two Air compressors (Hydrovane) feeding the autoclaves.

Electrical supply is fed from S.S.D. distribution board.

Autoclaves in Microbiology are fed from local distribution board.

2.6 **ACTION CARDS**

Refer to the following Action Cards in relation to Sterilisers

- **ACTION CARD NO. 1** - Failure
- **ACTION CARD NO. 2** - Repair
- **ACTION CARD NO. 3** – Resuming Normal Operations
3.0 CATERING
This part contains contingency procedures for the Estates Maintenance Department in relation to catering services at Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.

3.1 LOCATION OF SYSTEM
The Mid-Western Regional Hospital has the following catering equipment in the Main kitchen.

<table>
<thead>
<tr>
<th>ASSET ID</th>
<th>EQUIPMENT</th>
<th>SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>12112</td>
<td>Blender</td>
<td>CFS</td>
</tr>
<tr>
<td>10704</td>
<td>Boiling Pot</td>
<td>CFS</td>
</tr>
<tr>
<td>12191</td>
<td>Boiling Pot</td>
<td>CFS</td>
</tr>
<tr>
<td>10748</td>
<td>Bratt pan</td>
<td>CFS</td>
</tr>
<tr>
<td>10172</td>
<td>Bratt pan</td>
<td>CFS</td>
</tr>
<tr>
<td>10095</td>
<td>Deep Fat Fryer</td>
<td>CFS</td>
</tr>
<tr>
<td>10152</td>
<td>Deep Fat Fryer</td>
<td>CFS</td>
</tr>
<tr>
<td>10745</td>
<td>Dishwasher</td>
<td>Masser Hammond</td>
</tr>
<tr>
<td>10712</td>
<td>Distribution Board</td>
<td>Est Maint Dept</td>
</tr>
<tr>
<td>12832</td>
<td>Distribution Board</td>
<td>Est Maint Dept</td>
</tr>
<tr>
<td>13205</td>
<td>Food Prep</td>
<td>CFS</td>
</tr>
<tr>
<td>12114</td>
<td>Food Trolley</td>
<td>CFS</td>
</tr>
<tr>
<td>10097</td>
<td>Freezer</td>
<td>CROSS</td>
</tr>
<tr>
<td>10236</td>
<td>Freezer</td>
<td>CROSS</td>
</tr>
<tr>
<td>10250</td>
<td>Freezer</td>
<td>CROSS</td>
</tr>
<tr>
<td>10259</td>
<td>Freezer</td>
<td>CROSS</td>
</tr>
<tr>
<td>10719</td>
<td>Freezer</td>
<td>CROSS</td>
</tr>
<tr>
<td>12855</td>
<td>Freezer</td>
<td>CROSS</td>
</tr>
<tr>
<td>13206</td>
<td>Freezer Chest</td>
<td>Kelly refrig</td>
</tr>
<tr>
<td>10238</td>
<td>Fridge</td>
<td>CROSS</td>
</tr>
<tr>
<td>10395</td>
<td>Fridge</td>
<td>CROSS</td>
</tr>
<tr>
<td>10713</td>
<td>Gas Alarm Detection System</td>
<td>Est Maint Dept</td>
</tr>
<tr>
<td>10067</td>
<td>Hob</td>
<td>CFS</td>
</tr>
<tr>
<td>10094</td>
<td>Mixer</td>
<td>CFS</td>
</tr>
<tr>
<td>10716</td>
<td>Mixer</td>
<td>CFS</td>
</tr>
<tr>
<td>12113</td>
<td>Mixer</td>
<td>CFS</td>
</tr>
<tr>
<td>10736</td>
<td>Mixer</td>
<td>CFS</td>
</tr>
<tr>
<td>13208</td>
<td>Motorised Trolley</td>
<td>CFS</td>
</tr>
<tr>
<td>10706</td>
<td>Oven</td>
<td>CFS</td>
</tr>
<tr>
<td>10715</td>
<td>Oven</td>
<td>CFS</td>
</tr>
<tr>
<td>10724</td>
<td>Oven</td>
<td>CFS</td>
</tr>
<tr>
<td>10725</td>
<td>Oven</td>
<td>CFS</td>
</tr>
</tbody>
</table>
3.2 DESCRIPTION OF SYSTEM
The catering equipment consists of food storage, preparation, cooking and cleanup equipment. The failure of an individual item is rarely critical as there are a number of similar items that can be used to supplement another.
The equipment in the Main Kitchen is supplied by electricity and/or gas. If a piece of equipment fails to operate, the Estates Maintenance Department should be contacted. They will do an initial check on the supplies and contact the appropriate service company if the fault lies in the equipment itself.
If a Cold Room or Freezer fails, while waiting for repair, catering staff should monitor its internal temperatures. The contents should be moved to another freezer/cold room if the temperature rises above the appropriate level.

3.3 NO. AND TYPE OF SUPPLIES
All kitchen equipment is electrically supplied from the Kitchen Distribution Boards, located in a press at the canteen side of the kitchen.
Gas is supplied to the kitchen through a slam shut valve and a gas detection system is fitted in the kitchen area to detect any leaks.

3.4 ACTION CARDS
Refer to the following Action Cards in relation to Catering
ACTION CARD NO. 4 - Failure
ACTION CARD NO. 5 - Repair
ACTION CARD NO. 6 – Resuming Normal Operations
4.0 MEDICAL GASES
This part contains contingency procedures for the medical gases at the Mid-Western Regional Hospital.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with medical gases.

4.1 LOCATION OF SYSTEM
The medical gas system has equipment in the following locations:

<table>
<thead>
<tr>
<th>ASSET ID</th>
<th>EQUIPMENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>10034</td>
<td>Vacuum plant</td>
<td>Vacuum plant room</td>
</tr>
<tr>
<td>12746</td>
<td>Air receiver(surgical air)</td>
<td>Phase 1 plant room</td>
</tr>
<tr>
<td>12742</td>
<td>Compressor(surgical air)</td>
<td>Phase 1 plant room</td>
</tr>
<tr>
<td>12745</td>
<td>Air receiver(medical air)</td>
<td>Phase 1 plant room</td>
</tr>
<tr>
<td>10658</td>
<td>Compressor(medical air)</td>
<td>Phase 1 plant room</td>
</tr>
<tr>
<td>10675</td>
<td>Compressor(medical air)</td>
<td>Phase 1 plant room</td>
</tr>
<tr>
<td>12865</td>
<td>Air receiver(vacuum)</td>
<td>Phase 1 plant room</td>
</tr>
<tr>
<td>12866</td>
<td>Air receiver(vacuum)</td>
<td>Phase 1 plant room</td>
</tr>
<tr>
<td>12867</td>
<td>Vacuum pump</td>
<td>Phase 1 plant room</td>
</tr>
<tr>
<td>12868</td>
<td>Vacuum pump</td>
<td>Phase 1 plant room</td>
</tr>
<tr>
<td>12869</td>
<td>Vacuum pump</td>
<td>Phase 1 plant room</td>
</tr>
<tr>
<td>13566</td>
<td>Nitrous oxide manifold</td>
<td>Vacuum plant room</td>
</tr>
<tr>
<td>13564</td>
<td>VIE</td>
<td>VIE compound</td>
</tr>
<tr>
<td>13563</td>
<td>Oxygen manifold</td>
<td>VIE compound</td>
</tr>
</tbody>
</table>

4.2 TYPE OF SYSTEMS
The vacuum plant that serves the old hospital consists of one air receiver and three vacuum pumps (one duty, and two stand-by).
The vacuum plant that serves phase one and phase two consists of two air receivers and three vacuum pumps (one duty and two stand-by).
There is one medical air plant that serves the whole hospital and this consists of one air receiver and two compressors (duty and standby) The surgical air plant consists of one air receiver and one compressor. Nitrous oxide is fed from a manifold with a duty and standby and oxygen is fed from the VIE with a backup manifold. AGGS pumps are used to extract anaesthetic gases.

4.3 DESCRIPTION OF SYSTEMS
The following piped medical gases are in use at the Mid-Western Regional Hospital:

- Medical oxygen
- Nitrous Oxide
- Medical Air (Respirable at 4 Bar).
- Surgical Air (Power tools at 7 Bar)
- Medical Vacuum
- Anaesthetic gas scavenging.

They are supplied from the following plant and equipment.

**Oxygen**
V.I.E. with stand-by manifold serving whole site.

**Nitrous Oxide**
Duty and stand-by manifold serving whole site.

**Medical Air**
(Respiratory at 4 Bar) Two compressors - duty and stand-by. One air receiver. Drier and manifold.

**Surgical Air**
(Power tools at 7 Bar) one compressor, one receiver and Drier

**Medical Vacuum**
3 Vacuum pumps selected as 1 duty and 2 as stand-byes, serving Phase 1 & 2.

**Medical Vacuum**
3 Vacuum pumps selected as 1 duty and 2 as stand-byes, serving old hospital.

The Status of the above plant and equipment is monitored. It's present status and alarms are fed back to two (2) panels located in the main reception. Wards and departments have local low-pressure alarms.

### 4.4 DESCRIPTION OF BACKUP SYSTEM

Each of the piped medical gases has a backup system:

**Oxygen**
If the VIE goes low it will alarm and switch over to the backup manifold. This manifold consists of two sections allowing cylinders to be changed as they discharge.

**Nitrous Oxide**
If the Nitrous oxide goes low it will alarm and switch to the standby manifold. Cylinders can then be changed.

**Medical Air**
If the medical air goes below 4 bar it will alarm and switch to the standby compressor

**Surgical Air**
There is not any back up to this system.
Medical Vacuum  If vacuum goes low it will alarm and switch to standby pump

4.5 SUPPLIES FEEDING SYSTEMS
Compressors and vacuum pumps are fed from a three-phase electrical supply.

4.6 ACTION CARDS
Refer to the following Action Cards in relation to Medical Gases

ACTION CARD NO. 7 - Failure
ACTION CARD NO. 8 - Repair
ACTION CARD NO. 9 – Resuming Normal Operations
5.0 LIFTS
This part contains contingency procedures for the Lifts at the Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with lift equipment.

5.1 LOCATION OF SYSTEMS
There are 8 lifts serving the Mid-Western Regional Hospital.

<table>
<thead>
<tr>
<th>Asset ID</th>
<th>Lift</th>
<th>Lift Type</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>13575</td>
<td>Lift No 1</td>
<td>Bed/Pass</td>
<td>Surgical Lift</td>
</tr>
<tr>
<td>13576</td>
<td>Lift No 2</td>
<td>Bed/Pass</td>
<td>Surgical Lift</td>
</tr>
<tr>
<td>13578</td>
<td>Lift No 3</td>
<td>Bed/Pass</td>
<td>Medical Lift</td>
</tr>
<tr>
<td>13577</td>
<td>Lift No 4</td>
<td>Bed/Pass</td>
<td>Medical Lift</td>
</tr>
<tr>
<td>13580</td>
<td>Lift No 5</td>
<td>Bed/Pass</td>
<td>Phase 1</td>
</tr>
<tr>
<td>13581</td>
<td>Lift No 6</td>
<td>Bed/Pass</td>
<td>Phase 1</td>
</tr>
<tr>
<td>13579</td>
<td>Lift No 7</td>
<td>Passenger</td>
<td>Medical Records Lift</td>
</tr>
<tr>
<td>13574</td>
<td>Lift No 8</td>
<td>Passenger</td>
<td>Nurses Home</td>
</tr>
</tbody>
</table>

5.2 TYPE OF SYSTEM
Seven of the lifts are of the rope type. The lift in the Nurses home is a hydraulic lift.

5.3 DESCRIPTION OF SYSTEM
All bed/passenger lifts have alarm plus intercom for passenger safety. The hospital has 6 no. bed/passenger lifts fitted with the alarm and intercom system that when activated will contact security. The medical records lift has a local alarm only and the lift in the Nurses home has an alarm and intercom system that when activated will contact main reception.

5.4 DESCRIPTION OF BACKUP SYSTEM
There is not any backup to the lift system. Use alternative lift or stairs.

5.5 NUMBER AND TYPE OF SUPPLY FEEDING SYSTEM
There is one three-phase electrical supply feeding each lift.

5.6 ACTION CARDS
Refer to the following Action Cards in relation to Lifts

**ACTION CARD NO. 10 - Failure**
**ACTION CARD NO. 11 - Repair**
**ACTION CARD NO. 12 – Resuming Normal Operations**
6.0 BOILERS
This part contains contingency procedures for the Estates Maintenance Department equipment in the boiler-house at Mid-Western Regional Hospital.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with Boilers.

6.1 LOCATION OF SYSTEMS

<table>
<thead>
<tr>
<th>Asset No.</th>
<th>Location</th>
<th>Boiler Type</th>
<th>Burner Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>11408</td>
<td>Main Plant Room</td>
<td>Ignis</td>
<td>Riello RLS 130</td>
</tr>
<tr>
<td>10013</td>
<td>Main Plant Room</td>
<td>Hoval</td>
<td>Riello RLS 70</td>
</tr>
<tr>
<td>12417</td>
<td>Main Plant Room</td>
<td>Buderaus</td>
<td>Riello RS 100</td>
</tr>
<tr>
<td></td>
<td>Phase 1</td>
<td>Buderaus</td>
<td>Riello RLS 70</td>
</tr>
<tr>
<td>10026</td>
<td>Phase 1</td>
<td>Ideal Concord Super Series 4</td>
<td></td>
</tr>
<tr>
<td>10018</td>
<td>Phase 1</td>
<td>Ideal Concord Super Series 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phase 2</td>
<td>Buderaus</td>
<td>Riello RLS 100</td>
</tr>
<tr>
<td>10026</td>
<td>CSSD</td>
<td>Beel</td>
<td>Riello RLS 50</td>
</tr>
<tr>
<td>11910</td>
<td>Oncology unit</td>
<td>Buderaus Logano</td>
<td>RLS 28</td>
</tr>
<tr>
<td>11912</td>
<td>Oncology unit</td>
<td>Buderaus Logano</td>
<td>RS 28</td>
</tr>
<tr>
<td>12396</td>
<td>5B Boiler House</td>
<td>Ygnis</td>
<td>Riello RSs 50</td>
</tr>
<tr>
<td>13927</td>
<td>Ambulance Centre</td>
<td>Buderaus</td>
<td>RL 28</td>
</tr>
<tr>
<td>13932</td>
<td>Ambulance Centre</td>
<td>Old Boiler</td>
<td>Riello</td>
</tr>
</tbody>
</table>

6.1 TYPE OF SYSTEM
The boilers operate in a Low Pressure Hot Water System. The minimum requirement for the boilers is to maintain the steam, hot water and heating capability to the hospital site.
6.2 **DESCRIPTION OF SYSTEM**
The boilers serving the various locations listed heat water to a temperature determined by the BMS which in turn provides hot water to the radiator system, AHU’s and calorifiers.

6.3 **DESCRIPTION OF BACKUP SYSTEM**
There are gas fired and dual fired boilers serving the Mid-Western Regional Hospital. Each section has a dual fuelled boiler which will be operated on oil in the event of a mains gas failure.

6.4 **ACTION CARDS**
Refer to the following Action Cards in relation to Boilers

- **ACTION CARD NO. 13** - Failure
- **ACTION CARD NO. 14** - Repair
- **ACTION CARD NO. 15** – Resuming Normal Operations
7.0 BMS (Building Management System)
This part contains contingency procedures for the Estates Maintenance Department BMS system at Mid-Western Regional Hospital.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with BMS.

7.1 LOCATION OF BMS

<table>
<thead>
<tr>
<th>Asset No.</th>
<th>Location</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>7492</td>
<td>Tech Services Foremans Office</td>
<td>BMS Computer</td>
</tr>
</tbody>
</table>

7.2 TYPE OF SYSTEM
This system allows electronic control of the boilers, air conditioning and heating and ventilation.

7.3 DESCRIPTION OF BMS SYSTEM
The BMS controls the operation of the following systems on a remote computer.
- Boilers
- Air Conditioning
- Heating and Ventilation

There is a facility to adjust temperature set-points of the systems and the BMS can in return control three way valves and boilers to achieve these desired set-points. The system holds historical records for all sensors connected to the system. The system provides a graphical layout of all interfaced systems and sub-systems.

7.4 DESCRIPTION OF BMS BACKUP SYSTEM
There is no backup to the BMS rather than to switch from auto to hand on the various control panels.

7.5 ACTION CARDS
Refer to the following Action Cards in relation to BMS
- ACTION CARD NO. 16 - Failure
- ACTION CARD NO. 17 - Repair
- ACTION CARD NO. 18 – Resuming Normal Operations
8.0 FIRE ALARM SYSTEM
This part contains contingency procedures for the Estates Maintenance Department responsibilities in relation to fire alarm detection at The Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with fire alarm detection equipment.

8.1 LOCATION OF SYSTEM
The fire detection system has equipment in the following locations:

<table>
<thead>
<tr>
<th>Asset ID</th>
<th>Equipment</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10905</td>
<td>CPU 1</td>
<td>OPD Reception</td>
</tr>
<tr>
<td>10016</td>
<td>CPU 2</td>
<td>OPD Reception</td>
</tr>
<tr>
<td>10030</td>
<td>CPU 3</td>
<td>Basement</td>
</tr>
<tr>
<td>14545</td>
<td>CPU 4</td>
<td>Paediatrics</td>
</tr>
<tr>
<td>10999</td>
<td>CPU 5</td>
<td>Basement</td>
</tr>
<tr>
<td>13614</td>
<td>CPU 6</td>
<td>Oncology</td>
</tr>
<tr>
<td>10033</td>
<td>CPU 7 MASTER</td>
<td>Basement</td>
</tr>
<tr>
<td>10931</td>
<td>Master Repeater</td>
<td>Main Hospital Reception</td>
</tr>
<tr>
<td>10770</td>
<td>Master Repeater</td>
<td>A &amp; E Reception</td>
</tr>
</tbody>
</table>

8.2 TYPE OF SYSTEMS
Regional = Siemens/Morley addressable.
Ambulance Centre = Analogue system.

8.3 DESCRIPTION OF SYSTEMS
The Mid-Western Regional Hospital has 1 addressable fire alarm system. This system comprises of 7 no. CPU panels, with CPU 7 in the Basement being the master, and all others being slaves. Main reception and the Emergency Department reception in the hospital have full function repeater panels, with other areas having indication repeater panels only. Detection is achieved by the use optical, ionisation and heat detectors. Ionisation detection is being phased out at present. Manual call points are also used throughout. Input/output modules are used to control plant and equipment in the event of the fire alarm operating to fire mode. Each CPU has a total of 5 loops, each loop capable of supporting 125 devices. The fire alarm system is connected to the paging system such that any fires, faults or pre-alarms detected by the fire alarm system are sent directly to a series of selected pagers, depending on the type of alarm. All alarms are sent to a Estates Maintenance Department pager. Selected alarms are sent to particular pagers eg: Security receives all fire events. The information
displayed on the LCD display of the fire alarm system appears on the pager. The person holding the pager then investigates the problem. The system is serviced by Siemens Fire Safety.

