A Redlam lock is fitted to the exit door from the north east level 1 plant room. This lock should be removed. The door is however fitted with lever action handle hardware.

Test all electric locks as part of the annual fire test.

15 Fire Systems Interface Test

The installed system was tested during the survey and the FIP provided the required signal to:

- EWIS
- ADT Fire Monitoring (ACT Fire Brigade)

Due to the operation needs of the hospital it was not possible to test the operation of:

- Fire Fan Control Panel
- Fire Doors
- Electric Locks

All of which need to be tested as soon as possible as a part to the annual testing process.

16 General House Keeping

Generally the level of housekeeping was considered satisfactory and there are no recommendations in this regard with exception to the Fire Control Room.

Fire Control Room

Generally the room was found to be in a tidy and clean condition and complies with the requirements as a fire control room on most points including construction and egress requirements, ventilation and emergency and general lighting, however for full compliance with the BCA Specification E1.8 requirements for a Fire Control Room the Code also requires:

- A sloping plan bench
- A pin board and a white board both 1200mm wide and 1000mm high.
- An external sign the states "FIRE CONTROL ROOM"
- An operational fire brigade lock on the door

A site hydrant map folder is located in the fire control room on the EWIS panel.

The fire door from the FCR leading inside the building has been tagged as serviced and up to date however it requires adjustments. The door catches quite severely and has to be forced to fully close, and the door closer arm has been disconnected.

The natural ventilation of the room is restricted by a timber sheet fixed to the inside of the entry door. This sheet needs to be removed.

The noise from the sprinkler control room and sprinkler/hydrant pump room is unknown in the fire control room. At the next annual pumps and sprinkler tests it would be recommended to take sound level readings to confirm compliance with the BCA.

17 Maintenance Records

The maintenance records in this facility were log books for the FIP and EWIS panels which are considered satisfactory. Hydrants, Fire Hose Reels, Fire Blankets, fire and smoke doors and Fire Extinguishers all had maintenance tags however no log books or summary records were available on site for these disciplines.

Not all areas were accessible at the time of this audit however Pressure Testing and 6 monthly services were overdue on a significant number of fire extinguishers. There may be records available that confirm these units have been routinely tested which weren't available on site, however in some instances the maintenance tags do not reflect these test frequencies.

Fire doors are required to be serviced 6-monthly for swinging doors and 3-monthly for sliding doors. There may be records available that confirm this is being done which were not available during survey, however the maintenance tags in some instances do not reflect these test frequencies.

The Fire Services maintenance provider is to rectify maintenance records according to AS 1851 as part of routine service and maintenance.

ACT Government
Chief Minister, Treasury and Economic Development

ACT Government
Health

Building 2

The Canberra Hospital

Fire Services Condition Assessment Report

Address: Yamba Drive, Garran ACT
Customer: Chief Minister, Treasury and Economic Development Directorate
Date: 05 March 2015

Pyrosolv

Phone: 02 6260 2422 Email: admin@pyrosolv.com.au
66 Sheppard Street Hume ACT 2620
PO Box 1665 Tuggeranong DC ACT 2901
ABN: 93 493 460 208 ACN: 152 593 185

Table of Contents

1 Introduction

The report has been commissioned by the Chief Ministers, Treasury and Economic Development Directorate, Facilities Management to identify the condition of the existing fire systems and shortfalls in those systems at Building 2, The Canberra Hospital.

1.1 Executive Summary

The building was constructed prior to the introduction of the BCA when requirements for building design and construction were contained in the Building Manual ACT.

Generally the systems installed are of a high standard and appropriate for the risk and therefore are considered adequate.

However, the systems must be maintained in accordance with AS 1851 to ensure correct operation in the event of a fire or other emergency.

A long term strategic plan is required for the future upgrading of specific buildings and the sites fire safety package with a clear direction relative to the types and capabilities of any new systems to be installed. This may include addressable and networked system to be able to more efficiently manage the maintenance of the system and effective management of a fire or other emergency within the hospital.

1.2 Limitations

This report has been prepared in good faith and due care. It has been based on walk through inspection and review of the available documentation referred to. Some areas were locked and not available for inspection at the time of survey.

Verification of design, disassembly of equipment, or inspection of services in concealed spaces has not been included.

The standards used and referred to in this report are those that were in operation at the time of installation of the equipment. Where the equipment does not meet current standards, this is noted in the report. We note that any new and some replacement works required are to be in accordance with all current standards and the Building Code of Australia.

The audit was undertaken on the date of this report and issues that may have arisen after that date have not been included in this report.

2 The Building

This facility was purpose designed and constructed to provide foyer/entry, retail and amenities for the hospital, to a high standard relative to fire safety.

It has the following constructional characteristics:

Summary of Construction Determination		Results
Classification		Class 9a
Number of storeys contained		3
Year of construction		1970s
Type of construction required		Type A
Block 1	Section 58	Garran

The building consists of a basement containing service areas, a ground floor containing foyer, cafeteria, retail and a theatre, and is open to the level above by a 2 void sections. The upper level contains staff cafeteria and administration areas and 2 x Plant Rooms above.

2.1 Maintenance

The fire safety systems in the facility are being maintained by SMI Fire Services.