There is an analogue fire alarm system installed in the Regional Ambulance Centre. This system controls the ambulance centre building only and is not interfaced to the addressable fire alarm system in the hospital.

8.4 DESCRIPTION OF BACKUP SYSTEM
There is no Backup to the Fire alarm system.

8.5 SUPPLIES FEEDING SYSTEMS
The Mid-Western Regional Hospital fire alarm system is fed from a local Distribution board. It has its own internal backup battery. The Ambulance Centre fire alarm is fed from a local DB. It too has its own internal backup battery.

8.6 ACTION CARDS
Refer to the following Action Cards in relation to Fire Alarms

ACTION CARD NO. 19 - Failure
ACTION CARD NO. 20 - Repair
ACTION CARD NO. 21 – Resuming Normal Operations
9.0 SECURITY
This part contains contingency procedures for the Estates Maintenance Department responsibilities in relation to security equipment at Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with security equipment.

9.1 LOCATION OF SYSTEMS
The Security equipment is described below including locations:

<table>
<thead>
<tr>
<th>Asset ID</th>
<th>Equipment</th>
<th>Location</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>10368</td>
<td>Intruder Alarm</td>
<td>Post Graduate Centre</td>
<td>ETL</td>
</tr>
<tr>
<td>10362</td>
<td>Intruder Alarm</td>
<td>Pharmacy</td>
<td>ADT</td>
</tr>
<tr>
<td>13976</td>
<td>Intruder Alarm</td>
<td>Oncology</td>
<td>ETL</td>
</tr>
<tr>
<td>14285</td>
<td>Intruder Alarm</td>
<td>Mortuary</td>
<td>ETL</td>
</tr>
<tr>
<td>12564</td>
<td>Intruder Alarm</td>
<td>Estates Maintenance Department,</td>
<td>Mantech</td>
</tr>
<tr>
<td>14587</td>
<td>Intruder Alarm</td>
<td>Clinical Engineering Department</td>
<td>Mantech</td>
</tr>
<tr>
<td>13334</td>
<td>CCTV Multiplexer</td>
<td>Security Office</td>
<td>S.K.S.</td>
</tr>
<tr>
<td>13335</td>
<td>CCTV Multiplexer</td>
<td>Security Office</td>
<td>S.K.S.</td>
</tr>
<tr>
<td>13336</td>
<td>CCTV Multiplexer</td>
<td>Security Office</td>
<td>S.K.S.</td>
</tr>
<tr>
<td>13337</td>
<td>CCTV Multiplexer</td>
<td>Security Office</td>
<td>S.K.S.</td>
</tr>
<tr>
<td>12958</td>
<td>Tele alarm Nurse-call</td>
<td>A &amp; E Sister's Post</td>
<td>B.P. Multipage</td>
</tr>
<tr>
<td>13398</td>
<td>Tele alarm Nurse-call</td>
<td>A &amp; E Distribution Room</td>
<td>B.P. Multipage</td>
</tr>
</tbody>
</table>

9.2 DESCRIPTION OF SYSTEMS
Intruder Alarms
There are six separate Intruder alarms installed in the hospital. These consist of a main panel supplied from the mains, with a backup battery. A keypad supplies the method of setting/unsetting and programming the alarm. Detection of an intruder is achieved by means of magnetic reed switches on doors and windows and passive infra red detectors internally in some rooms. These detect movement. An internal and
The external siren is provided on all systems. The Intruder Alarms throughout the hospital are connected to the Paging System through DLC interfaces. In the event of activation the security pagers will be alerted and they will respond to the alert. Security have access/reset codes for all the Intruder alarms.

The Intruder alarms are supplied from the local Distribution board of the area they protect. In the event of a power failure they have 24 hour backup batteries.

Should any Intruder Alarm malfunction Action Card No.22.

**Security CCTV System**
A Security CCTV System is installed throughout the hospital. This comprises of cameras, both fixed and ‘pan, tilt, zoom’ (PTZ) cameras, multiplexers, video recorders and monitors. All cameras are monitored from the security office on a 24 hr basis. Should failure occur of any CCTV System see the relevant Action Card No. 22.

**Access Control Barriers**
Access Control Barriers are located throughout the site. Some operate by means of an inductive loop which detects the presence of a car automatically and then opens the barrier for exit only. On entry most can only be operated manually, either from the security office or a local pushbutton station. The consultants carpark barrier is controlled by coded keyfobs. Each consultant has one. The exit barriers from the public carpark are fitted with coinmechs, which will cause the barrier to open if the correct money is inputted. All barriers can be observed and controlled from the Security office via the CCTV system. Most Barriers also have an intercom link to the Security office. ETL supply and service all barriers.

**Tele Alarm Nurse Call**
A Tele Alarm Nurse call is installed in the Accident & Emergency Department. There are two consoles, one is located at the Sister’s Post in the Nurses Base and is used to identify the location of any call. The second is in the electrical distribution room. Alarm buttons are placed in all twenty patient cubicles and at 12 other locations around A & E. Any activation of this alarm sends an alert to security pagers.

### 9.3 NO. AND TYPE OF SUPPLIES

Each Intruder Alarm is supplied from the local Distribution Board. In the event of a power failure the Intruder alarm backup battery will keep the alarm operational for twenty four hours.

CCTV cameras are also supplied locally. These are centrally monitored from the Security office. The Security office is supplied from the local Distribution board. There is no backup UPS.

Barriers are supplied locally.

The TeleAlarm Nurse call system is supplied from local sockets in A & E.
9.4 ACTION CARDS
Refer to the following Action Cards in relation to Security

ACTION CARD NO. 22 - Failure
ACTION CARD NO. 23 - Repair
ACTION CARD NO. 24 – Resuming Normal Operations

10.0 NURSE-CALL SYSTEMS
This part contains contingency procedures for all Nurse-call systems in the Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with Nurse-call equipment.

10.1 LOCATION OF SYSTEMS

<table>
<thead>
<tr>
<th>Asset ID</th>
<th>Equipment</th>
<th>Location &amp; Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>12629</td>
<td>Ackerman 99</td>
<td>Ward 1B</td>
</tr>
<tr>
<td>11958</td>
<td>Ackerman 99</td>
<td>Ward 1C</td>
</tr>
<tr>
<td>12612</td>
<td>Ackerman 99</td>
<td>HDU</td>
</tr>
<tr>
<td>12465</td>
<td>Ackerman 99</td>
<td>Ward Trauma</td>
</tr>
<tr>
<td>11854</td>
<td>Ackerman 99</td>
<td>Ward 1D</td>
</tr>
<tr>
<td>10378</td>
<td>Ackerman 90</td>
<td>Ward 2B</td>
</tr>
<tr>
<td>10389</td>
<td>Ackerman 99</td>
<td>Ward 2C</td>
</tr>
<tr>
<td>10399</td>
<td>Ackerman 99</td>
<td>Ward 2D</td>
</tr>
<tr>
<td>10391</td>
<td>Ackerman 90</td>
<td>Ward 3A</td>
</tr>
<tr>
<td>11970</td>
<td>Ackerman 99</td>
<td>Ward 3B</td>
</tr>
<tr>
<td>14586</td>
<td>Ackerman 99</td>
<td>Ward 3C</td>
</tr>
<tr>
<td>10396</td>
<td>Ackerman 90</td>
<td>Ward 3D</td>
</tr>
<tr>
<td>12523</td>
<td>Ackerman 99</td>
<td>Ward 4D</td>
</tr>
<tr>
<td>10753</td>
<td>Ackerman 99</td>
<td>Ward Rainbow</td>
</tr>
<tr>
<td>10790</td>
<td>Ackerman 99</td>
<td>Ward Sunshine</td>
</tr>
<tr>
<td>10557</td>
<td>Mediplex Series 85</td>
<td>ICU</td>
</tr>
<tr>
<td>13696</td>
<td>Mediplex Series 85</td>
<td>Endoscopy</td>
</tr>
<tr>
<td>13719</td>
<td>Mediplex Series 85</td>
<td>Medical Day Ward</td>
</tr>
<tr>
<td>14099</td>
<td>Mediplex Series 85</td>
<td>Main Theatre Suite</td>
</tr>
<tr>
<td>14531</td>
<td>Mediplex Series 85</td>
<td>Dialysis</td>
</tr>
</tbody>
</table>

10.2 DESCRIPTION OF SYSTEM
Each individual ward has a separate system. Failure of one system will have no effect on any other ward. Nurse Call systems are primarily of type Ackerman 99 and Ackerman 90 in the old hospital, Ackerman 99
in the Paediatric wards and Mediplex Series 85 in phase one patient areas.

The Akerman Clino-OPT 99 is the newest system. It is comprised of:

1) A call push button at the patient bed.
2) A pullcord switch in the bathroom.
3) A cancel call pushbutton at the room door.
4) A display module over the room door.
5) An Information display at the nurses station.
6) A zone controller and power supply near the local D.B.

When a patient presses the call button at their bed, a permanent red light is displayed on the over-door module, the room number is displayed at the information display at the Nurses Station and a buzzer sounds.

A distress call from a bathroom pull-cord brings on a permanent white light.

Upon entering the room the nurse presses the cancel call pushbutton once. The red over-door light turns to green. If the nurse wants to summon further help, she presses the patient call pushbutton once. This causes the green light to turn red and flash rapidly, the buzzer frequency also increases.

When the nurse is finished and is leaving the room she presses the cancel call button once again and this cancels all lights.

10.3 BACKUP SYSTEM

There is no backup system for Nurses call. Should a Nurse call system fail then the ward in question will be provided with hand bells loud enough to be heard at the nurse’s station. Patients will be asked to be vigilant in terms of their neighbours in each ward area. If a nurse is required, the hand bell will be used or ambulant patients can contact staff on their neighbour’s request. Wards with non-ambulant or sedated patients will rely on increased observation of nursing staff. The periodicity of patient checks will be increased.

10.4 TYPE OF SUPPLIES FEEDING NURSE CALL SYSTEMS

Each Nurses call system is fed from the local Distribution Board through a Power supply which is part of the system.

10.5 ACTION CARDS

Refer to the following Action Cards in relation to Nurse Call Systems

ACTION CARD NO. 25 - Failure
ACTION CARD NO. 26 - Repair
ACTION CARD NO. 27 – Resuming Normal Operations
11.0 ELECTRICITY
This part contains contingency procedures for all Electricity services entering the hospital campus of the Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with Electricity.

11.1 LOCATION OF SYSTEMS

<table>
<thead>
<tr>
<th>ASSET</th>
<th>EQUIPMENT</th>
<th>LOCATION</th>
<th>SUPPLIER</th>
</tr>
</thead>
<tbody>
<tr>
<td>10009</td>
<td>Generator No.1</td>
<td>Generator House No. 1</td>
<td>FG Wilson</td>
</tr>
<tr>
<td>10857</td>
<td>Changeover Panel</td>
<td>Generator House No. 1</td>
<td>FG Wilson</td>
</tr>
<tr>
<td>10874</td>
<td>Transformer No. 1</td>
<td>Generator House No. 1</td>
<td>ESB</td>
</tr>
<tr>
<td>10054</td>
<td>Generator No. 2</td>
<td>Generator House No. 2</td>
<td>FG Wilson</td>
</tr>
<tr>
<td>10856</td>
<td>Changeover Panel</td>
<td>Generator House No. 2</td>
<td>FG Wilson</td>
</tr>
<tr>
<td>12843</td>
<td>RMU 10 KV No. 2</td>
<td>Generator House No. 2</td>
<td>ESB</td>
</tr>
<tr>
<td>12844</td>
<td>Transformer No. 2</td>
<td>Generator House No. 2</td>
<td>ESB</td>
</tr>
<tr>
<td>13907</td>
<td>Generator Broadcrown</td>
<td>Ambulance Centre</td>
<td>Powerohm</td>
</tr>
<tr>
<td>13908</td>
<td>Changeover Panel</td>
<td>Ambulance Centre</td>
<td>Powerohm</td>
</tr>
</tbody>
</table>
11.2 DESCRIPTION OF SYSTEMS
Mid-Western Regional Hospital

Electricity from the E.S.B. grid provides the main power for the site. Electricity is imported at medium voltage (10KV) and is transformed down in each of 2 no. substations to normal 400 volt supply. Each transformer is a 1000 KVA transformer. There are 2 no. 10KV ring main units located on the site, one at each substation. The substations are located as follows:

Substation No.1 – Phase 1
   Feeds Phase 1, Phase 2 and the oncology centre.
Substation No. 2 – Beside Mortuary
   Feeds all other areas of the site.

Emergency backup is provided by 2 No. standby diesel powered generators which operate on independent areas of the campus as indicated above. There is an 880KVA generator located at substation No. 1 and a 550 KVA generator located at substation No. 2. Both generators have an oil storage tank located underneath which will provide 8 hours of fuel running at full load. Both generators also have external tanks that will provide an additional 24 hours of fuel at full load. Both generators have auto fuel fill solenoids fitted that will ensure that the tanks underneath the generators will not go below half full.

The generator located at substation no.1 is a synchronised unit and hence will run in parallel with the ESB mains (no interruption in power to return to mains following a power outage). To facilitate this a G10 relay unit is fitted in this substation.

Each generator is brought on line via a changeover panel fitted with motorised/spring loaded circuit breakers and mains/generated mains detection equipment.

Further to this, there are critical areas which are fed by UPS’s. These are, namely:

1  4 designated beds in recovery.
2  Main Theatres
3  Eye Theatre
4  ICU
5  CCU
6  A/E Resuscitation room
7  A/E procedure room
Regional Ambulance Centre

The Regional Ambulance Centre is fed via a low voltage supply at 400 volts. Emergency backup is provided by 1 No. 40 KVA standby diesel powered generator.

The generator has an oil storage tank located underneath which will provide 8 hours of fuel running at full load. This generator also has an external tank that will provide an additional supply of oil to the unit. The generator is brought online via a changeover panel fitted with contactors and mains/generated mains detection equipment.

Further to this, there is 1 No. 10 KVA UPS that provides secure power to control room equipment and to 4 No. PABX central switchboards.

11.3 BACK UP SYSTEMS
UPS machines are one form of back up system used, though they will sustain load for only a short period of time. UPS machines are covered under Section 21 of this manual.

11.4 ACTION CARDS
Refer to the following Action Cards in relation to Electricity

**ACTION CARD NO. 28 - Failure**
**ACTION CARD NO. 29 - Repair**
**ACTION CARD NO. 30 - Resuming Normal Operations**
**ACTION CARD NO. 61 – Generator Checklist**

12.0 WATER
This part contains contingency procedures for all Water services entering the hospital campus of the Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with Water.

12.1 LOCATION OF WATER SUPPLIES

<table>
<thead>
<tr>
<th>Asset No.</th>
<th>Location</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>52000</td>
<td>Old hospital roof</td>
<td>Water Tank</td>
</tr>
</tbody>
</table>
12.2 DESCRIPTION OF WATER SYSTEM
The mains water supply for the hospital is provided from the local County Council main reservoir. This supply in turn feeds tanks in various locations listed these tanks serve the areas below. Where the water is required to be at higher pressure this is achieved using booster pumps.

12.3 DESCRIPTION OF BACKUP WATER SYSTEM
The tanks in the various locations have enough capacity to maintain a water supply for one day provided a local contingency plan is implemented in each area. In the event of mains water supply failure, the Hospital cold water storage tank has a supply for one day based on normal consumption. In this event 50% of the water consumption can be defined as non-critical and it is the responsibility of each department to put their water plans into place during failure of the water supply.

12.4 ACTION CARDS
Refer to the following Action Cards in relation to Water
ACTION CARD NO. 31 - Failure

ACTION CARD NO. 32 - Repair

ACTION CARD NO. 33 - Resuming Normal Operations
13.0 GAS
This part contains contingency procedures for all Gas services entering the hospital campus of the Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with Gas.

13.1 LOCATIONS SERVED BY GAS SUPPLIES
Main Boiler house
5 B Boiler house
Phase 1 Boiler house
Phase 2 Boiler house
Oncology Boiler house
Maintenance Boiler house
Kitchen

13.2 TYPE OF SYSTEM
Natural gas is supplied to the hospital from the mains line outside the front boundary wall. The gas is piped around the hospital to the various locations listed above.

13.3 DESCRIPTION OF SYSTEM
The main hospital boilers, satellite boilers and main kitchen are primarily gas operated.
A main gas line system is routed around the hospital grounds. Where a gas supply is required an isolating valve, pressure regulator and slam shut valve are installed, the slam shut valve is activated by the fire alarm or gas detection systems.

13.4 DESCRIPTION OF BACKUP SYSTEM
Each boiler house location has capabilities for 24 hr oil backup if the gas fails. (The boilers are dual fuel and normally operate using gas but have the capability to switch over and run on light oil.) The kitchen has a gas supply for cooking. This supply services only the fryers and grills.

13.5 NUMBER AND TYPE OF SUPPLIES FEEDING SYSTEM
One gas supply from the main line feeds the system.

13.6 ACTION CARDS
Refer to the following Action Cards in relation to Gas

**ACTION CARD NO. 34** - Failure
**ACTION CARD NO. 35** - Repair
**ACTION CARD NO. 36** - Resuming Normal Operations

14.0 OIL
This part contains contingency procedures for all Oil services entering the hospital campus of the Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.
The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with Oil.

14.1 LOCATIONS SERVED BY OIL SUPPLIES

<table>
<thead>
<tr>
<th>Asset No.</th>
<th>Location</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>13291</td>
<td>Phase 2 Roof</td>
<td>Oil Tank</td>
</tr>
<tr>
<td>13531</td>
<td>Phase 2 Roof</td>
<td>Oil Tank</td>
</tr>
<tr>
<td>14408</td>
<td>Oncology Roof</td>
<td>Oil Tank</td>
</tr>
<tr>
<td>14800</td>
<td>Phase 1 Roof</td>
<td>Oil Tank</td>
</tr>
<tr>
<td>14798</td>
<td>Behind Mortuary</td>
<td>Oil Tank</td>
</tr>
<tr>
<td>14799</td>
<td>Behind Mortuary</td>
<td>Oil Tank</td>
</tr>
</tbody>
</table>

14.2 TYPE OF SYSTEM

The system is a gravity feed oil supply from an oil tank located at areas listed above, providing a backup to the boilers which are normally run on natural gas. Electric Generators are also oil fed and they have a back up oil tank that will supply 24 Hours of oil (at full load) to the generator.

14.3 DESCRIPTION OF SYSTEM

The oil system is simply an oil tank with an oil line feeding the duel fuel burners in the various boiler houses. See section on boilers for locations and further details on the burners. The main hospital boilers and satellite boilers are primarily gas operated. Each location has capabilities for 24 hr oil backup if the gas fails. (The boilers are dual fuel and normally operate using gas but have the capability to switch over and run on light oil.)

14.4 DESCRIPTION OF BACKUP SYSTEM

This system is a backup system for the natural gas system and therefore the backup to this backup is to refill the oil tank as it runs low refer to the action card, failure of system, for the phone numbers of the oil supply company.

14.5 ACTION CARDS

Refer to the following Action Cards in relation to Oil

- ACTION CARD NO. 37 - Failure
- ACTION CARD NO. 38 - Repair
- ACTION CARD NO. 39 - Resuming Normal Operations

15.0 TELEPHONES

This part contains contingency procedures for all the PABX services serving the Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.
The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with communications.

The systems covered under this section are as follows:
1. Main P.A.B.X.
2. Back up P.A.B.X.
3. Voicemail System

15.1 LOCATION OF SYSTEM

<table>
<thead>
<tr>
<th>ASSET ID</th>
<th>DESCRIPTION</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>10032</td>
<td>Main Telephone Exchange</td>
<td>EMD 18 PABX Room</td>
</tr>
<tr>
<td>12342</td>
<td>Standby Telephone Exchange</td>
<td>EMD 18 PABX Room</td>
</tr>
<tr>
<td>12341</td>
<td>Telephone C/O Panel</td>
<td>EMD 18 PABX Room</td>
</tr>
<tr>
<td>12345</td>
<td>Backup Battery</td>
<td>EMD 18 PABX Room</td>
</tr>
<tr>
<td>12343</td>
<td>Distribution Board</td>
<td>EMD 18 PABX Room</td>
</tr>
<tr>
<td></td>
<td>Repartee Voicemail</td>
<td>EMD 18 PABX Room</td>
</tr>
</tbody>
</table>

15.2 TYPE OF SYSTEM

The main system is a Siemens Hicom 350E
The backup is a Nitsuko DXE 32.

15.3 DESCRIPTION OF SYSTEM

The telecommunications system in place is located in the basement PABX Room, comprising of 1200 extensions, 60 Primary Rate ISDN (digital) channels and 40 VPN analogue circuits. This system allows for the use of the “48 + extn no” facility over the PRA’s for DDI (direct dial inwards). There are 4 no. 2Mb links installed on the PABX – These are links to Catherine Street, St Josephs Hospital, Central Stores, and Environmental Health sites. These links allow internal communications to MWHB sites. Catherine St is where the hub for this service is located. The VPN analogue lines allow cheaper rate calls to be made to specific sites, eg. other Health Boards, as well as standard rate calls. The system has a 10 hour battery back up. This is located in the main switchroom alongside the P.A.B.X. There is a voicemail system connected to the PABX which serves all sites on the Limerick MWHB voice network. The system is maintained via a DMS server located in the PABX room. This server also records and provides call account management details.

15.4 DESCRIPTION OF BACKUP TELEPHONE SYSTEMS

An emergency standby PABX system is also provided. This system is a Nitsuko DXE 32 and it comprises of 16 analogue circuits and 44
extensions. The extensions from this system are supplied to critical locations only. A list of these is contained in Action Card No 39. The DDI facility is not available to this system. This system has a back up which is supplied from a UPS fitted in the main switchroom. The UPS will run this system for 30 mins in the event of power failure. A third back-up is provided whereby stations can be connected directly to external lines. A list of station numbers to external lines is contained in Action Card No 40.

In addition there are private lines that do not go through the main P.A.B.X.

There is a Changeover mechanism located in the switchroom to allow fast, easy conversion from one system to another in the event of one of the systems going down. It should be noted that there is no link whatsoever between the systems mentioned above and that only one system can be connected at any one time. The switching from one system to another is manual (by means of a switch located in Main Reception) and will be performed by trained Receptionist or maintenance staff only.

In the event of a failure in the Siemens communication system, the Receptionist staff will connect to the Stand-by P.A.B.X.

In the event of a failure in the Stand-by communication system, the Receptionist staff will connect stations directly to external lines.

In the event of internal telephone systems failing the following alternatives are available:
- Ambulance radio
- Mobile telephones
- Emergency Intercom between critical areas
- Public address system

15.5 NO. AND TYPE OF SUPPLIES
The main system is fed locally through a battery management system located beside it in the basement. The batteries provide a ten hour backup. The backup system is fed from a UPS in the fire alarm plant room. The switchover panel is fed from a UPS located in the Fire alarm plant room.

15.6 ACTION CARDS
Refer to the following Action Cards in relation to Telephones
- ACTION CARD NO. 40 - Failure
- ACTION CARD NO. 41 - Repair
- ACTION CARD NO. 42 – Resuming Normal Operations
- ACTION CARD NO. 62 – Standby PABX Extension Numbers
- ACTION CARD NO. 63 – Direct Line Numbers
16.0 PAGING
This part contains contingency procedures for all the Paging systems serving the Mid-Western Regional Hospital and Mid-Western Regional Maternity Hospital. Refer to Section 4 for Action Cards.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with paging systems.

The systems covered under this section are as follows:
1. Paging systems
2. Backup Paging System

16.1 LOCATION OF SYSTEMS
Equipment for the system is located as follows:
1) Telecomms room in Basement of Mid-Western Regional Hospital Dooradoyle.
2) Roof, roof plantroom and medical liftshaft Plantroom of Mid-Western Regional Hospital Dooradoyle.
3) Reception Desk of Mid-Western Regional Hospital Dooradoyle.
4) Accident & Emergency Reception of Mid-Western Regional Hospital Dooradoyle.
5) Ward 5B of Mid-Western Regional Hospital Dooradoyle.
6) Telecomms room on Ground floor of St Munchins Maternity Hospital.

<table>
<thead>
<tr>
<th>Asset ID</th>
<th>Equipment</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10669</td>
<td>Main Paging System</td>
<td>EMD 18 PABX Plant room</td>
</tr>
<tr>
<td>12335</td>
<td>Backup Paging System</td>
<td>EMD 10 Plant room communications</td>
</tr>
<tr>
<td>13625</td>
<td>Console</td>
<td>Main Reception Desk</td>
</tr>
<tr>
<td>14539</td>
<td>Console</td>
<td>EMD 18 PABX Plant room</td>
</tr>
<tr>
<td>12948</td>
<td>Console</td>
<td>A &amp; E Reception</td>
</tr>
<tr>
<td>20307</td>
<td>Booster</td>
<td>St Munchins EMD 206 PABX room</td>
</tr>
<tr>
<td>10743</td>
<td>Teleprotect Transmit/Rec</td>
<td>Ward 5B</td>
</tr>
<tr>
<td>10681</td>
<td>Teleprotect Transmit/Rec</td>
<td>EMD 18 PABX Plant room</td>
</tr>
<tr>
<td>14859</td>
<td>Transmitter</td>
<td>Medical Liftshaft Plantroom</td>
</tr>
</tbody>
</table>

16.2 TYPE OF SYSTEMS
Both the Main and Backup systems are Multitone Access 3000 paging systems.

16.3 DESCRIPTION OF MAIN SYSTEM
The user pager in use is a Multitone RPR552. There are currently 445 pagers in use on the system. There are 6 telephone interfaces to the system, four for 83; 2060, 2061, 2062, and 2466. One for 63; 2663 and external access via 061 301132. There is an interface for the BMS, this is located in the Electrical foremans office. There is an interface for the Fire Alarm, this is located in the basement telecomms room in Dooradoyle. The Nurses mobile alarms in A & E and the Intruder Alarms throughout the site are connected to the Paging system.

There are 3 Access 1000 Programming/Paging consoles. One at Main reception, one at A & E reception and one in the basement PABX room. These are primarily used by reception staff for Team Paging. For example, the Regional Cardiac Arrest Team carry dedicated RPR552 pagers. These are distinguished by a yellow label and the absence of a 3-digit pager number. Their team paging number is 10. In the event of a cardiac emergency anywhere in the hospital a person alerts reception giving an exact location. The receptionist translates this location into a code using a chart located on the reception desk and then alerts the Cardiac Team using the paging console as follows:

- Press Cancel key to clear display
- Press Red Team Call key
- Enter Team no: 10
- Press Enter key
- Key in location no:
- Press Red Team Call key

The dedicated cardiac pagers will then alarm while displaying the location of the emergency. The cardiac arrest pagers are dedicated to this purpose only. Some of the other 445 standard pagers are also programmed for team paging, eg: team 12 is the Surgical team. All members of this team can be summoned by team paging no: 12.

A Teleprotect 900 system has been installed in ward 5B to protect the staff from personal attack. Twenty six Infrared transmitter locators are positioned throughout the ward. The staff carry Ascom U970 personal alarms, these pick-up their location from the locators as the staff move around the ward. Alarms can be activated by depressing a red button on the top of the unit, or by means of a pullcord, or by means of a mercury tilt switch that activates if the unit is left in a horizontal position (Man Down). When an alarm is activated it sends a signal to the Paging system, this alerts a number of 5B and Security staff Panic Alert pagers, giving the location of the attacked staff member. The Teleprotect 900 system is controlled by a PC (Compaq Evo, 08647) in the 5B Receptionists office. This computer must never be switched off!
16.4 DESCRIPTION OF BACKUP SYSTEM

The Backup System is also a Multitone Access 3000. The system and transmitter are located in the Telecomms plantroom on the roof of the Mid-Western Regional Hospital Dooradoyle. The Back-up system also has its own separate antennae. The switch to transfer from the Main system to the Backup system is situated under the Access 3000 Console at the Main Reception Desk of the Mid-Western Regional Hospital Dooradoyle. The Back-up system has only two telephone interface cards, this limits the no. of persons able to use the system simultaneously to two. Both these interfaces are for 83. There is no access for 63 or externally through 061 301132. It is worth noting that in the event of the telephone system failing while the back-up paging system is in use that St Munchins Maternity Hospital will be unable to use the paging system.

16.5 NUMBER AND TYPE OF SUPPLIES

The Main paging system is fed by a 3 KVA UPS. It should last for 30 mins approx on the UPS. It is located in the Fire Alarm room beside the Telecomms room in the basement of the Mid-Western Regional Hospital Dooradoyle. The Backup system is fed from a mains socket in the EMD 10 Plant room.

16.6 ACTION CARDS

Refer to the following Action Cards in relation to Paging Systems

ACTION CARD NO. 43 - Failure
ACTION CARD NO. 44 - Repair
ACTION CARD NO. 45 – Resuming Normal Operations

17.0 PUBLIC ADDRESS

This part contains contingency procedures for all the Public Address system serving the Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with Public Address.

LOCATION OF SYSTEM

<table>
<thead>
<tr>
<th>ASSET</th>
<th>EQUIPMENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>14591</td>
<td>PA Mainframe</td>
<td>Direct Payments Office</td>
</tr>
<tr>
<td>14590</td>
<td>PA Amplifier</td>
<td>Direct Payments Office</td>
</tr>
<tr>
<td>14589</td>
<td>PA Amplifier</td>
<td>Radiology</td>
</tr>
<tr>
<td>14592</td>
<td>PA Amplifier</td>
<td>Rainbow Ward</td>
</tr>
</tbody>
</table>
17.1 DESCRIPTION OF SYSTEM
The public address system in place was installed by Sound Productions. There are 3 main paging microphones installed, 1 of which is a 16 zone microphone, located at Outpatients reception. The other 2 microphones are located 1 at main reception and 1 in the Major Emergency Control room (Medical Boardroom). The system comprises of 1 mainframe that houses an amplifier, audio combiner, microphone rack, etc. This mainframe is located in the direct payments office located behind OPD reception. The amplifier that serves the “Old Hospital” PA system is located here also. The mainframe feeds onto a number of smaller amplifiers. These amplifiers are located in and provide public address facilities to the following areas:
- Sunshine Ward
- Rainbow Ward
- Admissions
- Emergency Department
- Emergency Department Reception
- Radiology Department
- Oncology Centre
- Patient Support Centre

Individual microphones are fitted in these areas so that local paging can be carried out.

The Laboratory has a PA system that is used for local paging only and is not interfaced into the main hospital system.

17.2 BACK UP SYSTEM
The main backup that this system has is that the mainframe and “Old Hospital” amplifier are feed from a UPS which is located beside the mainframe. The UPS will run the public address system for 60 mins on continuous operation. There is no standby system installed to provide public address services in the event of failure of the mainframe system. Local paging would not be affected by failure of the mainframe system.

17.3 SUPPLIES FEEDING THE SYSTEM
The system is fed from DC 1(Phase 1) GS 20, and is backed up via UPS as mentioned above.
17.4 **ACTION CARDS**

Refer to the following Action Cards in relation to Public Address:

**ACTION CARD NO. 46 - Failure**

**ACTION CARD NO. 47 - Repair**

**ACTION CARD NO. 48 – Resuming Normal Operations**

18.0 **EMERGENCY INTERCOM**

This part contains contingency procedures for the Emergency Intercom system serving the Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.

The **Estates Maintenance Department** holds contact details of appropriate staff and contractors associated with the Emergency Intercom.

18.1 **LOCATION OF SYSTEM**

The system is located throughout the hospital.

<table>
<thead>
<tr>
<th>ASSET</th>
<th>EQUIPMENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>14764</td>
<td>TD-3/H Handset</td>
<td>School Of Nursing Portacabin 5</td>
</tr>
<tr>
<td>14765</td>
<td>TD-3/H Handset</td>
<td>Classroom 1</td>
</tr>
<tr>
<td>14766</td>
<td>TD-3/H Handset</td>
<td>Conference Room 2nd Floor Nurses Home</td>
</tr>
<tr>
<td>13621</td>
<td>TD-12/H Handset</td>
<td>Main Reception</td>
</tr>
<tr>
<td>12965</td>
<td>TD-12/H Handset</td>
<td>Emergency Department Nurses Station</td>
</tr>
<tr>
<td>14767</td>
<td>TD-12/H Handset</td>
<td>Medical Boardroom</td>
</tr>
<tr>
<td>14760</td>
<td>TD-3/H Handset</td>
<td>General Managers Office</td>
</tr>
<tr>
<td>14762</td>
<td>TD-3/H Handset</td>
<td>ICU</td>
</tr>
<tr>
<td>14759</td>
<td>TD-3/H Handset</td>
<td>CCU</td>
</tr>
<tr>
<td>14763</td>
<td>TD-3/H Handset</td>
<td>Pharmacy</td>
</tr>
<tr>
<td>14098</td>
<td>TD-3/H Handset</td>
<td>Main Theatre Reception</td>
</tr>
<tr>
<td>14761</td>
<td>TD-3/H Handset</td>
<td>Laboratory</td>
</tr>
<tr>
<td>12966</td>
<td>Main System Controller</td>
<td>Emergency Department Nurses Station</td>
</tr>
</tbody>
</table>
18.2 DESCRIPTION OF SYSTEM

The Emergency Intercom system in place is an Aiphone selective call intercom system, which will allow communication between the major and/or critical areas of the hospital. The areas covered under this system and the communications available on each handset are as follows:

<table>
<thead>
<tr>
<th>Handset Location</th>
<th>Can Contact</th>
<th>Is contactable by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Reception</td>
<td>Emergency Department</td>
<td>Emergency Department</td>
</tr>
<tr>
<td></td>
<td>Medical Boardroom</td>
<td>Medical Boardroom</td>
</tr>
<tr>
<td></td>
<td>General Managers Office</td>
<td>General Managers Office</td>
</tr>
<tr>
<td></td>
<td>ICU</td>
<td>ICU</td>
</tr>
<tr>
<td></td>
<td>CCU</td>
<td>CCU</td>
</tr>
<tr>
<td></td>
<td>Pharmacy</td>
<td>Pharmacy</td>
</tr>
<tr>
<td>Emergency Department</td>
<td>Main Reception</td>
<td>Main Reception</td>
</tr>
<tr>
<td></td>
<td>Medical Boardroom</td>
<td>Medical Boardroom</td>
</tr>
<tr>
<td></td>
<td>General Managers Office</td>
<td>Conference Room 2&lt;sup&gt;nd&lt;/sup&gt; NH</td>
</tr>
<tr>
<td></td>
<td>ICU</td>
<td>General Managers Office</td>
</tr>
<tr>
<td></td>
<td>CCU</td>
<td>ICU</td>
</tr>
<tr>
<td></td>
<td>Pharmacy</td>
<td>CCU</td>
</tr>
<tr>
<td></td>
<td>Theatre</td>
<td>Pharmacy</td>
</tr>
<tr>
<td></td>
<td>Laboratory</td>
<td>Laboratory</td>
</tr>
<tr>
<td></td>
<td>Main Theatre</td>
<td></td>
</tr>
<tr>
<td>Medical Boardroom</td>
<td>Main Reception</td>
<td>Main Reception</td>
</tr>
<tr>
<td></td>
<td>Emergency Department</td>
<td>Emergency Department</td>
</tr>
<tr>
<td></td>
<td>General Managers Office</td>
<td>Classroom 1</td>
</tr>
<tr>
<td></td>
<td>ICU</td>
<td>School Of Nursing Cabin 5</td>
</tr>
<tr>
<td></td>
<td>CCU</td>
<td>General Managers Office</td>
</tr>
<tr>
<td></td>
<td>Pharmacy</td>
<td>ICU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CCU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pharmacy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Laboratory</td>
</tr>
<tr>
<td>Classroom 1</td>
<td>School Of Nursing Cabin 5</td>
<td>School Of Nursing Cabin 5</td>
</tr>
<tr>
<td></td>
<td>Medical Boardroom</td>
<td>Conference Room 2&lt;sup&gt;nd&lt;/sup&gt; NH</td>
</tr>
<tr>
<td>Location</td>
<td>Conference Room 2\textsuperscript{nd} NH</td>
<td>School Of Nursing Cabin 5</td>
</tr>
<tr>
<td>---------------------------</td>
<td>------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>General Managers Office</td>
<td>Main Reception</td>
<td>Main Reception</td>
</tr>
<tr>
<td>ICU</td>
<td>Main Reception</td>
<td>Main Reception</td>
</tr>
<tr>
<td>CCU</td>
<td>Main Reception</td>
<td>Main Reception</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Main Reception</td>
<td>Main Reception</td>
</tr>
<tr>
<td>Laboratory</td>
<td>Emergency Department</td>
<td>Emergency Department</td>
</tr>
<tr>
<td>Main Theatre</td>
<td>ICU</td>
<td>Laboratory</td>
</tr>
</tbody>
</table>

18.3 **NUMBER AND TYPE OF SUPPLIES**

This system is feed from the UPS which covers the Procedures room in A/E. This system will run for 30 mins in the event of loss of mains supply.
18.4 ACTION CARDS
Refer to the following Action Cards in relation to Emergency Intercom

ACTION CARD NO. 49 - Failure

ACTION CARD NO. 50 - Repair

ACTION CARD NO. 51 – Resuming Normal Operations

19.0 AIR CONDITIONING
This part contains contingency procedures for the Air conditioning at the Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with lift equipment.