3 Fire Systems Summary

	Provided	Adequacy	BCA	Recommendation
Fire Indicator Panel	Yes	Yes	Compliant	Consider replacement within 5 years
Thermal and Smoke Detectors	Predominately Thermals throughout	Yes	Compliant	Recommend upgrade to Smoke Detection
Sprinkler Systems	Not required	Not applicable	Compliant	Nil
Fire Hose Reels	As required	Yes	Acceptable	Nil
Fire Hydrants	As required	Yes	Compliant	Nil
Fire and Smoke Doors and Barriers	Yes	Yes	Compliant	Nil
Fire Extinguishers and Blankets	Yes	Yes	Compliant	Nil
Evacuation and Warning Systems	Yes	Yes	Compliant	Consider replacement within 5 years
Emergency Lighting and Exit Signs	Yes	Yes	Compliant	Nil
Emergency Exit Routes	Yes	Yes	Compliant	Nil
Exit Door Locking Devices	Yes	Yes	Compliant	Test installed electric locks
Fire Systems Interface Test	Yes	Yes	Compliant	Review operation and test FFCP
General Housekeeping	Satisfactory	Yes	Compliant	Nil
Maintenance Records	Partial	Partial	Partially Compliant *See section 17	Log books or summary records required

4 Fire Indicator Panel

[redacted]

The onsite log book states that the system is being maintained to the requirements of AS 1851 by SMI Fire Services and tested monthly. The last annual test was recorded in July 2014. The FIP batteries were most recently replaced in June 2013.

The block plans clearly identify the areas covered by the system.

The system is no longer fully supported by the manufacturer and replacement parts are getting difficult to source. The system should be programmed for replacement within 3 years.

Consider replacement of FIP within 3 years. Estimated Cost $20,000

Fire Fan Control Panel

Incorporated within the FIP is a Fire Fan Control Panel (FFCP) which indicates the automatic operation of smoke control, exhaust, supply air fans and stair pressurisation fans. This panel also provides a facility for the Fire Brigade to manually start and/or stop specific fans.

The diagrammatic display on the FFCP does not clearly advise the operator of the most effective operation of the system. Experience has shown that the Fire Brigade will not know how to operate the system in the event of a fire. It is recommended that the operation of the system be clearly explained and represented on the display.

Review FFCP operation and update display.

5 Thermal and Smoke Detectors

Thermal detectors were originally installed throughout all areas of the building as required at the time of installation with smoke detectors in the return air and supply air ducts in the plant rooms. Smoke detectors have been retrofitted to some areas as they have been upgraded, and have been installed at the top of the fire stairs and outside the fire doors to the stairs.

It is understood that all detectors are connected to the Fire Indicator Panel.

Part of the ceiling in the Hoz cafeteria office was removed and so was the detector. This detector needs to be replaced.

Beam type smoke detectors are installed across the large void on Level 3. One of the beam detectors is in fault. These Wormald B111B detectors have been obsolete for many years and parts are not available at all.

Building works recently completed in the level 3 offices area did not account for the detection requirements of AS1670. The corridor has been extended to the south west fire stair egress door and there aren't any detectors in the new corridor section and in one office on the west side of the corridor wall. The installation of the wall is such that an existing heat detector in another office on the west side of the corridor wall is too close to the wall. AS1670 requires detectors to be a minimum of 300mm off a wall.

As smoke detectors are preferred and required by current standards the replacement of all thermal detectors with smoke detectors is recommended in areas not susceptible to dust, steam or in the kitchen areas within the next 5 years.

Provide and install smoke detector in Hoz cafeteria office. Estimated Cost $250.

Install new smoke detectors in the corridor and office area in L3 admin area. Estimated Cost $750.

Replace faulty beam detector and consider replacement of the remaining 2 units. Estimated Cost $1,800.

Upgrade remaining areas to include smoke detectors including all electrical switchboard cupboards. Estimated Cost $20,000.

Note 1: As the FIP is obsolete due consideration should be given to upgrade the FIP as well. An addressable fire system upgrade should be considered to match the new FIP in Building 1 which would provide the Hospital with a start for a more comprehensive network fire system option for the campus.

Note 2: Smoke detectors require a 5-yearly calibration test as a requirement of AS1851. Calibration testing of conventional detectors is an expensive and time consuming process that requires each individual detector to be removed and tested with specific calibration equipment. It can be more cost effective to replace the smoke detectors with new units. Addressable smoke detectors however are monitored by the addressable FIP and the process as indicated for the conventional detectors is not required for addressable smoke detectors.

Install new smoke detectors and remote indicators in the electrical switchboard cupboards on Level 3, and install a smoke detector on the ceiling outside the elevator on level 3. Estimated Cost $750.

6 Fire Sprinkler Systems

A sprinkler system is not installed, required or recommended. However wall wetting sprinklers are installed external to the northern side of the building to protect exposures from Building 1. The water supply for this system is taken directly off the hydrant service.

7 Fire Hose Reels

Fire hose reels are strategically located throughout the building and provide adequate coverage for occupants to reach all areas of the floor in the event of a fire. Water supply for this system is taken off the hydrant service.

Locations are as detailed on the plans at item 18 of this report.

Generally Fire Hose Reels are co-located within cupboards with a Fire Hydrant and a CO2 fire extinguisher.

Hose reels are tagged as having been maintained as required and there is no recommendation for improvement in this service.

8 Fire Hydrants

Internal hydrants are installed to provide firefighting water for the ACT Fire Brigade.

Locations are as detailed on the plans at item 18 of this report.

Generally Fire Hydrants are co-located within cupboards with a Fire Hose Reel and a CO2 fire extinguisher.

Fire Hydrants are tagged as having been maintained as required.

The water supply for this system is off the hydrant booster located in Building 1, refer comments in the report on that building.

Ball valve and pillar street hydrants are available which will provide adequate coverage externally of the building. We believe these hydrants are maintained by ActewAGL.

Stortz couplings have been fitted to all hydrants to facilitate ease of connection of Fire Brigade equipment, these couplings are provided with a rubber seal which if not protected will dry, drack and dislodge. Stortz blank caps appear to be fitted to all Storz couplings.

9 Fire and Smoke Doors and Barriers

Fire doors are provided to all fire isolated stairs and fire compartments as detailed in the drawings at item 18. Generally doors appeared to be in good condition. Fire doors are tagged as having been maintained as required.

It was not possible to inspect the remainder of the fire barriers above the ceiling at the time of inspection.

Fire door test frequencies are 6-monthly for pivoting / hinged doors and 3 monthly for sliding fire doors.

Note: The fire isolated stairwell located near the Hoz cafeteria has had vinyl installed on the ground floor landing. No information has been supplied as to the fire-rating or manufacture of the vinyl, and could be deemed to create a hazard in a fire escape stairwell.

10 Fire Extinguishers and Blankets

Portable special risk fire extinguishers are installed throughout to provide facilities for occupants / staff to attack a fire in the building.

Carbon Dioxide extinguishers have been installed which are considered the most appropriate in this situation. Locations are as detailed on the plans at item 18 of this report. A Wormald Sapphire fire extinguisher has been installed in the staff entrance area to the main reception.

Generally CO2 fire extinguishers are co-located within cupboards with a Fire Hose Reel and a Fire Hydrant.

Portable fire extinguishers have been strategically located throughout the facility are considered adequate in number, type and locations.

Portable fire extinguishers are required to be serviced/inspected every 6 months and pressure tested every 5 years. Fire extinguishers are tagged as having been maintained as required.

11 Evacuation and Warning Systems

An AMPAC EV3000 Emergency Warning and Communications system is installed within this facility with the MECP located adjacent to the FIP in the main entry.

The system is connected to the FIP and operates automatically on fire alarm.

Flush speakers are installed throughout and it is understood that these can be heard in all area.

Warden Intercommunications Phones (WIP) are strategically located throughout the facility to assist in the coordination of an emergency of fire within.

The onsite log book states that the system is being maintained to the requirements of AS 1851 by SMI Fire Services and tested monthly. The last annual test was recorded in July 2014. The EWIS batteries were most recently replaced in February 2012.

The hospital has a warden system in place therefore the alert tone is utilised in the fire alarm activation procedures.

Evacuation plans have been installed throughout the building.

The EWIS panel is still supported by the manufacturer however it is getting old and like all electronic equipment the parts can start to break down. Some replacement parts are difficult to source as some of the electronic components are no longer manufactured. The system should be programmed for replacement within 5 years, and would recommend standardising any upgrade to the same type as recently installed in Building 1 to enable future networking of the campus EWIS system.

Consider replacement of the EWIS panel and WIP's within 5 years. Estimated Cost $25,000.

12 Emergency Lights and Exit Signs

Emergency lighting and illuminated exit signs are provided throughout all areas of the facility. Generally the fittings appear to be in good order and condition and are considered serviceable.

No installation or maintenance details were available on site however it is understood that they are currently maintained under contract by GLS.

13 Emergency Exit Routes

The emergency exit routes provided were in accordance with the requirements of the BCA and were clear and accessible at the time of survey.

14 Exit Doors and Locking Devices

Generally the locking devices fitted to exit doors were satisfactory at the time of survey. Blue break glass facilities were installed on some exit door controlled by electric locks which need to be tested as soon as possible to ensure correct operation and release in the event of a fire.

Test all electric locks as soon as possible.

15 Fire Systems Interface Test

The installed system wasn't tested during the survey however monthly test sheets in the site log book indicated the testing is up to date and the FIP provided the required signals to the:

- EWIS
- ADT Fire Monitoring (ACT Fire Brigade)

Due to the operational needs of the hospital it was not possible to test the operation of:

- Fire Fan Control Panel
- Fire Doors release. Also check the strobe lights / signs operate on automatic sliding fire door release.
- Electric Locks

All need to be tested as part of the annual testing process.

An annual test was indicated in the site log book as being last performed in July 2014.

16 General House Keeping

Generally the level of housekeeping was considered satisfactory and there are no recommendations in this regard.

17 Maintenance Records

The maintenance records in this facility were log books for the FIP and EWIS panels which are considered satisfactory. Hydrants, Fire Hose Reels, Fire Blankets, fire and smoke doors and Fire Extinguishers all had maintenance tags however no recent log books or summary records were available on site for these disciplines.

Not all areas were accessible at the time of this audit however pressure testing and 6 monthly services were overdue on a significant number of fire extinguishers. There may be records available that confirm these units have been routinely tested which weren't available on site, however the maintenance tags do not reflect these test frequencies.

Fire doors are required to be serviced 6-monthly for swinging doors and 3-monthly for sliding doors. There may be records available that confirm this is being done which were not available on site at the time of survey, however the maintenance tags do not reflecting compliance with these test frequencies.