19.1 LOCATION OF SYSTEM
The Air conditioning system has equipment in the following locations:

<table>
<thead>
<tr>
<th>ASSET ID</th>
<th>EQUIPMENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>10007</td>
<td>A.H.U. 23</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10012</td>
<td>A.H.U. 14</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10047</td>
<td>A.H.U. 11</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10053</td>
<td>A.H.U. 12</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10060</td>
<td>A.H.U. 13</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10076</td>
<td>A.H.U. 25</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10090</td>
<td>A.H.U. 22</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10091</td>
<td>A.H.U. 27</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10104</td>
<td>A.H.U. 21</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10126</td>
<td>A.H.U. 19</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10127</td>
<td>A.H.U. 16</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10129</td>
<td>A.H.U. 26</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10130</td>
<td>A.H.U. 18</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10143</td>
<td>A.H.U. 24</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10148</td>
<td>A.H.U. 15</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10171</td>
<td>A.H.U. 28</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10180</td>
<td>A.H.U. 20</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10190</td>
<td>A.H.U. 29</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10992</td>
<td>A.H.U. 17</td>
<td>Plant room phase 1</td>
</tr>
<tr>
<td>10677</td>
<td>A.H.U.</td>
<td>Kitchen roof</td>
</tr>
<tr>
<td>10690</td>
<td>A.H.U.</td>
<td>Kitchen roof</td>
</tr>
<tr>
<td>12357</td>
<td>A.H.U.</td>
<td>Kitchen roof</td>
</tr>
<tr>
<td>10726</td>
<td>A.H.U.</td>
<td>A&amp;E roof</td>
</tr>
<tr>
<td>10024</td>
<td>A.H.U. 10</td>
<td>Roof phase 1</td>
</tr>
<tr>
<td>10025</td>
<td>A.H.U. 3</td>
<td>Roof phase 1</td>
</tr>
<tr>
<td>10027</td>
<td>A.H.U. 9</td>
<td>Roof phase 1</td>
</tr>
<tr>
<td>10038</td>
<td>A.H.U. 7</td>
<td>Roof phase 1</td>
</tr>
<tr>
<td>10039</td>
<td>A.H.U. 5</td>
<td>Roof phase 1</td>
</tr>
</tbody>
</table>
19.2 TYPE OF SYSTEMS
The air conditioning in the hospital is mainly carried out by air handling units that are used in conjunction with extract fans. Some areas that are not served by an air handling units have split air conditioning units installed.

19.3 DESCRIPTION OF SYSTEMS
The air handling units consist of a cabinet which takes in air from the outside, filters it and blows the air through a heating or cooling coil, and then into the rooms being air conditioned, via ducts and outlet grills. The air in the room is extracted by means of an extract fan to allow circulation. All the air handling units are fitted with a heating coil to heat the air and some are fitted with a cooling coil which gives a cooling function. Chilled water is required to flow through the cooling coil for cooling and hot water is required to flow through the heating coil for heating.

The split type system has an outdoor unit and usually has heating and cooling functions.

19.4 DESCRIPTION OF BACKUP SYSTEM
There is not any backup to the air conditioning system.

19.5 NUMBER AND TYPE OF SUPPLY FEEDING SYSTEM
Air handling units require three-phase electrical supplies and split systems require either single phase or three-phase electrical supplies. In some cases both types of supplies are required for split systems. Chilled water and hot water are required for the heating and cooling coils on air handling units.
19.6 ACTION CARDS

Refer to the following Action Cards in relation to Air Conditioning

ACTION CARD NO. 52 - Failure
ACTION CARD NO. 53 - Repair
ACTION CARD NO. 54 – Resuming Normal Operations
20.0 PNEUMATIC CONVEYOR
This part contains contingency procedures for the Pneumatic Conveyor system serving the Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with the Pneumatic Conveyor.

20.1 LOCATION OF SYSTEM
The system is located throughout the hospital.

<table>
<thead>
<tr>
<th>ASSET</th>
<th>EQUIPMENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>13612</td>
<td>User Station</td>
<td>Haematology</td>
</tr>
<tr>
<td>13613</td>
<td>User Station</td>
<td>Laboratory Reception</td>
</tr>
<tr>
<td>14344</td>
<td>User Station</td>
<td>Histology</td>
</tr>
<tr>
<td>13611</td>
<td>User Station</td>
<td>Oncology</td>
</tr>
<tr>
<td>14352</td>
<td>User Station</td>
<td>Serology</td>
</tr>
<tr>
<td>14357</td>
<td>User Station</td>
<td>Microbiology</td>
</tr>
<tr>
<td>12478</td>
<td>User Station</td>
<td>Ward 1C</td>
</tr>
<tr>
<td>12764</td>
<td>User Station</td>
<td>Ward 1B</td>
</tr>
<tr>
<td>13124</td>
<td>User Station</td>
<td>Emergency Department</td>
</tr>
<tr>
<td>11849</td>
<td>User Station</td>
<td>Ward 1D</td>
</tr>
<tr>
<td>12471</td>
<td>User Station</td>
<td>Ward Trauma</td>
</tr>
<tr>
<td>14776</td>
<td>User Station</td>
<td>Ward 3C</td>
</tr>
<tr>
<td>14777</td>
<td>User Station</td>
<td>Ward 3D</td>
</tr>
<tr>
<td>14778</td>
<td>User Station</td>
<td>Ward 3A</td>
</tr>
<tr>
<td>12790</td>
<td>User Station</td>
<td>Pharmacy</td>
</tr>
<tr>
<td>14775</td>
<td>User Station</td>
<td>Ward 4B</td>
</tr>
<tr>
<td>14770</td>
<td>User Station</td>
<td>ICU</td>
</tr>
<tr>
<td>14773</td>
<td>User Station</td>
<td>Day Ward</td>
</tr>
<tr>
<td>14774</td>
<td>User Station</td>
<td>Dialysis</td>
</tr>
<tr>
<td>10043</td>
<td>Main Station/User station</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>14565</td>
<td>User Station</td>
<td>Rainbow Ward</td>
</tr>
<tr>
<td>14581</td>
<td>User Station</td>
<td>Caterpillar</td>
</tr>
<tr>
<td>14575</td>
<td>User Station</td>
<td>Sunshine Ward</td>
</tr>
<tr>
<td>14772</td>
<td>User Station</td>
<td>Physiotherapy</td>
</tr>
<tr>
<td>14768</td>
<td>Blower Motor</td>
<td>Basement</td>
</tr>
</tbody>
</table>

20.2 TYPE OF SYSTEM
The Pneumatic conveyor system is an air operated system.

20.3 DESCRIPTION OF SYSTEM
The Pneumatic Conveyor system comprises of 24 user stations, 13 diverter stations and 1 blower motor. There are also approx 70 canisters in the system.

When a person wishes to send a message from one area of the hospital to another, they place their message into a canister, go to the nearest user station and enter the 4 digit number of the station that the canister is to go to. They then place their canister into the user station and wait for it to go.

When the 4 digit number is entered into the system, the system lines up the diverters, so that the canister is provided with the appropriate route to get to the receiving station. The blower motor is then started by the system, in either suction mode or blow mode depending on the route. (The sending of a canister may require both suction mode and blow mode depending on the route).

Each time a transaction is completed by the system a log of the event is printed to the system printer located in the Biochemistry Lab.

The system is capable of sending only one canister at a time, so if the system is busy, a queuing system is set up whereby the queued canisters are sent according to the time the canister was placed into the user station.

If one station were to go into fault then the entire system goes into fault.

To prevent the spread of airborne infections from the Emergency Department to other areas of the hospital, a kill switch is located in the sister’s office in the emergency department. This kill switch removes supply to the blower motor and puts the system into fault, thereby disabling the system.

A map of the system is given on the following page.
20.4 SUPPLIES FEEDING SYSTEM
The system is fed via 2 no. power supplies. One of these is located at the main station in the Biochemistry laboratory. The second supply, a 3 phase supply, is located at the blower motor in the basement.

20.5 ACTION CARDS
Refer to the following Action Cards in relation to Pneumatic Conveyor
ACTION CARD NO. 55 - Failure
ACTION CARD NO. 56 - Repair
ACTION CARD NO. 57 – Resuming Normal Operations

21.0 UPS
This part contains contingency procedures for UPS machines serving the Mid-Western Regional Hospital. Refer to Section 4 for Action Cards.

The Estates Maintenance Department holds contact details of appropriate staff and contractors associated with UPS machines.

21.1 LOCATION OF SYSTEMS
UPS systems are located throughout the hospital.
<table>
<thead>
<tr>
<th>ASSET</th>
<th>EQUIPMENT LOCATION AREA COVERED SUPPLIER HOSPITAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>10002</td>
<td>15 KVA UPS Phase 1 Theatre 7,8,9 Secure MWRH</td>
</tr>
<tr>
<td>13312</td>
<td>Battery Unit Plant Room A/E Basement A/E Recovery Room &amp; Theatre Secure Power Systems MWRH</td>
</tr>
<tr>
<td>10042</td>
<td>15 KVA UPS Phase 1 Plant Room Neo Natal Secure Power Systems MWRH</td>
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<tr>
<td>20189</td>
<td>Battery Unit Roof Plant Rm Neo Natal Recovery Room Secure Power Systems Maternity MWRH</td>
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<td>15 KVA UPS Phase 1 Plant Room Neo Natal Theatre 1,2,3 Secure Power Systems MWRH</td>
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<td>10041</td>
<td>20 KVA UPS Phase 1 Boiler A/E Recovery Room Secure Power Systems MWRH</td>
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<td>20279</td>
<td>3 KVA UPS Roof Plant Rm Recovery Room Secure Power Systems Maternity MWRH</td>
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<td>13306</td>
<td>6 KVA UPS A/E X-Ray Processing Room Secure Power Systems MWRH</td>
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<td>10110</td>
<td>25 KVA UPS Phase 2 Plant Rm Biochemistry Lab Secure Power Systems MWRH</td>
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<td>13907</td>
<td>Battery Unit A/E X-Ray Processing Room Secure Power Systems MWRH</td>
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<td>10871</td>
<td>UPS Pac's Room Pac's Room Secure Power Systems MWRH</td>
</tr>
<tr>
<td>13311</td>
<td>6 KVA UPS A/E Theatre Plant Room A/E Recovery Room &amp; Theatre Secure Power Systems MWRH</td>
</tr>
<tr>
<td>12992</td>
<td>3 KVA UPS A/E Theatre Plant Room Secure Power Systems MWRH</td>
</tr>
<tr>
<td>13917</td>
<td>10 KVA UPS Ambulance Centre Ambulance Centre Control Room Secure Power Systems MWRH</td>
</tr>
<tr>
<td>12346</td>
<td>15 KVA UPS Cat Scan Plant Room CCU Pat Smith Engineering MWRH</td>
</tr>
<tr>
<td>14769</td>
<td>3 KVA UPS Radio Station Radio Station Secure Power Systems MWRH</td>
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</table>

### 21.2 TYPE OF SYSTEMS

UPS systems consist of single phase units and of three phase units. The autonomy of each UPS may be different (Autonomy refers to how long the batteries will last for a given load).

### 21.3 DESCRIPTION OF SYSTEM
UPS systems provide uninterrupted conditioned supply to the equipment connected to the output of the unit. They have inbuilt batteries that will maintain the output in the event of loss of mains.

During normal operation the batteries are being constantly charged. During loss of mains the batteries discharge over a period of time into the output or load, depending on the autonomy of the UPS.

If the UPS detects a major fault (in the mains input or in the output) it will go off line (or into internal bypass). By doing this the UPS protects itself. Going off line means that the battery element of the UPS and the line conditioning element of the UPS are switched off (i.e. The inverter/rectifier switches off). If a power failure were to occur when the unit is off line, the output will be affected through loss of power.

Larger UPS’s (Above 3 KVA) are fitted with an External Bypass. This comprises of a panel on the wall beside the UPS machine. The panel has 2 supplies running through it. These supplies are usually fed from the same board, but in some cases are fed from different boards. The first supply is the normal supply feeding the UPS. The second supply is an alternative supply that is only used during external bypass. The panel has 2 switches on it. Switch no.1 (right hand side switch) connects the second supply to the load. Switch no. 2 isolates the UPS from all supplies. The UPS must be off line before it is switched to external bypass, otherwise the inverter/rectifier may be damaged beyond repair. Once a UPS is in external bypass, the UPS is effectively isolated and can be maintained, removed or replaced. If a power failure were to occur when the unit is in external bypass, the load being fed will be affected through loss of power.

21.4 ACTION CARDs

Refer to the following Action Cards in relation to UPS

**ACTION CARD NO. 58 - Failure**

**ACTION CARD NO. 59 - Repair**

**ACTION CARD NO. 60 – Resuming Normal Operations**
ACTION CARD NO 1

STERILIZERS (Failure)

Estates Maintenance Department Contacts for Sterilizers (The Mid-Western Regional Hospital) are:
1) Mechanical Services Officer, Liam Ryan, 087 9076644
2) Technical Services Supervisor, Tony McBride, 087 6782572
3) On call plumber, Pager 200
4) On call Electrician, Pager 100

External Contractors are:
Manepa 01-2959191 (For equipment in C.S.S.D.)
Davidson and Hardy 1800 –709080 (Kestrel and Falcon autoclaves)
The Medical supply company 01-8224222 (Boxer autoclave)
Power Air 087-2677934 Billy Coleman

ACTIONS IN THE EVENT OF FAILURE OF STERILIZERS

 QUANTIFY THE PROBLEM AS MUCH AS POSSIBLE (CHECK AIR, CHECK STEAM, CHECK ELECTRICAL POWER)

 CONTACT EITHER ON CALL ELECTRICIAN ON PAGER 100 OR ON CALL PLUMBER ON PAGER 200, AS APPROPRIATE.

 CALL SOME OR ALL OF THE FOLLOWING, AS REQUIRED
  • TECHNICAL SERVICES SUPERVISOR
  • MECHANICAL SERVICES OFFICER
  • ELECTRICAL/MECHANICAL FOREMAN
  • MECHANICAL TECHNICIAN

 FOLLOWING INSTRUCTION OR IF UNABLE TO CONTACT THE ABOVE CALL THE APPROPRIATE CONTRACTOR.

ACTION CARD NO 2

STERILIZERS (Repair)

Estates Maintenance Department Contacts for Sterilizers (The Mid-Western Regional Hospital) are:
1) Mechanical Services Officer, Liam Ryan, 087 9076644
2) Technical Services Supervisor, Tony McBride, 087 6782572
3) On call plumber, Pager 200
4) On call Electrician, Pager 100

External Contractors are:
Manepa 01-2959191 (For equipment in C.S.S.D.)
SERVICE CONTRACT DETAILS

The service and repair of the kestrel and Falcon 30 autoclave is subject to a service contract with Davidson and Hardy.
The service and repair of the boxer autoclave is subject to a service contract with The Medical Supply Company.
There is not any service contract with Manepa.
Details of these service contracts can be found in the service contracts files located in the service officers office. (Davidson and Hardy file no. 3.004. The Medical supply co. file no.3.009)

DOCUMENTS, MANUALS AND DRAWINGS
Manuals for sterilization equipment in Microbiology are held in Public Health Lab.

ACTION CARD NO 3
STERILISERS (Resuming Normal Operations)

Estates Maintenance Department Contacts for Sterilizers (The Mid-Western Regional Hospital) are:
1) Mechanical Services Officer, Liam Ryan, 087 9076644
2) Technical Services Supervisor, Tony McBride, 087 6782572
3) On call plumber, Pager 200
4) On call Electrician, Pager 100

External Contractors are:
Manepa 01-2959191 (For equipment in C.S.S.D.)
Davidson and Hardy 1800 –709080 (Kestrel and Falcon autoclaves)
The Medical supply company 01-8224222 (Boxer autoclave)
Power Air 087-2677934 Billy Coleman

RESUMING NORMAL OPERATIONS

- ENSURE THAT STERILIZATION EQUIPMENT IS TESTED THOROUGHLY.
- OBTAIN A FULLY COMPLETED SERVICE SHEET FROM THE ENGINEER (IF CALLED IN).
- INFORM ALL NECESSARY STAFF THAT SYSTEM IS REPAIRED.
ACTION CARD NO 4

CATERING (Failure)

Estates Maintenance Department Contacts for the Catering Systems are:
1) Electrician on Call, Pager 100
2) Electrical Services Officer, Larry Murphy, 086 6692111
3) Technical Services Supervisor, Tony McBride, 087 6782572

External Contractors are:

CFS, Carey Food Equipment Services 061 302096
Joe Carey (mobile) 087 2530261

Cross Refrigeration 061 417415

Kelly Refrigeration 065 6820997

Masser Hammond 021 4341202
Tom Collopy: 087 2052427

ACTIONS IN THE EVENT OF FAILURE OF CATERING EQUIPMENT

- QUANTIFY THE PROBLEM AS MUCH AS POSSIBLE
  - IS IT AN INDIVIDUAL APPLIANCE THAT HAS FAILED OR HAVE ALL THE GAS/ELECTRIC APPLIANCES FAILED.
  - IF THERE IS A BACKUP OR ALTERNATIVE APPLIANCE, INSTRUCT STAFF TO MOVE TO THIS AND THEN ISOLATE THE FAULTY APPLIANCE.
  - IF A FAULT OCCURS IN A FREEZER/COLDROOM THEN KEEP THE DOOR CLOSED UNTIL THE SERVICE COMPANY COME AND MONITOR THE TEMPERATURE. IF REPAIR WILL BE PROLONGED THEN INSTRUCT STAFF TO MOVE CONTENTS ANOTHER FREEZER.
CONTACT ON CALL ELECTRICIAN ON PAGER 100, OR ON CALL PLUMBER ON PAGER 200, AS APPROPRIATE.

CALL SOME OR ALL OF THE FOLLOWING, IF NECESSARY
- TECHNICAL SERVICES SUPERVISOR
- ELECTRICAL SERVICES OFFICER
- ELECTRICAL/MECHANICAL FOREMAN
- ELECTRICAL TECHNICIAN

FOLLOWING INSTRUCTION, OR IF UNABLE TO CONTACT THE ABOVE, CALL THE APPROPRIATE SERVICE COMPANY AS LISTED ABOVE.
ACTION CARD NO 5
CATERING (Repair)

**Estates Maintenance Department** Contacts for the Catering Systems are:

4) Electrician on Call, Pager 100
5) Electrical Services Officer, Larry Murphy, 086 6692111
6) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are:

CFS, Carey Food Equipment Services 061 302096
  Joe Carey (mobile) 087 2530261

Cross Refrigeration 061 417415

Kelly Refrigeration 065 6820997

Masser Hammond 021 4341202
  Tom Collopy: 087 2052427

**SERVICE CONTRACT DETAILS**

Service contract details for the above listed companies can be found in the Service Contract files located in the service officer’s office.
ACTION CARD NO 6
CATERING (Resuming Normal Operations)

Estate Maintenance Department Contacts for the Catering Systems are:

7) Electrician on Call, Pager 100
8) Electrical Services Officer, Larry Murphy, 086 6692111
9) Technical Services Supervisor, Tony McBride, 087 6782572

External Contractors are:

CFS, Carey Food Equipment Services 061 302096
Joe Carey (mobile) 087 2530261

Cross Refrigeration 061 417415
Kelly Refrigeration 065 6820997

Masser Hammond 021 4341202
Tom Collopy: 087 2052427

RESUMING NORMAL OPERATIONS

☐ ENSURE THAT EQUIPMENT IS TESTED THOROUGHLY.

☐ OBTAIN A FULLY COMPLETED SERVICE SHEET FROM ANY SERVICE ENGINEER THAT WAS CALLED IN.

☐ INFORM ALL NECESSARY CATERING AND ESTATE MAINTENANCE DEPARTMENT STAFF THAT EQUIPMENT HAS BEEN REPAIRED.

ACTION CARD NO 7
MEDICAL GASES (Failure)

Estate Maintenance Department Contacts for medical gases (The Mid-Western Regional Hospital) are:

1) Mechanical Services Officer, Liam Ryan, 087 9076644
2) Technical Services Supervisor, Tony McBride, 087 6782572
3) On call plumber Pager 200
4) On call electrician Pager 100

External Contractors are:

Hospital technical systems 01-4551163
ACTIONS IN THE EVENT OF FAILURE OF MEDICAL GASES

- QUANTIFY THE PROBLEM AS MUCH AS POSSIBLE
  - CHECK ELECTRICAL POWER,
  - CHECK COMPRESSOR/VACUUM PUMP
  - CHECK BACKUP MANIFOLDS IN THE CASE OF OXYGEN OR NITROUS OXIDE).

- CONTACT EITHER ON CALL ELECTRICIAN ON PAGER 100 OR ON CALL PLUMBER ON PAGER 200, AS APPROPRIATE

- CALL SOME OR ALL OF THE FOLLOWING, AS REQUIRED
  - TECHNICAL SERVICES SUPERVISOR
  - MECHANICAL SERVICES OFFICER
  - ELECTRICAL/MECHANICAL FOREMAN
  - MECHANICAL TECHNICIAN

- FOLLOWING INSTRUCTION OR IF UNABLE TO CONTACT THE ABOVE CALL THE APPROPRIATE CONTRACTOR.

ACTION CARD NO 8  

**MEDICAL GASES (Repair)**

**Estates Maintenance Department** Contacts for medical gases (The Mid-Western Regional Hospital) are:

1) Mechanical Services Officer, Liam Ryan, 087 9076644  
2) Technical Services Supervisor, Tony McBride, 087 6782572  
3) On call plumber Pager 200  
4) On call electrician Pager 100

**External Contractors** are:

- Hospital technical systems 01-4551163
- B.O.C. gas services 01-4091804 (outlet points)

**SERVICE CONTRACT DETAILS**

The service and repair of the medical gas system is subject to a service contract with:

- Hospital Technical systems Ltd.  Details in file no.3.006
- B.O.C. Gas services Ltd. (outlet points only) Details in file no.3.002
These files are located in the service officer's office.

**DOCUMENT, MANUALS AND DRAWINGS**

Drawings for the medical gas system can be found in the drawing cabinet in the service officer’s office.
ACTION CARD NO 9
MEDICAL GASES (Resuming Normal Operations)

Estate Maintenance Department Contacts for medical gases (The Mid-Western Regional Hospital) are:
1) Mechanical Services Officer, Liam Ryan, 089076644
2) Technical Services Supervisor, Tony McBride, 087 6782572
3) On call plumber Pager 200
4) On call electrician Pager 100

External Contractors are:
Hospital technical systems 01-4551163
B.O.C. gas services 01-4091804 (outlet points)

RESUMING NORMAL OPERATIONS

☐ ENSURE THAT MEDICAL GAS SYSTEM IS TESTED THOROUGHLY.

☐ OBTAIN A FULLY COMPLETED SERVICE SHEET FROM THE SERVICE ENGINEER.

☐ INFORM ALL THE NECESSARY STAFF THAT THE MEDICAL GAS SYSTEM IS REPAIRED.
  - TECHNICAL SERVICES SUPERVISOR
  - MECHANICAL SERVICES OFFICER
  - ELECTRICAL/MECHANICAL FOREMAN
  - MECHANICAL TECHNICIAN
ACTION CARD NO 10

LIFTS (Failure)

Estates Maintenance Department Contacts for the lift System (The Mid-Western Regional Hospital ) are:

1) Electrician on call, Pager 100,
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

External Contractors are: Mid Western Lift Services Ltd., 061-400123

ACTIONS TO BE TAKEN IN THE EVENT OF LIFT FAILURE

- QUANTIFY THE PROBLEM AS MUCH AS POSSIBLE. CHECK TO SEE ARE THERE ANY PASSENGERS TRAPPED IN THE LIFT, IF PASSANGERS ARE TRAPPED, THEN:
  - GO TO ACTION CARD NO. 64 FOR RELEASE OF PASSENGERS FROM ROPE TYPE LIFT
  - GO TO ACTION CARD NO. 65 FOR RELEASE OF PASSENGERS FROM HYDRAULIC TYPE LIFT

- CONTACT THE ON CALL ELECTRICIAN ON PAGER 100.

- CALL SOME OR ALL OF THE FOLLOWING:
  - TECHNICAL SERVICES SUPERVISOR
  - MECHANICAL SERVICES OFFICER
  - ELECTRICAL/MECHANICAL FOREMAN
  - MECHANICAL TECHNICIAN.

- FOLLOWING INSTRUCTION OR IF UNABLE TO CONTACT THE ABOVE CONTACT MID-WESTERN LIFT SERVICES.
ACTION CARD NO 11

LIFTS (Repair)

**Estates Maintenance Department** Contacts for the lift System (The Mid-Western Regional Hospital) are:

1) Electrician on call, Pager 100,
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are: Mid Western Lift Services Ltd., 061-400123

**SERVICE CONTRACT DETAILS**

The service and repair of the Lift system is subject to a service contract with Mid Western Lift Services Ltd. Details of this contract can be found in Service Contracts File No:3.009 located in the service officers office.

**DOCUMENT, MANUALS AND DRAWINGS**

ACTION CARD NO 12

LIFTS (Resuming Normal Operations)

**Estates Maintenance Department** Contacts for the lift System (The Mid-Western Regional Hospital) are:

1) Electrician on call, Pager 100,
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are: Mid Western Lift Services Ltd., 061-400123
RESUMING NORMAL OPERATIONS

- Estates Maintenance Department to inspect and check lift system to ensure it is operating to normal standards.

- Obtain a fully completed service sheet from the service engineer (if called in).

- Inform all necessary staff that lift system is repaired:
  - Technical Services Supervisor
  - Mechanical Services Officer
  - Electrical/Mechanical Foreman
  - Mechanical Technician
  - On-call Electrician
  - Main Reception
  - Security

ACTION CARD NO 13

BOILERS (Failure)

**Estates Maintenance Department** Contacts for Boilers (The Mid-Western Regional Hospital) are:
1) Electrician on call, Pager 100
2) Plumber on call, Pager 200
3) Mechanical Services Officer, Liam Ryan, 087 9076644
4) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are: Lenmac 061202277
Noel Drummond 087 2123580

ACTIONS TO BE TAKEN IN THE EVENT OF BOILER FAILURE

- Call on-call electrician on pager 100, or on-call plumber on pager 200, as appropriate.

- Call some or all of the following, if required:
- TECHNICAL SERVICES SUPERVISOR
- MECHANICAL SERVICES OFFICER
- MECHANICAL TECHNICIAN.

- CHECK THE BOILER PANEL TO MAKE SURE THE BURNER HAS NOT TRIPPED OUT.

- IF THERE IS A LOCKOUT ON THE PANEL AN ELECTRICIAN WILL HAVE TO RESET IT.

- IF THE BURNER IS LOCKED OUT AN ORANGE LIGHT WILL APPEAR ON THE FRONT OF THE UNIT THIS MUST BE Pressed TO RESET THE BURNER.

- IF THE BURNER HAS LOCKED OUT DUE TO GAS SUPPLY FAILURE SWITCH THE BURNER OVER TO OIL AND RESET IT.

- TO OPERATE THE BOILER IN MANUAL MODE THE BOILER CONTROL ON THE PANEL MUST BE SWITCHED TO HAND THE BOILER WILL NOW OPERATE INDEPENDENTLY OF THE BMS AND WORK TO A PRESET TEMPERATURE ON THE BOILERS CONTROL PANEL THIS TEMPERATURE SHOULD BE APPROX 80 – 90 DEGREES.

- FOLLOWING INSTRUCTION OR IF UNABLE TO CONTACT THE ABOVE CONTACT SERVICE COMPANY.
ACTION CARD NO 14

BOILERS (Repair)

**Estates Maintenance Department** Contacts for Boilers (The Mid-Western Regional Hospital) are:

1) Electrician on call, Pager 100
2) Plumber on call, Pager 200
3) Mechanical Services Officer, Liam Ryan, 087 9076644
4) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are:

- Lenmac  061202277
- Noel Drummond  087 2123580

**SERVICE CONTRACT DETAILS**

The service and repair of Boilers are subject to a service contract with Lenmac Services Ltd. Details of this contract can be found in Service Contracts File No:3.008 located in the service officer's office.

ACTION CARD NO 15

BOILERS (Resuming Normal Operations)

**Estates Maintenance Department** Contacts for Boilers (The Mid-Western Regional Hospital) are:

1) Electrician on call, Pager 100
2) Plumber on call, Pager 200
3) Mechanical Services Officer, Liam Ryan, 087 9076644
4) Technical Services Supervisor, Tony McBride, 087 6782572
External Contractors are: Lenmac 061202277
Noel Drummond 087 2123580

RESUMING NORMAL OPERATIONS

- IF THE BURNER HAS BEEN SWITCHED FROM GAS TO OIL, SWITCH IT BACK TO GAS.
- THE BOILER MUST BE TURNED BACK TO AUTO ON THE CONTROL PANEL IF THE PROBLEM WITH THE BMS HAS BEEN SORTED OUT.
- THE BOILER MUST BE OBSERVED TO MAKE SURE IT OPERATES CORRECTLY UNDER NORMAL OPERATIONS.
- OBTAIN A FULLY COMPLETED SERVICE SHEET FROM THE SERVICE ENGINEER (IF CALLED IN)
- INFORM ALL NECESSARY STAFF THAT BOILERS ARE REPAIRED
  - TECHNICAL SERVICES SUPERVISOR
  - MECHANICAL SERVICES OFFICER
  - ELECTRICAL/MECHANICAL FOREMAN
  - MECHANICAL TECHNICIAN
ACTION CARD NO 16

BMS (Failure)

Estates Maintenance Department Contacts for BMS (The Mid-Western Regional Hospital) are:

1) Electrician on call, Pager 100
2) Plumber on call, Pager 200
3) Mechanical Services Officer, Liam Ryan, 087 9076644
4) Technical Services Supervisor, Tony McBride, 087 6782572

External Contractors are: Manutec 069 68144

Ceil Haskett 087 2668348

ACTIONS TO BE TAKEN IN THE EVENT OF BMS FAILURE

- CALL ON-CALL ELECTRICIAN ON PAGER 100, OR ON-CALL PLUMBER ON PAGER 200, AS APPROPRIATE

- CALL SOME OR ALL OF THE FOLLOWING, IF REQUIRED:
  - TECHNICAL SERVICES SUPERVISOR
  - MECHANICAL SERVICES OFFICER
  - MECHANICAL TECHNICIAN.

- IN THE EVENT OF THE BMS FAILING TO OPERATE, ALL INTERFACED SYSTEMS SHOULD BE ISOLATED FROM THE BMS AND OPERATED MANUALLY. THIS WILL INCLUDE THE FOLLOWING SYSTEMS:
  - BOILERS
  - AIR CONDITIONING
  - HEATING AND VENTILATION
ACTION CARD NO 17  

**BMS (Repair)**

**Estates Maintenance Department** Contacts for BMS (The Mid-Western Regional Hospital) are:

1) Electrician on call, Pager 100
2) Plumber on call, Pager 200
3) Mechanical Services Officer, Liam Ryan, 087 9076644
4) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are:  
Manutec 069 68144  
Ceil Haskett 087 2668348

**SERVICE CONTRACT DETAILS**

The service and repair of the BMS system is subject to a service contract with Manutec Ltd. Details of this contract can be found in Service Contracts File No: 2.016 located in the service officer’s office.

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ACTION CARD NO 18  

**BMS (Resuming Normal Operations)**

**Estates Maintenance Department** Contacts for BMS (The Mid-Western Regional Hospital) are:

1) Electrician on call, Pager 100
2) Plumber on call, Pager 200
3) Mechanical Services Officer, Liam Ryan, 087 9076644
4) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are:  
Manutec 069 68144
RESUMING NORMAL OPERATIONS

- WHEN THE BMS SYSTEM IS REPAIRED THE CONTROLS MAY BE SWITCHED BACK TO AUTO ON THE CONTROL PANEL.

- OBTAIN A FULLY COMPLETED SERVICE SHEET FROM THE SERVICE ENGINEER.

- INFORM ALL NECESSARY STAFF THAT BMS SYSTEM IS REPAIRED
  - TECHNICAL SERVICES SUPERVISOR
  - MECHANICAL SERVICES OFFICER
  - ELECTRICAL/MECHANICAL FOREMAN
  - MECHANICAL TECHNICIAN
ACTION CARD NO 19
FIRE (Failure)

**Estates Maintenance Department** Contacts for the Fire Alarm System (The Mid-Western Regional Hospital) are:
2) Electrician on Call, Pager 100
3) Electrical Services Officer, Larry Murphy, 086 6692111
4) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are: Siemens Fire Safety 01-4508920

Mike Condon
086 - 8505118

**ACTIONS IN THE EVENT OF FAILURE OF FIRE ALARM SYSTEM**

- QUANTIFY THE PROBLEM AS MUCH AS POSSIBLE
- CONTACT THE ON CALL ELECTRICIAN ON PAGER 100.
- CALL SOME OR ALL OF THE FOLLOWING, AS REQUIRED
  - TECHNICAL SERVICES SUPERVISOR
  - ELECTRICAL SERVICES OFFICER
  - ELECTRICAL/MECHANICAL FOREMAN
  - ELECTRICAL TECHNICIAN
- FOLLOWING INSTRUCTION, OR IF UNABLE TO CONTACT THE ABOVE, CALL SIEMENS FIRE SAFETY AS PER ABOVE.