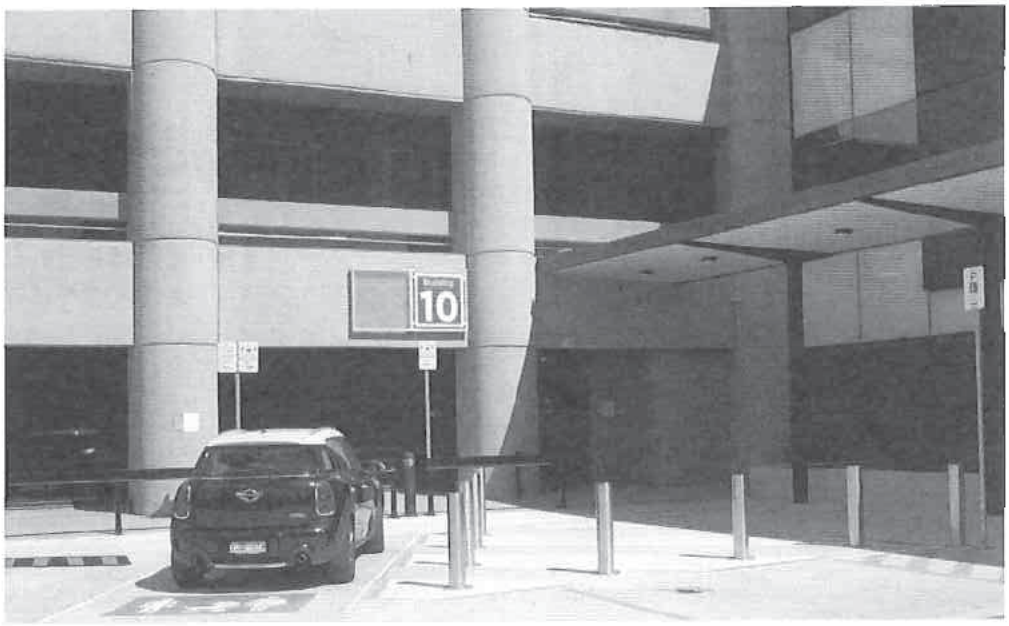
The Fire Services maintenance provider is to rectify maintenance records as part of routine service and maintenance.

ACT Government
Chief Minister, Treasury and Economic Development

ACT Government
Health

Building 10 Pathology

The Canberra Hospital



Fire Services Condition Assessment Report

Address: Yamba Drive, Garran ACT
Customer: Chief Minister, Treasury and Economic Development Directorate
Date: 13 March 2015

Pyrosolv

Phone: 02 6260 2422 Email: admin@pyrosolv.com.au
66 Sheppard Street Hume ACT 2620
PO Box 1665 Tuggeranong DC ACT 2901
ABN: 93 493 460 208 ACN: 152 593 185

Table of Contents

1 Introduction

The report has been commissioned by the Chief Ministers, Treasury and Economic Development Directorate, Facilities Management to identify the condition of the existing fire systems and shortfalls in those systems at Building 10 Pathology, The Canberra Hospital.

1.1 Executive Summary

The building was constructed prior to the introduction of the BCA when requirements for building design and construction were contained in the Building Manual ACT. The building was constructed for the Australian Government's Department of Housing and Construction who at that time were not bound to comply with the regulations.

Generally the systems installed are of a high standard and appropriate for the risk and therefore are considered adequate.

However, the systems must be maintained in accordance with AS 1851 to ensure correct operation in the event of a fire or other emergency.

A long term strategic plan is required for the future upgrading of specific buildings and the sites fire safety package with a clear direction relative to the types and capabilities of any new systems to be installed. This may include addressable and networked system to be able to more efficiently manage the maintenance of the system and effective management of a fire or other emergency within the hospital.

1.2 Limitations

This report has been prepared in good faith and due care. It has been based on walk through inspection and review of the available documentation referred to. Some areas were locked and not available for inspection at the time of survey.

Verification of design, disassembly of equipment, or inspection of services in concealed spaces has not been included.

The standards used and referred to in this report are those that were in operation at the time of installation of the equipment. Where the equipment does not meet current standards, this is noted in the report. We note that any new and some replacement works required are to be in accordance with all current standards and the Building Code of Australia.

The audit was undertaken on the date of this report and issues that may have arisen after that date have not been included in this report.

2 The Building

This facility was purpose designed and constructed as a hospital laboratory, to a high standard relative to fire safety.

It has the following constructional characteristics:

Summary of Construction Determination		Results
Classification		Class 8
Number of storeys contained		6
Year of construction		1970s
Type of construction required		Type A
Block 1	Section 58	Garran

2.1 Maintenance

The fire safety systems in the facility are being maintained by SMI Fire Services.