- INSTIGATE FIREWATCH AS FOLLOWS:
  - MINIMUM OF TWO PERSONS TO CARRY OUT FIREWATCH, ONE TO BE MEMBER OF ESTATES MAINTENANCE DEPARTMENT.
  - ESTATES MAINTENANCE DEPARTMENT TO DECIDE ON TEAMS REQUIRED – MINIMUM OF 2 REQUIRED FOR HOSPITAL SITE.
  - FIREWATCH TEAMS TO BE ALLOCATED HOSPITAL AREA AND TO WALK AROUND - ALL HOSPITAL AREAS TO CHECK FOR FIRE AND SECURITY OF BUILDING.
  - AS A MINIMUM, FIREWATCH TO BE CARRIED OUT EVERY 4 HOURS (THIS WILL INCLUDE INSPECTION OF BOILER-HOUSES AND GENERATOR ROOMS)
  - UNOCCUPIED AREAS TO BE CHECKED AND LOCKED OFF. (TO BE PERIODICALLY CHECKED AS PART OF FIREWATCH.)
  - FIREWATCH TEAMS TO CLOSE ALL FIRE DOORS IN THEIR AREAS.
ACTION CARD NO 20

FIRE (Repair)

**Estates Maintenance Department** Contacts for the Fire Alarm System (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Services Officer, Larry Murphy, 086 6692111
3) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are:

Siemens Fire Safety, 01-4508920
Mike Condon, 086 - 8505118

**SERVICE CONTRACT DETAILS**

The service and repair of the Fire Alarm system is subject to a service contract with Siemens Fire Safety Ltd. Details of this contract can be found in Service Contracts File No: 2.017 located in the service officers office.

**DOCUMENT, MANUALS AND DRAWINGS**
Drawings for the Fire Alarm system can be found in the Fire Alarm drawings and information folder, this is located in the Service officer's office.

ACTION CARD NO 21

**FIRE** (Resuming Normal Operations)

**Estate Maintenance Department** Contacts for the Fire Alarm System (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100  
2) Electrical Technician, Pat Cassidy, 5111  
2) Electrical Services Officer, Larry Murphy, 086 6692111

**External Contractors** are: Siemens Fire Safety, 01-4508920  
Mike Condon, 086 - 8505118

**RESUMING NORMAL OPERATIONS**

- ENSURE THAT FIRE ALARM SYSTEM IS TESTED THOROUGHLY
- OBTAIN A FULLY COMPLETED SERVICE SHEET FROM THE SIEMENS ENGINEER
- INFORM ALL NECESSARY STAFF THAT FIRE ALARM SYSTEM IS REPAIRED
  - TECHNICAL SERVICES SUPERVISOR
  - ELECTRICAL SERVICES OFFICER
  - ELECTRICAL/MECHNICAL FOREMAN
  - ELECTRICAL TECHNICIAN
  - ON-CALL ELECTRICIAN
  - MAIN RECEPTION
  - SECURITY
STAND DOWN FIREWATCH

RECORD ALL DETAILS IN FIRE ALARM LOG BOOK

ACTION CARD NO 22  

SECURITY (Failure)

Estates Maintenance Department Contacts for Security System (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Technician, Pat Cassidy, 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111

External Contractors are:

INTRUDER ALARMS:

- ADT: 021 4275757 / 086 8342361
- ETL: 1850 304300, look for ETL
- MANTECH: 061 340230 / 086 8161402

CCTV:

- SKS (Seamus McMahon) 01 4565655 / 087 2596955

TELEALARM NURSECALL:

- B.P. Multipage (Dave Purcell) 01 6708555 / 087-9477267

ACTIONS IN THE EVENT OF FAILURE OF A SECURITY SYSTEM

- QUANTIFY THE PROBLEM AS MUCH AS POSSIBLE, IS THERE POWER IN THE AREA? IS IT PLUGGED IN? ETC.

- CONTACT THE ON CALL ELECTRICIAN ON PAGER 100.

- CALL SOME OR ALL OF THE FOLLOWING, AS REQUIRED
  - ELECTRICAL/MECHANICAL FOREMAN
  - ELECTRICAL TECHNICIAN
  - ELECTRICAL SERVICES OFFICER
FOLLOWING INSTRUCTION, OR IF UNABLE TO CONTACT ANY OF THE ABOVE, CONTACT THE RELEVANT SERVICE COMPANY.

ACTION CARD NO 23
SECURITY (Repair)

_Estates Maintenance Department_ Contacts for Security System(The Mid-Western Regional Hospital) are:

4) Electrician on Call, Pager 100
5) Electrical Technician, Pat Cassidy, 5111
6) Electrical Services Officer, Larry Murphy, 086 6692111

_External Contractors_ are:

**INTRUDER ALARMS:**

- ADT: 021 4275757 / 086 8342361
- ETL: 1850 304300, look for ETL
- MANTECH: 061 340230 / 086 8161402
CCTV:
  o SKS (Seamus McMahon)  01 4565655 / 087 2596955

TELEALARM NURSECALL:
  o B.P. Multipage (Dave Purcell)  01 6708555 / 087-9477267

SERVICE CONTRACT DETAILS

The service and repair of the Security systems are subject to service contracts with the companies listed above. Details of these contracts can be found in Service Contracts Files located in the service officer's office.

ACTION CARD NO 24
SECURITY (Resuming Normal Operations)

Estates Maintenance Department Contacts for Security System(The Mid-Western Regional Hospital) are:
  7) Electrician on Call, Pager 100
  8) Electrical Technician, Pat Cassidy, 5111
  9) Electrical Services Officer, Larry Murphy, 086 6692111

External Contractors are:

INTRUDER ALARMS:
  o ADT:  021 4275757 / 086 8342361
  o ETL:  1850 304300, look for ETL
  o MANTECH:  061 340230 / 086 8161402

CCTV:
  o SKS (Seamus McMahon)  01 4565655 / 087 2596955

TELEALARM NURSECALL:
  o B.P. Multipage (Dave Purcell)  01 6708555 / 087-9477267

RESUMING NORMAL OPERATIONS
- ENSURE THAT THE FAULTED SECURITY SYSTEM IS TESTED THOROUGHLY

- OBTAIN A FULLY COMPLETED SERVICE SHEET FROM THE ENGINEER

- INFORM ALL NECESSARY STAFF THAT SECURITY ALARM SYSTEM IS REPAIRED
  - TECHNICAL SERVICES SUPERVISOR
  - ELECTRICAL SERVICES OFFICER
  - ELECTRICAL/MECHANICAL FOREMAN
  - ELECTRICAL TECHNICIAN
  - ON-CALL ELECTRICIAN

- STAND DOWN ANY EXTRA SECURITY INITIATIVES THAT MAY HAVE BEEN PUT IN PLACE DURING THE FAILURE PERIOD.

ACTION CARD NO 25

NURSE CALL (Failure)
**Estates Maintenance Department** Contacts for the Nurse Call System (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Services Officer, Larry Murphy, 086 6692111
3) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are:

- **Ackerman**: Connexus Communications: 01 4604722 / 086-2647361
- **Mediplex**: Medical Systems Ireland 01 8308855
  Despro Mediplan Ltd: 0044 114 269 7361

**ACTIONS IN THE EVENT OF FAILURE OF A NURSES CALL SYSTEM**

- QUANTIFY THE PROBLEM AS MUCH AS POSSIBLE. IS THE PROBLEM LOCAL TO ONLY ONE ROOM IN A WARD OR IS THE ENTIRE WARD AFFECTED?

- CONTACT THE ON CALL ELECTRICIAN ON PAGER 100.

- CALL SOME OR ALL OF THE FOLLOWING, AS REQUIRED
  - ELECTRICAL SERVICES OFFICER
  - ELECTRICAL/MECHANICAL FOREMAN
  - ELECTRICAL TECHNICIAN

- FOLLOWING INSTRUCTION, OR IF UNABLE TO CONTACT ANY OF THE ABOVE, CONTACT THE RELEVANT SERVICE COMPANY.

- ALL AREAS OF AFFECTED WARD TO BE ISSUED WITH HAND BELL TO SUMMONS NURSE.

- PATIENTS TO BE ASKED TO BE VIGILANT FOR THEIR NEIGHBOURS AND NURSES TO INCREASE OBSERVATION.

- WARDS WITH NON-AMBULANT OR SEDATED PATIENTS TO INCREASE OBSERVATION.
ACTION CARD NO 26

NURSE CALL (Repair)

**Estates Maintenance Department** Contacts for the Nurse Call System (The Mid-Western Regional Hospital) are:

4) Electrician on Call, Pager 100
5) Electrical Services Officer, Larry Murphy, 086 6692111
6) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are:

**Ackerman**: Connexus Communications: 01 4604722 / 086-2647361

**Mediplex**: Medical Systems Ireland 01 8308855
Despro Mediplan Ltd: 0044 114 269 7361

**SERVICE CONTRACT DETAILS**

There is no service contract on the Nurses call systems as there are separate systems in each area of the hospital. It is possible, though not preferrable, to operate without a Nurses call system for a period of time. The system is maintained on a day to day basis by the Estates Maintenance Department.
DOCUMENT, MANUALS AND DRAWINGS

ACKERMAN CLINO-OPT 90 AND CLINO-OPT 99: Manuals and information are filed in the ‘Nurse Call’ file, in the service officer’s office.

MEDIPLEX SERIES 85: Manuals and details are filed in Section 7 of the Phase 1 Electrical Maintenance Manual (06), in the service officer’s office.

ACTION CARD NO 27

NURSE CALL (Resuming Normal Operations)

_Estates Maintenance Department_ Contacts for the Nurse Call System (The Mid-Western Regional Hospital) are:

7) Electrician on Call, Pager 100
8) Electrical Services Officer, Larry Murphy, 086 6692111
9) Technical Services Supervisor, Tony McBride, 087 6782572

External Contractors are:

- Ackerman: Connexus Communications: 01 4604722 / 086-2647361
- Mediplex: Medical Systems Ireland 01 8308855
  Despro Mediplan Ltd: 0044 114 269 7361

RESUMING NORMAL OPERATIONS

- ENSURE THAT THE SYSTEM IS TESTED THOROUGHLY
- IF AN ENGINEER HAS BEEN CALLED TO REPAIR A NURSE CALL SYSTEM THEN OBTAIN A FULLY COMPLETED SERVICE SHEET FROM THEM.
- INFORM ALL NECESSARY STAFF THAT NURSE CALL SYSTEM IS REPAIRED
  - WARD SISTER
  - ELECTRICAL SERVICES OFFICER
  - ELECTRICAL/Mechanical FOREMAN
  - ELECTRICAL TECHNICIAN
  - ON-CALL ELECTRICIAN
- STAND DOWN ANY EXTRA INITIATIVES THAT, MAY, HAVE BEEN PUT IN PLACE DURING THE FAILURE PERIOD.
COLLECT ALL BELLS AND RETURN TO ELECTRICAL STORE.

ACTION CARD NO 28
ELECTRICITY (Failure)

**Estates Maintenance Department** Contacts for Electricity (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Technician, Pager 583, Extension 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111
4) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are:

ESB Emergency Number 1850 – 372999
Locally Clem Cusack 087-2352086

FG Wilson 01 – 4508322
Powerohm Ambulance Centre Only
061-506600 or

Eugene Mulcahy 087 - 2520900

ACTIONS IN THE EVENT OF FAILURE OF ELECTRICITY SUPPLY

- CONTACT ON-CALL ELECTRICIAN ON PAGER 100.
- CONTACT TSS AND ELECTRICAL SERVICES OFFICER.
- ENSURE THAT MAIN BREAKERS ARE NOT TRIPPED.
- CONTACT AND REMAIN IN CONTACT WITH E.S.B. THROUGHOUT POWER FAILURE.
- CARRY OUT RESETS AS DETAILED IN ACTION CARD NO. 30.
- MONITOR GENERATORS EVERY 30 MINUTES AS PER ACTION CARD NO. 61.
- MONITOR GENERATOR LOAD AND PREPARE TO SHED LOAD IF REQUIRED. (TURN OFF ELECTRICAL SUPPLY TO LESS CRITICAL AREAS.

ACTIONS IN THE EVENT OF FAILURE OF GENERATED SUPPLY

- QUANTIFY REASON FOR GENERATOR TRIPPING.
- CONTACT ON-CALL ELECTRICIAN ON PAGER 100, IF NOT ALREADY ON SITE.
- CONTACT TSS AND ELECTRICAL SERVICES OFFICER, IF NOT ALREADY ON SITE.
- CONTACT FG WILSON (OR POWEROHM IN THE CASE OF THE AMBULANCE CENTRE) AND TELL THEM TO ATTEND SITE WITHOUT DELAY. GET MOBILE NUMBER FOR ENGINEER ON ROUTE TO SITE.
- FIRST ELECTRICAL STAFF TO ARRIVE ARE TO START TO TRACE FAULT USING WIRING DIAGRAMS PRESENT IN GENERATOR ROOMS AND ARE TO CONTACT ENGINEER ON ROUTE TO SITE.
ACTION CARD NO 29

ELECTRICITY (Repair)

**Estates Maintenance Department** Contacts for Electricity (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Technician, Pager 583, Extension 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111
4) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are:

- ESB Emergency Number 1850 – 372999
  Locally Clem Cusack 087-2352086

- FG Wilson 01 – 4508322

- Powerohm Ambulance Centre Only
  061-506600
  or Eugene Mulcahy 087 - 2520900

**Service Contract Details**
The ESB perform checks on the 10KV system within the hospital twice yearly, with one major inspection per year. Details of this contract are held in the service officers office in service contract folder 2.014.

All Generators are on service contract. All contracts cater for 2 no. service visits per year. Service Contract documentation can be found in service contract folders 2.015 in the case of FG Wilson and in folder 2.017 in the case of Powerohm. All folders are located in the service officers office.

**Technical Manuals and Drawings**
Technical manuals and drawings for ESB systems and generators can be found in the service officers office.

ACTION CARD NO 30

ELECTRICITY (Resuming Normal Operations)

**Estates Maintenance Department** Contacts for Electricity (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Technician, Pager 583, Extension 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111
4) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are:

- ESB Emergency Number 1850 – 372999
  Locally Clem Cusack 087-2352086
RESUMING NORMAL OPERATIONS

THE FOLLOWING ITEMS OF PLANT WILL BE REQUIRED TO BE RESET FOLLOWING A TOTAL POWER FAILURE IN AREAS COVERED UNDER GENERATOR NO. 1

- SSD AUTOCLAVES
  - PRESS YELLOW RESET BUTTON ON 3 NO.

- SSD BOILER HOUSE COMPRESSORS
  - RESET DOL STARTERS ON 2 NO. AIR

- SSD BOILER HOUSE CHIEFTAIN BOILER
  - RESET EXTRA LOW WATER ALARM ON

- SSD BOILER HOUSE NOT TRIPPED OUT
  - CHECK GAS BURNERS TO ENSURE THEY ARE NOT TRIPPED OUT

- PHASE 2 PLANT ROOM
  - RESET UPS

- PHASE 2 BOILER HOUSE
  - RESET UPS

- PHASE 2 BOILER HOUSE NECESSARY
  - CHECK BURNERS (3) AND RESET IF NECESSARY

THE FOLLOWING ITEMS OF PLANT WILL BE REQUIRED TO BE RESET FOLLOWING A TOTAL POWER FAILURE IN AREAS COVERED UNDER GENERATOR NO. 2

- WARD 5B BOILER HOUSE
  - CHECK BURNER AND RESET IF NECESSARY

- MAIN BOILER HOUSE NECESSARY
  - CHECK BURNERS (2) AND RESET IF NECESSARY

- PABX ROOM
  - RESET AIR CONDITIONING
THE FOLLOWING ITEMS MAY ONLY BE RESET AFTER ESB MAINS POWER HAS BEEN RESTORED IN FULL.

- NUCLEAR MEDICINE - CHECK AIR CONDITIONING UNIT
- MAIN KITCHEN - RESET KNOCKOUT CONTACTOR
- NURSES HOME ELECT. RM - RESET KNOCKOUT SUPPLY TO SCHOOL OF NURSING
- PORTACABINS - RESET TIME CLOCKS IN CABINS
- GENERATOR HOUSE NO.2 - RESET KNOCKOUT CONTACTOR

**ACTION CARD NO 31**

**WATER** (Failure)

**Estates Maintenance Department** Contacts for Water (The Mid-Western Regional Hospital) are:

1) Plumber on call, Pager 200
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are: Limerick Corporation 061 417833

**ACTIONS TO BE TAKEN IN THE EVENT OF WATER FAILURE**

- CALL ON-CALL ELECTRICIAN ON PAGE 100, OR ON-CALL PLUMBER ON PAGE 200, AS APPROPRIATE

- CALL SOME OR ALL OF THE FOLLOWING, IF REQUIRED:
  - TECHNICAL SERVICES SUPERVISOR
  - MECHANICAL SERVICES OFFICER
  - MECHANICAL TECHNICIAN.
  - DIRECTOR OF NURSING
  - SENIOR NURSE ON DUTY

- FAILURE OF WATER SUPPLY – AFFECTED DEPARTMENTS TO ADOPT LOCAL DEPARTMENT CONTINGENCY PLANS AND STAFF TO FOLLOW WATER MINIMISATION PROCEDURES WHICH WILL INCLUDE ELECTRIC/GAS ISOLATION OF WATER BOILERS, DISHWASHERS AND BEDPAN WASHERS.
AS A PRIORITY THE FOLLOWING DEPARTMENTS MUST BE CONTACTED:

- DIALYSIS UNIT
- INFECTION CONTROL
- CATERING

ACTION CARD NO 32
WATER (Repair)

**Estates Maintenance Department** Contacts for Water (The Mid-Western Regional Hospital) are:

1) Plumber on call, Pager 200
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are: Limerick Corporation 061 417833

**SERVICE DETAILS**

Information on water services can be found in file no 3.021 located in the service officer’s office.

**DRAWINGS**

Drawings for the water system are located in the drawings cabinet in the technical services office.
ACTION CARD NO 33

WATER (Resuming Normal Operations)

**Estates Maintenance Department** Contacts for Water (The Mid-Western Regional Hospital) are:

1) Plumber on call, Pager 200
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are: Limerick Corporation 061 417833

RESUMING NORMAL OPERATIONS

- ESTATES MAINTENANCE DEPARTMENT TO CHECK MAIN TANKS AND CARRY OUT A FLUSH THROUGH OF THE SYSTEM IN ACCORDANCE WITH LOCAL GUIDANCE. ON REINSTATEMENT OF MAINS WATER

- STAFF SHOULD CHECK THE OPERATION OF SERVICES, E.G. TOILETS, TAPS, WASHING MACHINES ETC, AND DRAW OFF A QUANTITY OF WATER FROM ALL DRINKING WATER OUTLETS.

- AS A PRIORITY THE FOLLOWING DEPARTMENTS MUST BE CONTACTED:
  - DIALYSIS UNIT
  - INFECTION CONTROL
  - CATERING

- CALL SOME OR ALL OF THE FOLLOWING, AS REQUIRED:
  - TECHNICAL SERVICES SUPERVISOR
  - MECHANICAL SERVICES OFFICER
  - MECHANICAL TECHNICIAN
  - DIRECTOR OF NURSING
  - SENIOR NURSE ON DUTY

ACTION CARD NO 34

GAS (Failure)

**Estates Maintenance Department** Contacts for Gas (The Mid-Western Regional Hospital) are:

1) Plumber on call, Pager 200
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are: BORD GAIS 1850 673322
ACTIONS TO BE TAKEN IN THE EVENT OF GAS FAILURE

- **CALL ON-CALL PLUMBER ON PAGER 200.**

- **CALL SOME OR ALL OF THE FOLLOWING, IF REQUIRED:**
  - TECHNICAL SERVICES SUPERVISOR
  - MECHANICAL SERVICES OFFICER
  - MECHANICAL TECHNICIAN.

- **NOTIFY OTHER DEPARTMENTS USING GAS AND THEY WILL IMPLEMENT THEIR LOCAL CONTINGENCY PLANS THIS INCLUDES CATERING.**

- **TECHNICAL SERVICES STAFF TO SWITCH BOILERS FROM OIL TO GAS AND ENSURE OPERATION OF HEATING AND HOT WATER SUPPLIES.**

- **ESTATES MAINTENANCE DEPARTMENT TO ISOLATE GAS MAINS ON FAILURE OF SUPPLY AND SWITCH OFF ALL GAS APPLIANCES.**

**ACTION CARD NO 35**

**GAS (Repair)**

**Estates Maintenance Department** Contacts for Gas (The Mid-Western Regional Hospital) are:

1) Plumber on call, Pager 200
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are:  
BORD GAIS 1850 673322

**SERVICE DETAILS**

Information on gas services can be found in the Technical Services office.

**DRAWINGS**

Drawings for the Gas system are located in the drawings cabinet in the Technical services office.
ACTION CARD NO 36
GAS (Resuming Normal Operations)

Estates Maintenance Department Contacts for Gas (The Mid-Western Regional Hospital) are:
1) Plumber on call, Pager 200
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

External Contractors are: BORD GAIS 1850 673322

RESUMING NORMAL OPERATIONS

- Estates Maintenance Department Switch on gas supply and ensure correct operation of all gas appliances before use.
- Inform the relevant areas that the gas supply is restored and that gas appliances need to be checked to make sure they are not left turned on.
- Call some or all of the following, as required:
  - Technical Services Supervisor
  - Mechanical Services Officer
  - Mechanical Technician.
  - Director of Nursing
  - Senior Nurse on duty
ACTION CARD NO 37

OIL (Failure)

Estates Maintenance Department Contacts for Oil (The Mid-Western Regional Hospital) are:

1) Plumber on call, Pager 200
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

External Contractors are: TARA OIL 061 440077
JAMES O MAHONY 087 2573635

ACTIONS TO BE TAKEN IN THE EVENT OF OIL FAILURE

☐ CALL ON-CALL PLUMBER ON PAGER 200.

☐ NOTIFY THE MECHANICAL SERVICES OFFICER AND THE TECHNICAL SERVICES SUPERVISOR.

☐ CALL TARA OIL.

ACTION CARD NO 38

OIL (Repair)

Estates Maintenance Department Contacts for Oil (The Mid-Western Regional Hospital) are:

1) Plumber on call, Pager 200
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

External Contractors are: TARA OIL 061 440077
JAMES O MAHONY  087 2573635
ACTION CARD NO 39

OIL (Resuming Normal Operations)

Estates Maintenance Department Contacts for Oil (The Mid-Western Regional Hospital) are:
   1) Plumber on call, Pager 200
   2) Mechanical Services Officer, Liam Ryan, 087 9076644
   3) Technical Services Supervisor, Tony McBride, 087 6782572

External Contractors are:  
   TARA OIL          061 440077  
   JAMES O MAHONY    087 2573635

RESUMING NORMAL OPERATIONS

- IF THE OIL COMPLETELY RAN OUT THE SYSTEM MAY BE AIR-LOCKED AND WILL HAVE TO BE BLED. THIS WILL HAVE TO BE DONE BY A PLUMBER OR THE BURNER SERVICE COMPANY LENMAC 061 202277.

- NOTIFY THE MECHANICAL SERVICES OFFICER AND THE TECHNICAL SERVICES SUPERVISOR.

ACTION CARD NO 40

TELEPHONES (Failure)

Estates Maintenance Department Contacts for the Telephone System(The Mid-Western Regional Hospital) are:
   1) Electrician on Call, Pager 100
   2) Electrical Services Officer, Larry Murphy, 086 6692111
   3) Technical Services Supervisor, Tony McBride, 087 6782572

External Contacts are:
Siemens Communications: 1890 743636
Eircom Govt Service centre: 1800 234000
Eircom VPN A/C Manager, Gerry Morrissey: 087 2579793

**ACTIONS IN THE EVENT OF FAILURE OF COMMUNICATIONS**

- **QUANTIFY THE EXTENT OF THE FAILURE BY:**
  - Try to ring other Limerick hospitals using 4-digit extensions.
  - Try to ring other Limerick hospitals using outside lines.
  - Try to ring in to the regional using a mobile phone.

- **CONTACT THE ON CALL ELECTRICIAN ON PAGER 100 AND THE ELECTRICAL SERVICES OFFICER OR THE TECHNICAL SERVICES SUPERVISOR.**

- **IF THE MAIN TELEPHONE SYSTEM IS ‘DEAD’, RECEPTION STAFF TO SWITCH TO THE STANDBY PABX, POS 2 ON THE SELECTOR SWITCH AT MAIN RECEPTION DESK. ACTION CARD NO. 62 IS TO BE PHOTOCOPIED AND DISTRIBUTED TO ALL LOCATIONS LISTED ON ACTION CARD 62.**

- **IF THE STANDBY PABX FAILS - RECEPTION STAFF TO CONNECT OUTSIDE LINES DIRECTLY TO WARDS BY SWITCHING SELECTOR SWITCH TO POS 3. ACTION CARD NO. 63 IS TO BE PHOTOCOPIED AND DISTRIBUTED TO ALL AREAS ON CARD 63.**

- **IN THE EVENT OF ELECTRICITY FAILURE, THE MAIN COMMUNICATIONS SYSTEM HAS A 10 HOUR BATTERY BACK UP. THE STANDBY SYSTEM HAS A 30 MIN BACK UP.**
ACTION CARD NO 41

TELEPHONES (Repair)

**Estates Maintenance Department** Contacts for the Telephone System (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Services Officer, Larry Murphy, 086 6692111
3) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contacts** are:

Siemens Communications:

1890 743636
Eircom Govt Service centre: 1800 234000
Eircom VPN A/C Manager, Gerry Morrissey: 087 2579793

**SERVICE CONTRACT DETAILS**

The service and repair of the Telephone system is subject to a service contract with Siemens Communications Ltd. Details of this contract can be found in Service Contracts File No: 2.017 located in the service officer’s office.
**ACTION CARD NO 42**  
**TELEPHONES** (Resuming Normal Operations)

**Estates Maintenance Department** Contacts for the Telephone System (The Mid-Western Regional Hospital) are:
- 4) Electrician on Call, Pager 100
- 5) Electrical Services Officer, Larry Murphy, 086 6692111
- 6) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contacts** are:

Siemens Communications:
- 1890 743636
- Eircom Govt Service centre: 1800 234000
- Eircom VPN A/C Manager, Gerry Morrissey: 087 2579793

**RESUMING NORMAL OPERATIONS**

- **SWITCH FROM STANDBY TO MAIN SYSTEM**

- **ENSURE THAT TELEPHONE SYSTEM IS TESTED THOROUGHLY BY:**
  - RING INTERNAL EXTENSIONS
  - RING EXTERNAL NUMBERS
  - RING INTO THE HOSPITAL USING A MOBILE PHONE.
  - TEST THE PAGING INTERFACE BY ATTEMPTING TO PAGE A KNOWN PAGER.
  - MAKE CALLS TO ALL OTHER SITES ON THE NETWORK

- **OBTAIN A FULLY COMPLETED SERVICE SHEET FROM ANY SERVICE ENGINEER CALLED IN TO ASSIST.**

- **INFORM ALL NECESSARY STAFF THAT TELEPHONE SYSTEM IS REPAIRED**
  - TECHNICAL SERVICES SUPERVISOR
  - ELECTRICAL SERVICES OFFICER
  - ELECTRICAL/MECHANICAL FOREMAN
  - ELECTRICAL TECHNICIAN
  - ON-CALL ELECTRICIAN
ACTION CARD NO 43

PAGING (Failure)

Estates Maintenance Department Contacts for the Paging System (The Mid-Western Regional Hospital) are:
1) Electrician on Call, Pager 100
2) Electrical Services Officer, Larry Murphy, 086 6692111
3) Technical Services Supervisor, Tony McBride, 087 6782572

External Contacts are: BP Multipage  Dave Purcell, 01 6708555 / 087 9477267

ACTIONS IN THE EVENT OF FAILURE OF THE PAGING SYSTEM

- QUANTIFY THE EXTENT OF THE PROBLEM AS MUCH AS POSSIBLE:
  - IS THE REGULAR 83 INTERFACE WORKING?
  - IS THE EMERGENCY 63 INTERFACE WORKING?
  - CAN YOU PAGE USING THE EXTERNAL INTERFACE 061 301132?
  - CAN YOU PAGE FROM THE MATERNITY HOSPITAL?
  - IS IT POSSIBLE TO PAGE FROM CONSOLES?

- INSTRUCT RECEPTIONIST STAFF TO CONTACT THE ON CALL ELECTRICIAN BY PHONE IF IT IS NOT POSSIBLE TO PAGE.
- SWITCH OVER TO THE BACK-UP PAGING SYSTEM BY PRESSING THE SWITCHOVER BUTTON SITUATED UNDER THE ACCESS 3000 CONSOLE AT THE MAIN RECEPTION DESK IN THE REGIONAL HOSPITAL DOORADOYLE.

- CHECK THE OPERATION OF THE BACK-UP PAGING SYSTEM BY PAGING A KNOWN PAGER USING THE 83 INTERFACE. NB. THE 63 INTERFACE AND THE EXTERNAL 061 301132 INTERFACE DO NOT WORK WITH THE BACK-UP SYSTEM.

- CALL SOME OR ALL OF THE FOLLOWING, AS REQUIRED
  - TECHNICAL SERVICES SUPERVISOR
  - ELECTRICAL SERVICES OFFICER
  - ELECTRICAL/MECHANICAL FOREMAN
  - ELECTRICAL TECHNICIAN

- FOLLOWING INSTRUCTION, OR IF UNABLE TO CONTACT ANY OF THE ABOVE, CONTACT THE RELEVANT SERVICE COMPANY.
ACTION CARD NO 44

PAGING (Repair)

**Estates Maintenance Department** Contacts for the Paging System (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Services Officer, Larry Murphy, 086 6692111
3) Technical Services Supervisor, Tony McBride, 087 6782572

External Contacts are: BP Multipage  Dave Purcell, 01 6708555 / 087 9477267

**SERVICE CONTRACT DETAILS**

The service and repair of the Paging system is subject to a service contract with B.P. Multipage Ltd. Details of this contract can be found in Service Contracts File No: 2.013 located in the service officers office.

**DOCUMENT, MANUALS AND DRAWINGS**

Manuals and information are stored in the ‘Paging Systems' folder in the service officer's office.

**REPAIR**

- **ENSURE THAT SYSTEM IS TESTED THOROUGHLY BY USING**
  - 83 INTERFACE
  - 63 INTERFACE
  - 061-301132 INTERFACE
  - CONSOLES
  - TEAM PAGES
  - TELEPROTECT

**A/E ALARMS**
ACTION CARD NO 45

PAGING (Resuming Normal Operations)

**Estates Maintenance Department** Contacts for the Paging System (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100  
2) Electrical Services Officer, Larry Murphy, 086 6692111  
3) Technical Services Supervisor, Tony McBride, 087 6782572

**External** Contacts are: BP Multipage  Dave Purcell, 01 6708555 / 087 9477267

**RESUMING NORMAL OPERATIONS**

- **PUT MAIN PAGING SYSTEM ON LINE**

- **TEST MAIN SYSTEM THOROUGHLY TO ENSURE THAT THE FOLLOWING ARE WORKING SATISFACTORILY**
  - 83 INTERFACE
  - 63 INTERFACE
  - 061-301132 INTERFACE
  - CONSOLES
  - TEAM PAGES
  - TELEPROTECT
  - A/E ALARMS

- **OBTAIN A FULLY COMPLETED SERVICE SHEET FROM THE SERVICE ENGINEER**

- **INFORM ALL NECESSARY STAFF THAT PAGING SYSTEM IS REPAIRED**
  - TECHNICAL SERVICES SUPERVISOR
  - ELECTRICAL SERVICES OFFICER
  - ELECTRICAL/Mechanical FOREMAN
  - ELECTRICAL TECHNICIAN
  - ON-CALL ELECTRICIAN

ACTION CARD NO 46

PUBLIC ADDRESS (Failure)

**Estates Maintenance Department** Contacts for Public Address system (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100  
2) Electrical Technician, Pager 583, Extension 5111  
3) Electrical Services Officer, Larry Murphy, 086 6692111
External Contractors are:  Liddane’s Public Address
Jack Liddane 086 – 2533684
061 - 357499

Sound Productions
Gerry O'Brien 086 – 2564107
01 - 4600470

ACTIONS IN THE EVENT OF FAILURE OF PUBLIC ADDRESS FACILITIES

- CONTACT ON-CALL ELECTRICIAN ON PAGER 100.
- CONTACT ELECTRICAL SERVICES OFFICER.
- INFORM RECEPTION OF STATUS AND ADVISE THAT ALL WARD AREAS ARE MADE AWARE THAT THE SYSTEM IS INOPERABLE.
- INFORM RECEPTION TO CONTACT AREAS COVERED BY EMERGENCY INTERCOM AND TO INFORM THEM THAT THEY WILL BE CONTACTED BY THIS MEANS UNTIL THE SYSTEM IS REPAIRED.
- ON-CALL ELECTRICIAN TO CONTACT SERVICE COMPANY (LIDDANES’ FIRST) AFTER INITIAL INVESTIGATIONS DEEM THIS APPROPRIATE.
ACTION CARD NO 47  

PUBLIC ADDRESS (Repair)

**Estates Maintenance Department** Contacts for Public Address system (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Technician, Pager 583, Extension 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111

**External Contractors** are:  
Liddane’s Public Address  
Jack Liddane 086 – 2533684  
061 - 357499

Sound Productions  
Gerry O Brien 086 – 2564107  
01 - 4600470

**SERVICE CONTRACT DETAILS**

There is no service contract on the PA system as there are several alternative means of contacting departments and areas of the hospital. It is possible to operate without PA system services for a period of time. The system is maintained on a day to day basis by the Estates Maintenance Department. The service company for the system is locally based.

**TECHNICAL MANUALS AND DRAWINGS**

A schematic drawing of the PA system is available in the Service Officers office in a file named PUBLIC ADDRESS.
ACTION CARD NO 48

PUBLIC ADDRESS (Resuming Normal Operations)

Estates Maintenance Department Contacts for Public Address system (The Mid-Western Regional Hospital) are:
   1) Electrician on Call, Pager 100
   2) Electrical Technician, Pager 583, Extension 5111
   3) Electrical Services Officer, Larry Murphy, 086 6692111

External Contractors are:
   Liddane’s Public Address
   Jack Liddane 086 – 2533684
   061 - 357499

   Sound Productions
   Gerry O Brien 086 – 2564107
   01 - 4600470

RESUMING NORMAL OPERATIONS

☐ CONTACT ON-CALL ELECTRICIAN ON PAGER 100.

☐ VERIFY THAT ALL AREAS COVERED BY PUBLIC ADDRESS FACILITIES ARE WORKING CORRECTLY.

☐ CONTACT RECEPTION AND INFORM THEM THAT THE SYSTEM IS BACK ON-LINE AND THAT THEY MAY INFORM AREAS OF THIS FACT.

☐ CONTACT RECEPTION AND INFORM THEM THAT AREAS COVERED BY EMERGENCY INTERCOM MAY BE INFORMED THAT THE MAIN SYSTEM IS BACK ON-LINE.

☐ CONTACT ELECTRICAL SERVICES OFFICER.

☐ GET SERVICE DOCKET FROM SERVICE COMPANY.
ACTION CARD NO 49

EMERGENCY INTERCOM (Failure)

**Estates Maintenance Department** Contacts for Emergency Intercom system (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Technician, Pager 583, Extension 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111

**External Contractors** are: SKS  Seamus Mc Mahon 01-4565655 087-2596955

**ACTIONS IN THE EVENT OF FAILURE OF EMERGENCY INTERCOM FACILITIES**

- CONTACT ON-CALL ELECTRICIAN ON PAGER 100.
- CONTACT ELECTRICAL SERVICES OFFICER.
- INFORM RECEPTION OF STATUS AND INFORM RECEPTION TO ADVISE ALL AREAS COVERED BY THE INTERCOM, THAT THE SYSTEM IS INOPERABLE.
- ON-CALL ELECTRICIAN TO CONTACT SERVICE COMPANY AFTER INITIAL INVESTIGATIONS DEEM THIS APPROPRIATE.
ACTION CARD NO 50

EMERGENCY INTERCOM (Repair)

**Estates Maintenance Department** Contacts for Emergency Intercom system (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Technician, Pager 583, Extension 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111

**External Contractors** are: SKS Seamus Mc Mahon 01-4565655
087-2596955

**SERVICE CONTRACT DETAILS**

There is no service contract on the Emergency Intercom system as there are several alternative means of contacting departments and areas of the hospital. It is possible to operate without Emergency Intercom services for a period of time. The system is maintained on a day to day basis by the Estates Maintenance Department.