3 Fire Systems Summary

	Provided	Adequacy	BCA	Recommendation
Fire Indicator Panel	Yes	Yes	Compliant	Program replacement within 3 years
Thermal and Smoke Detectors	Smoke	Yes	Compliant	Recommend replacement within 3 years
Sprinkler Systems	Yes	Yes	Compliant	Nil
Fire Hose Reels	Throughout	Yes	Acceptable	Nil
Fire Hydrants	Throughout	Yes	Compliant	Nil
Fire and Smoke Doors and Barriers	Yes	Yes	Compliant	Nil
Fire Extinguishers and Blankets	Throughout	Yes	Compliant	Nil
Evacuation and Warning Systems	Yes	Yes	Non Compliant	Recommend replacement
Emergency Lighting and Exit Signs	Yes	Yes	Compliant	Nil
Emergency Exit Routes	Yes	Yes	Compliant	Nil
Exit Door Locking Devices	Yes	Yes	Compliant	Test installed electric locks
Fire Systems Interface Test	Yes	Yes	Compliant	Review operation and test FFCP
General Housekeeping	Satisfactory	Yes	Compliant	Nil
Maintenance Records	Partial	Partial	Partially Compliant	Log books or summary records required.

4 Fire Indicator Panel

The onsite log book states that the system is being maintained to the requirements of AS 1851 by SMI Fire Services and tested monthly. The last annual test was recorded 25 March 2014. The FIP batteries were most recently replaced 21 March 2014.

The block plans clearly identify the areas covered by the system.

Monitoring is provided both for the ACT Fire Brigade and to the Hospital telephony reception room in Building 1 via a dialler interface.

This system is aging and replacement parts are difficult to source. The system should be programmed for replacement within 3 years.

Programme replacement of FIP within 3 years. Estimated Cost $25,000

Fire Fan Control Panel

Incorporated within the FIP is the Fire Fan Control Panel (FFCP) which allows for automatic operation of smoke control, exhaust, supply air fans and stair pressurisation fans. This panel also provides a facility for the Fire Brigade to manually stand and/or stop specific fans.

The display on the FFCP does not clearly advise the operator of the most effective operation of the system. Experience has shown that the Fire Brigade will not know how to operate the system in the event of a fire. It is recommended that the operation of the system be clearly explained and represented on the display.

Review FFCP operation and update display.

5 Thermal and Smoke Detectors

Conventional smoke detectors have been installed throughout all areas of the building to the requirements of AS 1668 (skeletal layout).

It is understood that all detectors are connected to the Fire Indicator Panel.

Generally Olsen Smoke Detectors are installed with a mixture of other Tyco detectors.

Whilst these detectors are performing their design function a review of the overall systems will be required to determine the future of the overall package as installed within the complex.

Level 3 south corridor has heat detectors installed. These should be changed to smoke detectors

Replace Level 3 heat detectors with smoke detectors. Estimated Cost $500

Programme upgrade of all detectors within 3 years. Estimated Cost $20,000

6 Fire Sprinkler Systems

An automatic wet pipe sprinkler system has been installed throughout the building, generally to the requirements of AS 2118.

The system is controlled by two valve sets located in a cupboard on the southern side of the building.

The system is being maintained to the requirements of AS1851.

The onsite log books indicate that the last six-monthly and Annual tests have been conducted as required. The annual test sheet also indicated there were a number of issues that required rectification.

There was no evidence that the valve overhauls had been undertaken. The latest test tag indicates the 3-yearly valve overhauls having been completed 5/2005.

No proof was evident of sprinkler interface testing with the FFCP.

There is an auto jacking pump that is locked in auto as is required.

The spares box was adequately stocked with sprinkler heads and spanner.

Water Supply

It is understood that the water supply for the sprinkler and hydrant services are supplemented by tanks on Level 13 of Building 1 which are delivered by diesel and electric pumps in the pump room.

Details relative to the maintenance of the tanks and/or pumps was not available on site at the time of survey.

7 Fire Hose Reels

Fire hose reels are strategically located throughout the building and provide adequate coverage for occupant to reach all areas of the floor in the event of a fire. Water supply for this system is taken off the hydrant service.

Locations are as detailed on the plans at item 18 of this report.

Generally Fire Hose Reels are co-located within cupboards with a Fire Hydrant and a CO2 fire extinguisher.

Hose reels are tagged as having been maintained as required and there is no recommendation for improvement in this service.

8 Fire Hydrants

Internal hydrants are installed to provide firefighting water to the ACT Fire Brigade.

Locations are as detailed on the plans at item 18 of this report.

Generally Fire Hydrants are co-located within cupboards with a Fire Hose Reel and a CO2 fire extinguisher.

Fire Hydrants are tagged as having been maintained as required. Boosters were last identified as serviced 10/2014.

The water supply for this system is off the hydrant booster located in Building 1, refer comments in the report on that building.

Ball valve and pillar street hydrants are available which will provide adequate coverage externally of the building. It is unclear at this time as to whom is servicing the external hydrants..

Stortz couplings have been fitted to all hydrants to facilitate ease of connection of Fire Brigade equipment. These couplings are provided with a rubber seal which if not protected will dry, drack and dislodge. Stortz blank caps have been fitted to all couplings.

Note: The concrete footpath outside the booster doors has lifted. The right side door leaf cannot be opened.

9 Fire and Smoke Doors and Barriers

The building consists of basement, ground and five levels with a plant room above. The building is provided with a fire isolated stairwell at each end of the building. Generally fire separation has been provided between floors.

Minimal internal fire barriers have been provided as shown in item 18. It was not possible during the survey to inspect the fire barriers above the fire doors and ceilings however it is understood that major works will be required to rectify the bulkhead above these doors which has been breached by wiring and not being fire stopped.