**TECHNICAL MANUALS AND DRAWINGS**

A schematic drawing of the Emergency Intercom system is available in the Service Officers office in a file named PUBLIC ADDRESS.
ACTION CARD NO 51

EMERGENCY INTERCOM (Resuming Normal Operations)

Estates Maintenance Department Contacts for Emergency Intercom system (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Technician, Pager 583, Extension 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111

External Contractors are: SKS Seamus Mc Mahon 01-4565655 087-2596955

RESUMING NORMAL OPERATIONS

- CONTACT ON-CALL ELECTRICIAN ON PAGER 100.
- VERIFY THAT ALL AREAS COVERED BY EMERGENCY INTERCOM FACILITIES ARE WORKING CORRECTLY.
- CONTACT RECEPTION AND INFORM THEM THAT THE SYSTEM IS BACK ON-LINE AND THAT THEY MAY INFORM AREAS OF THIS FACT.
- CONTACT ELECTRICAL SERVICES OFFICER.
- GET SERVICE DOCKET FROM SERVICE COMPANY.
ACTION CARD NO 52

AIR CONDITIONING (Failure)

Estates Maintenance Department Contacts for the air conditioning System (The Mid-Western Regional Hospital) are:
1) Electrician on call, Pager 100,
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

External Contractors are:
Mulvaney air conditioning 061-301003
Master air 01-4602188
Manutec (Controls only) 069-68144

ACTIONS TO BE TAKEN IN THE EVENT OF AIR CONDITIONING FAILURE

- QUANTIFY THE PROBLEM AS MUCH AS POSSIBLE
- CHECK THE FOLLOWING: ELECTRICAL SUPPLY, CHILLED WATER, HOT WATER, AIR INTAKE, FILTERS.
- CONTACT THE ON CALL ELECTRICIAN ON PAGER 100.
- CALL SOME OR ALL OF THE FOLLOWING:
  - TECHNICAL SERVICES SUPERVISOR.
  - MECHANICAL SERVICES OFFICER.
  - ELECTRICAL/MECHANICAL FOREMAN.
  - MECHANICAL TECHNICIAN.
- FOLLOWING INSTRUCTION OR IF UNABLE TO CONTACT THE ABOVE CONTACT THE RELEVANT SERVICE COMPANY CONCERNED.
ACTION CARD NO 53

**AIR CONDITIONING (Repair)**

**Estates Maintenance Department** Contacts for the air conditioning System (The Mid-Western Regional Hospital) are:
1) Electrician on call, Pager 100,
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are:

- Mulvaney air conditioning 061-301003
- Master air 01-4602188
- Manutec (Controls only) 069-68144

**SERVICE CONTRACT DETAILS**

The service and repair of the air conditioning system is subject to service contracts with:
- Mulvaney air conditioning Details in file no. 3.009
- Master air services Details in file no. 3.009
- Manutec Details in file no. 2.016

These files are located in the service officer’s office.

**DOCUMENT, MANUALS AND DRAWINGS**

Drawings of the air conditioning system are located in the drawing cabinet in the services officer’s office.

ACTION CARD NO 54

**AIR CONDITIONING (Resuming Normal Operations)**

**Estates Maintenance Department** Contacts for the air conditioning System (The Mid-Western Regional Hospital) are:
1) Electrician on call, Pager 100,
2) Mechanical Services Officer, Liam Ryan, 087 9076644
3) Technical Services Supervisor, Tony McBride, 087 6782572

**External Contractors** are:
RESUMING NORMAL OPERATIONS

- ENSURE THAT THE AIR CONDITIONING SYSTEM IS TESTED THOROUGHLY.

- OBTAIN A FULLY COMPLETED SERVICE SHEET FROM THE SERVICE ENGINEER.

- INFORM ALL NECESSARY STAFF THAT THE AIR CONDITIONING SYSTEM IS REPAIRED.
  - TECHNICAL SERVICES SUPERVISOR
  - MECHANICAL SERVICES OFFICER
  - ELECTRICAL/MECHANICAL FOREMAN
  - MECHANICAL TECHNICIAN
  - ON-CALL ELECTRICIAN
ACTION CARD NO 55

PNEUMATIC CONVEYOR (Failure)

Estates Maintenance Department Contacts for Pneumatic Conveyor system (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Technician, Pager 583, Extension 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111
4) Technical services Supervisor, Tony Mc Bride, 087-6782572

External Contractors are:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>APT Lt</td>
<td>01- 8413005</td>
</tr>
<tr>
<td>John Hughes</td>
<td>087 - 2580328</td>
</tr>
<tr>
<td>Pat Hughes</td>
<td>086 - 8176920</td>
</tr>
</tbody>
</table>

ACTIONS IN THE EVENT OF FAILURE OF PNEUMATIC CONVEYOR SYSTEM

- CONTACT ON-CALL ELECTRICIAN ON PAGER 100.
- CONTACT TSS AND ELECTRICAL SERVICES OFFICER, IF REQUIRED.
- ON-CALL ELECTRICIAN TO PUT THE SYSTEM INTO AUTOMATIC CLEANING FOLLOWING ARRIVAL ON SITE.
- INFORM PORTERING STAFF THAT SYSTEM HAS FAILED AND THAT THEY ARE TO REMAIN ON STANDBY AS COVER MAY BE REQUIRED SHOULD SYSTEM REPAIR BE PROLONGED
ACTION CARD NO 56

PNEUMATIC CONVEYOR (Repair)

**Estates Maintenance Department** Contacts for Pneumatic Conveyor system (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Technician, Pager 583, Extension 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111
4) Technical services Supervisor, Tony Mc Bride, 087-6782572

**External Contractors** are:  
APT Ltd  01- 8413005  
John Hughes 087 - 2580328  
Pat Hughes  086 – 8176920

**Service Contract Details**

APT perform two preventative maintenance checks on the Pneumatic Conveyor system per year. These checks include inspection of and replacement where required of limit switches, greasing and cleaning of all moving parts, inspection and testing of all motors, and housings. Details of this contract are held in the service officers office in service contract folder 2.013.

The contract also provides for phone support at a rate of 2 calls per week.

**Technical Manuals and Drawings**

Technical manuals and drawings for the Pneumatic Conveyor system can be found in the service officers office.

**REPAIR**

- **IF AUTOMATIC CLEANING IS NOT SUCCESSFUL, THEN ELECTRICIAN TO LOCATE FAULT USING MANUALS.**

- **IF STILL NOT SUCCESSFUL, THEN ELECTRICIAN TO CONTACT APT AND CALL THEM TO SITE IF REQUIRED.**

- **INFORM PORTERING STAFF THAT COVER WILL NOW BE REQUIRED, IF THIS IS THE CASE.**
ACTION CARD NO 57
PNEUMATIC CONVEYOR (Resuming Normal Operations)

Estates Maintenance Department Contacts for Pneumatic Conveyor system (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Technician, Pager 583, Extension 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111
4) Technical services Supervisor, Tony Mc Bride, 087-6782572

External Contractors are: APT Ltd 01- 8413005
John Hughes 087 - 2580328
Pat Hughes  086 – 8176920

RESUMING NORMAL OPERATIONS

- VERIFY THAT ALL AREAS COVERED BY PNEUMATIC CONVEYOR ARE WORKING CORRECTLY.
- CONTACT PORTERING AND INFORM THEM THAT THE SYSTEM IS BACK ON-LINE AND THAT THEY MAY CEASE COVER.
- CONTACT TSS AND ELECTRICAL SERVICES OFFICER, IF REQUIRED.
- GET SERVICE DOCKET FROM SERVICE COMPANY.
ACTION CARD NO 58

U.P.S. (Failure)

**Estates Maintenance Department** Contacts for UPS systems (The Mid-Western Regional Hospital) are:
1) Electrician on Call, Pager 100
2) Electrical Technician, Pager 583, Extension 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111
4) Technical Services Supervisor, Tony Mc Bride, 087-6782572

**External Contractors** are: Secure Power Systems Stephen Cullen 01-4506808
086-2340330
Pat Smith Engineering Padraig Smith 069-61066
087-2594051
Powerohm Ian Jackson 01-4030765
087-6833507
Eugene Mulcahy 087-2520900

**ACTIONS IN THE EVENT OF FAILURE OF UPS SYSTEM**

- CONTACT ON-CALL ELECTRICIAN ON PAGER 100.
- CONTACT TSS AND ELECTRICAL SERVICES OFFICER, IF REQUIRED.
- ON-CALL ELECTRICIAN TO CHECK SUPPLIES PRESENT ON FAILED UPS SYSTEM FOLLOWING ARRIVAL ON SITE.
- IF POSSIBLE, ON-CALL ELECTRICIAN TO PUT THE SYSTEM INTO EXTERNAL BYPASS FOLLOWING CHECK OF SUPPLIES.
- ON-CALL ELECTRICIAN TO INFORM AREA(S) AFFECTED THAT THEY ARE NOT ON UPS.
- CONTACT RELEVANT SERVICE COMPANY.
ACTION CARD NO 59

U.P.S. (Repair)

Estates Maintenance Department Contacts for UPS systems (The Mid-Western Regional Hospital) are:

1) Electrician on Call, Pager 100
2) Electrical Technician, Pager 583, Extension 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111
4) Technical Services Supervisor, Tony Mc Bride, 087-6782572

External Contractors are:
Secure Power Systems Stephen Cullen 01-4506808
086-2340330
Pat Smith Engineering Padraig Smith 069-61066
087-2594051
Powerohm Ian Jackson 01-4030765
087-6833507
Eugene Mulcahy 087-2520900

Service Contract Details

All UPS systems have preventative maintenance contracts. The frequency of maintenance intervals are determined by the manufacturer of each system. All systems supplied by Powerohm and Pat Smith Engineering are maintained preventatively at six monthly intervals. All systems supplied by secure Power Systems are maintained at yearly intervals. Details of these contracts are held in the service officer's office in service contract folder 2.017

Technical Manuals and Drawings

Technical manuals for the UPS systems can be found in the Service Officer’s office.

REPAIR

- WAIT FOR SERVICE COMPANY TO ARRIVE ON SITE.
- LOCATE TECHNICAL MANUAL FOR SYSTEM.
- CONTINUE TO LIASE WITH AREA(S) AFFECTED BY FAILURE.
☐ CHECK SUPPLIES ARE PRESENT AND SOUND. INVESTIGATE IF OTHERWISE.
ACTION CARD NO 60

U.P.S. (Resuming Normal Operations)

**Estates Maintenance Department** Contacts for UPS systems (The Mid-Western Regional Hospital) are:
1) Electrician on Call, Pager 100
2) Electrical Technician, Pager 583, Extension 5111
3) Electrical Services Officer, Larry Murphy, 086 6692111
4) Technical Services Supervisor, Tony Mc Bride, 087-6782572

**External Contractors** are:
- Secure Power Systems  Stephen Cullen  01-4506808
  086-2340330
- Pat Smith Engineering  Padraig Smith  069-61066
  087-2594051
- Powerohm  Ian Jackson  01-4030765
  087-6833507
  Eugene Mulcahy  087-2520900

**RESUMING NORMAL OPERATIONS**

- **ENSURE ALL SUPPLIES ARE PRESENT.**
- **INFORM AREA(S) COVERED BY UPS SYSTEM THAT THE SYSTEM IS ABOUT TO BE BROUGHT BACK ON LINE.**
- **REMOVE UPS SYSTEM FROM EXTERNAL BYPASS TO INTERNAL BYPASS**
- **INSPECT SUPPLY. IF SUPPLY IS OK THEN PLACE UPS ON LINE.**
- **INSPECT SUPPLY.**
- **VERIFY THAT AREA(S) COVERED BY UPS SYSTEM PROPER SUPPLY VOLTAGES.**
- **INFORM AREA(S) COVERED BY UPS SYSTEM THAT SYSTEM IS REPAIRED**
- **GET SERVICE DOCKET FROM SERVICE COMPANY.**
- CONTACT NECESSARY STAFF AND INFORM THEM THAT SYSTEM IS BACK ON-LINE.

ACTION CARD NO 61

ELECTRICITY (Generator Checklist)
<table>
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<tr>
<th>Time</th>
<th>Water Temp</th>
<th>Oil Pressure</th>
<th>Battery Voltage</th>
<th>Line Voltage R</th>
<th>Phase Voltage R-S</th>
<th>Line Current R</th>
<th>Fuel Level</th>
<th>Frequency</th>
<th>Run Time</th>
<th>RPM</th>
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</table>

Date

Remarks

Signature
### ACTION CARD NO 62

**TELEPHONES (STANDBY PABX EXTENSION NUMBERS)**

<table>
<thead>
<tr>
<th>NUMERICAL ORDER</th>
<th>ALPHABETICAL ORDER</th>
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<tbody>
<tr>
<td>2010 RECEPTION HALL</td>
<td>1B CORRIDOR 2239</td>
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<tr>
<td>2061 BLEEP SYSTEM</td>
<td>A&amp;E NURSES STATION 2343</td>
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<tr>
<td>2119 RECEPTION</td>
<td>AMBULANCE 2297</td>
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<tr>
<td>2135 WARD 2B NURSED STN.</td>
<td>BIOCHEMISTRY 2266</td>
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<td>2138 ICU</td>
<td>BLEEP SYSTEM 2061</td>
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<td>2157 CCU. NURSES STN.</td>
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<td>2172 RAINBOW NURSES STN.</td>
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<td>2178 CATHERINE O'MALLEY</td>
<td>CASUALTY X-RAY 2332</td>
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<td>2180 OP. THEATRE</td>
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<tr>
<td>2229 WARD 5B PORTABLE</td>
<td>CATHERINE O'MALLEY 2178</td>
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<td>2234 WARD 2C CORRIDOR</td>
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<td>2239 1B CORRIDOR</td>
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<td>2241 SECURITY</td>
<td>DR. RES TEA ROOM 2390</td>
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<td>2258 HAEMATOLOGY/PORTABLE</td>
<td>EMERGENCY 2777</td>
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<td>2266 BIOCHEMISTRY</td>
<td>FIRE PHONE 2666</td>
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<td>HAEMATOLOGY/PORTABLE 2258</td>
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<td>2281 NURSES STN.SUNSHINE</td>
<td>ICU 2138</td>
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<td>2297 AMBULANCE</td>
<td>John Hennessy 2451</td>
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<td>2332 CASUALTY X-RAY</td>
<td>Mark Sparling 2443</td>
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<td>2337 PHARMACY</td>
<td>Maura Fitzgerald 2420</td>
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<td>2343 A&amp;E NURSES STATION</td>
<td>NURSES STATION 2400</td>
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<td>2364 X-RAY</td>
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<td>2390 DR. RES TEA ROOM</td>
<td>OP. THEATRE 2180</td>
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<td>2441 WARD 1D SR.OFFICE</td>
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<td>Trauma Ward</td>
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<td>2666 FIRE PHONE</td>
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<td>WARD 2D SR.OFFICE 2577</td>
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<td>2722 PORTERS PORTABLE</td>
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<td>A/E Reception</td>
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<td>Ambulance Centre</td>
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<td>Assistant General Manager</td>
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<td>Assistant Matron (cordless)</td>
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<tr>
<td>Casualty</td>
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<td>Doctors Residence</td>
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<td>Emergency Phone</td>
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<td>Fire Brigade</td>
<td>301820</td>
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<tr>
<td>General Manager</td>
<td>301898</td>
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</table>
ACTION CARD NO 64

LIFTS (RELEASE OF PASSENGERS – ROPE TYPE LIFT)

- LOCATE POSITION OF LIFT CAR IN LIFT SHAFT AND TELL PASSENGERS TO REMAIN IN THE LIFT CAR AND KEEP CLEAR OF THE LIFT ENTRANCE.

- SWITCH OFF THE POWER SUPPLY


- WIND THE MOTOR SLOWLY IN THE DIRECTION FOUND EASIEST CHECKING THE LIFT CAR POSITION UNTIL THE CAR PLATFORM IS NEAR A FLOOR.

- IMPORTANT: APPLY THE BRAKE.

- OPEN THE LANDING DOORS AT THE FLOOR WHERE THE LIFT IS WITH THE EMERGENCY KEY.

- PULL OPEN THE CAR DOORS AND ASSIST PASSENGERS FROM THE LIFT

- CLOSE CAR AND LANDING DOORS.

- RETURN EMERGENCY KEY TO A PLACE OF SAFE KEEPING
ACTION CARD NO 65
LIFTS (RELEASE OF PASSENGERS – HYDRAULIC TYPE LIFT)

- LOCATE THE POSITION OF THE LIFT CAR IN THE LIFT SHAFT AND TELL THE PASSENGERS TO REMAIN IN THE LIFT CAR AND KEEP CLEAR OF THE ENTRANCE.

- SWITCH OFF THE POWER SUPPLY.

- THE LIFT CAN BE LOWERED MANUALLY BY PRESSING THE RED BUTTON ON THE TANK LOCATED IN THE MACHINE ROOM, CHECKING THE LIFT CAR POSITION UNTIL THE CAR PLATFORM IS NEAR A FLOOR.

- OPEN THE LANDING DOORS AT THE FLOOR WHERE THE LIFT IS WITH THE EMERGENCY KEY.

- PULL OPEN THE DOORS AND ASSIST THE PASSENGERS FROM THE LIFT.

- CLOSE THE CAR AND LANDING DOORS.

- RETURN THE EMERGENCY KEY TO A PLACE OF SAFE KEEPING.