[redacted] A window is installed over the fire door and on subsequent floors above this level. These windows on the lower levels should be either fire rated or have drenchers installed to maintain the fire rated egress requirements of the fire stairs.

Commission passive fire protection contractor to rectify all defects in bulkheads above fire doors and fire walls generally.

Develop a procedure to ensure that cabling, mechanical and hydraulics works are validated as having been completed – including the reinstatement of penetrated fire barriers.

10 Fire Extinguishers and Blankets

Portable special risk fire extinguishers are installed throughout to provide facilities for occupant to attack a fire in the building.

Carbon Dioxide extinguishers have been installed throughout the building which are considered the most appropriate in this situation, and some ABE dry powder fire extinguishers and fire blankets in laboratory areas. Locations are as detailed on the plans at item 18 of this report.

Generally CO2 fire extinguishers are co-located within cupboards with a Fire Hose Reel and a Fire Hydrant.

Fire extinguishers are tagged as having been maintained.

Note: Fire extinguisher location signs require updating in some areas to the requirements of AS2444.

11 Evacuation and Warning Systems

A T-Gen 50 Tone Generator system is provided within the FIP which provides adequate warning to occupants in the event of an emergency in the building.

This is supplemented by an Aiphone Warden Communications system adjacent to the FIP with Warden Intercom Phones throughout the facility.

Strobe lights have been installed in the Plant Room and are connected to a FireSense strobe light control panel located next to the FIP. These strobe lights operate directly off the FIP as the T Gen 50 system does not have the facility to drive strobe lights.

Flush speakers are installed throughout with exception to the Plant Rooms where horn speakers are installed. It is understood that these can be heard in all areas.

The system was tested and considered appropriate for the risk, however the installation is not compliant with any current Australian Standard.

The system is connected to the FIP and operates automatically on fire alarm.

This evacuation system as installed in this building is a compromise and should be replaced with a compliant EWIS panel and associated field equipment in compliance with AS1670.4, 2004. As the system stands now it served a purpose however cannot be certified as a compliant system.

Recommend replacement with new EWIS panel. Estimated Cost $40,000.

12 Emergency Lights and Exit Signs

Emergency lighting and illuminated exit signs are provided throughout all areas of the facility. Generally the fittings appear to be in good order and condition and are considered serviceable.

No installation or maintenance details were available on site. It is understood that they are maintained under contract by GLS.

13 Emergency Exit Routes

The emergency exit routes provided were in accordance with the requirements of the BCA and were clear and available at the time of survey.

14 Exit Doors and Locking Devices

Generally the locking devices fitted to exit doors were satisfactory at the time of survey. Blue break glass facilities were installed on some exit door controlled by electric locks which need to be tested as soon as possible to ensure correct operation and release in the event of a fire.

Note: A Redlam lock is fitted to an exit door in the ground floor south corridor (to the Mortuary). This door appears to already have the correct lever action hardware fitted however the Redlam lock should be removed.

Remove Redlam Lock and supply and install compliant locking hardware. Estimated Cost $300.

Test all electric locks as soon as possible.

15 Fire Systems Interface Test

The installed system was not tested during the survey however the on-site annual test record indicates the FIP provided the required signal to:

- EWIS
- ADT Fire Monitoring (ACT Fire Brigade)

Due to the operation needs of the hospital it was not possible to test the operation of:

- Fire Fan Control Panel
- Fire Doors
- Electric Locks

It is recommended a full function test be included for future annual testing processes.

16 General House Keeping

Generally the level of housekeeping was considered satisfactory and there are no recommendations in this regard.

17 Maintenance Records

The maintenance records in this facility were log books for the FIP and EWIS panels which are considered satisfactory. Hydrants, Fire Hose Reels, Fire Blankets, fire and smoke doors and Fire Extinguishers all had maintenance tags however no log books or summary records were available on site for these disciplines.

Not all areas were accessible at the time of this audit however Pressure Testing and 6 monthly services were overdue on a significant number of fire extinguishers. There may be records available that confirm these units have been routinely tested which weren't available on site, however in some instances the maintenance tags aren't reflecting these test frequencies.

Fire doors are required to be serviced 6-monthly for swinging doors. There may be records available that confirm this is being done which weren't available on site, however the maintenance tags in some instances do not reflecting these test frequencies.

ACT Government
Chief Minister, Treasury and Economic Development

ACT Government
Health

Building 11 Centenary Hospital for Women & Children

The Canberra Hospital

Fire Services Condition Assessment Report

Address: Yamba Drive, Garran ACT
Customer: Chief Minister, Treasury and Economic Development Directorate
Date: 24 April 2015

Pyrosolv

Phone: 02 6260 2422 Email: admin@pyrosolv.com.au
66 Sheppard Street Hume ACT 2620
PO Box 1665 Tuggeranong DC ACT 2901
ABN: 93 493 460 208 ACN: 152 593 185

Table of Contents

1 Introduction

The report has been commissioned by the Chief Ministers, Treasury and Economic Development Directorate, Facilities Management to identify the condition of the existing fire systems and shortfalls in those systems at Building 12 Diagnostic & Treatment, The Canberra Hospital.

1.1 Overview

The original building 11 has been upgraded and extended with the final construction stage completed recently. Building 11 as it stands now was built predominantly in compliance with the BCA however an engineered alternative solution of the fire services and egress paths of travel have been adopted and approved by the ACT Fire Brigade. A copy of the alternative solution document is located in the FIP / EWIS cupboard located inside the main entry to building 11

Generally the systems installed are of a high standard and appropriate for the risk and therefore are considered adequate.

The systems however, must be maintained in accordance with AS 1851 to ensure correct operation in the event of a fire or other emergency.

A long term strategic plan is recommended for the future upgrading of specific buildings and the sites fire safety packages with a clear direction relative to the types and capabilities of any new systems to be installed. This may include addressable and compatible networked systems to be able to more efficiently manage the maintenance of the system and effective management of a fire or other emergency within the hospital. Where

1.2 Limitations

This report has been prepared in good faith and due care. It has been based on a walk through inspection and review of the available documentation. Some areas were locked and not available for inspection at the time of the survey.

Verification of design, disassembly of equipment, or inspection of services in concealed spaces has not been included.

The standards used and referred to in this report are those that were in operation at the time of installation of the equipment. Where the equipment does not meet current standards, this is noted in the report. We note that any new and some replacement works required are to be in accordance with all current standards and the Building Code of Australia.

The audit was undertaken on the date of this report and issues that may have arisen after that date have not been included in this report.

2 The Building

This facility was purpose designed and constructed as a hospital for Women and Children to a high standard relative to fire safety.

It has the following constructional characteristics:

Summary of Construction Determination		Results
Classification		Class 9a
Number of storeys contained		3
Year of construction		2000s
Type of construction required		Type A
Block 1	Section 58	Garran

2.1 Maintenance

The fire safety systems in the facility are being maintained by SMI Fire Services.

3 Fire Systems Summary

	Provided	Adequacy	BCA	Recommendation
Fire Indicator Panel	Yes	Yes	Compliant	Nil
Thermal and Smoke Detectors	Smoke	Yes	Compliant	Relocate detectors away from SA Registers
Sprinkler Systems	Yes	Yes	Compliant	Nil
Fire Hose Reels	Throughout	Yes	Acceptable	Nil
Fire Hydrants	Throughout	Yes	Compliant	Nil
Fire and Smoke Doors and Barriers	Yes	Yes	Compliant	Some doors require confirmation of their designed purpose
Fire Extinguishers and Blankets	Throughout	Yes	Compliant	Nil
Evacuation and Warning Systems	Yes	Yes	Compliant	Nil
Emergency Lighting and Exit Signs	Yes	Yes	Compliant	Nil
Emergency Exit Routes	Yes	Yes	Compliant	Nil
Exit Door Locking Devices	Yes	Yes	Compliant	Nil
Fire Systems Interface Test	Yes	Yes	Compliant	Test as soon as possible
General Housekeeping	Satisfactory	Yes	Compliant	Nil
Maintenance Records	Partial	No	Partial	Maimtenance records to be kept on site as per AS 1851

4 Fire Indicator Panel

An addressable Ampac FireFinder Fire Indicator Panel has been installed in a purpose built cupboard inside the main entrance foyer area of building 11 on level 1.

The system is connected via the required dual path to the accredited third party provider ADT Fire Monitoring service, which in the event of an alarm relays the signal to the ACT Fire Brigade.

There were no alarms or faults indicating on the FIP

The latest service log books for the FIP indicate the FIP is being tested monthly and an annual test was completed on the detection system and FIP 25/11/2014. The FIP batteries did not have any indication as to when they were replaced. If these batteries have not been 2-yearly tested as required by AS1851 then this needs to be done or the batteries replaced.

The block plans adjacent to the FIP clearly identify the areas covered by the system.

New Ampac fire system LCD mimic panels have been installed throughout building 11 predominantly in nurse station areas.

The alternative engineered solution for building 11 did not include the dry fire services references and the inspection indicated the detection design was more than adequate for the installation requirements of the BCA with references to AS1668.

Fire Fan Control Panel

Incorporated within the FIP is the Fire Fan Control Panel (FFCP) which allows for the manual shut down of the Air Conditioning systems in the event of a fire.

5 Thermal and Smoke Detectors

Addressable Ampac smoke detectors have been installed throughout the majority of areas in the building to the requirements of AS 1668. Duct detectors have been installed in Supply-Air and Return-Air ducts in the roof plant rooms.

It is understood that all detectors are connected to the Fire Indicator Panel.

Manual Break Glass Alarm units have been strategically located in the wards and are fitted with anti-tamper covers.

6 Fire Sprinkler Systems

An automatic wet pipe sprinkler system has been installed throughout the building, generally to the requirements of AS 2118. An Alternative Solution has been applied to the building which makes reference to approval of the ACT Fire Brigade of the sprinkler system installation to compensate egress design issues

The system is controlled by valve sets in the sprinkler valve room, which is located on the east side of the building near the main entrance to Building 11.

There is an automatic jacking pump installed.

The onsite log books indicate that the system is being regularly tested monthly and the six-monthly and Annual tests have been conducted 19/09/2014 as required. As the system is relatively new the 3-yearly alarm valve overhauls may not be due however this requires confirmation.

There is a Pressure Gauge schedule in the sprinkler valve room and a block plan. Labelling of the system appears satisfactory.

Water Supply

The water supply for the sprinkler and hydrant services are directly off the towns main supply.

Boosters have been installed in the car park area near the entrance to Building 11. The sprinkler booster set was last serviced January 2015. A block plan is installed in the booster cabinet.

The annual test report indicated there were 2 items requiring rectification in the sprinkler valve room as the annual test could not be completed:

1. The volume of water released as part of the annual test does not stay confined in the drain provided and runs out of the Valve Room floor. There is a pipe penetrating the floor to the Plant Room below that has not been sealed and the water runs through the penetration into the room below. This penetration needs to be sealed before an annual test can be completed successfully.
2. The alarm line drains consist of short flexible hose that release onto the valve room floor. The flexible hose should be removed and the drain pipework extended to the drain.

7 Fire Hose Reels

Fire hose reels are strategically located throughout the building and provide adequate coverage for occupant to reach all areas of the floor in the event of a fire. Water supply for this system is taken off the hydrant service.

Locations are as detailed on the plans at item 18 of this report.

Generally Fire Hose Reels are co-located within cupboards with a Fire Hydrant and a CO2 fire extinguisher.

Hose reels are tagged as having been maintained as required and there is no recommendation for improvement in this service.

The alternative engineered solution included reference to the fire hose reels specifically on level 3. All fire hose reels are 36m in hose length however the alternative solution included the installation of a 50m fire hose reel.

8 Fire Hydrants

Internal hydrants are installed to provide firefighting water to the ACT Fire Brigade.

Locations are as detailed on the plans at item 18 of this report.

Generally Fire Hydrants are co-located within cupboards with a Fire Hose Reel and a CO2 fire extinguisher.

Fire Hydrants are tagged as having been maintained as required.

The water supply for this system is off the hydrant main for the Canberra Hospital site

Ball valve street hydrants are available which will provide adequate coverage externally of the building. It is unclear at this time as to whom is servicing the external hydrants.

Storz couplings have been fitted to all internal hydrants to facilitate ease of connection of Fire Brigade equipment, these couplings are provided with a rubber seal which if not protected will dry, crack and dislodge. Blank caps appear to have been fitted to all Storz couplings.

A dedicated Hydrant Booster assembly has been installed on the edge of the building 11 carpark loop road specifically for Building 11. The boosters were tagged as being serviced January 2015. There is a hydrant block plan present in the booster cabinet.

9 Fire and Smoke Doors and Barriers

The building consists of ground and two levels above with 3 separate plant rooms on the roof.

The building has three external fire egress stairs fire rated from the floor levels. Generally fire separation appears to have been provided between floors with exception to the floor of the sprinkler valve room. Details of all areas for this purpose could not be achieved for this report

Internal fire barriers have been provided however details were not available to confirm the extent. It was not possible during the survey to inspect the fire barriers above the fire doors throughout the building.

Commission passive fire protection contractor to rectify all defects in bulkheads above fire doors and fire walls generally and assess the level 1 stores area.

Develop a procedure to ensure that cabling, mechanical and hydraulics works are validated as having been completed – including the reinstatement of penetrated fire barriers.

Fire Doors

Identifiable Fire doors are in compliance with the BCA and AS1905 have been installed and are subject to regular inspection and testing as required by AS1851.

There are a substantial amount of doors held back with magnetic door holders in building 11 that do not have signage or certification tags. The magnetic door holders release on activation of a fire or sprinkler alarm in the building. Some doors have maintenance tags fitted only and are being serviced six monthly. If these doors are not smoke or fire doors they do not require servicing however the construction and thickness of the doors, and that they are held back with magnetic door holders, would suggest they are smoke or fire doors as they close on alarm to compartmentalise areas of the building.

When the doors are serviced 6-monthly they need to be manually released to confirm they close. A number of doors were stuck on the floor and could not reach the magnetic door holder, let alone close, when tested. Another classified fire door was held open with a floor stopper fixed to the bottom of the fire door

The fire and smoke doors design / installation throughout building 11 needs to be confirmed and certification tags, signage and servicing upgraded to suit. Test all doors release and close properly in both manual and automatic operation and ensure this process is completed as per the requirements of AS1851.

Recommend all doors be checked against the design criteria for the building and rectification works done to suit.

Fire Dampers

Fire dampers have been installed in fire walls / barriers throughout the complex.

Australian Standards required dampers to be inspected, tested and serviced every 10 years.

10 Fire Extinguishers and Blankets

Portable special risk fire extinguishers are installed throughout to provide facilities for occupant to attack a fire in the building. Fire blankets have also been installed in operating theatre areas and kitchenette / staff room areas.

Generally 5.0kg Carbon Dioxide extinguishers have been installed which are considered the most appropriate in this situation. Locations are as detailed on the plans at item 18 of this report.

CO2 fire extinguishers are co-located within cupboards with a Fire Hose Reel and a Fire Hydrant.

Portable fire extinguishers have been strategically located throughout the facility are considered adequate in number, type and locations.

Portable fire extinguishers have been as required to be serviced/inspected every 6 months and pressure tested every 5 years. As the installation is less than 5 years old pressure testing was not due on any of the units.

Fire extinguishers are tagged as having been maintained as required.

11 Evacuation and Warning Systems

An Ampac EV3000 Emergency Warning and Communications system is installed within this facility and is located next to the FIP.

The system is connected to the FIP and operates automatically on a fire alarm.

Flush speakers are installed throughout with exception to horn speakers in the plant rooms, and car basement service areas, and it is understood that these can be heard in all areas.

This system was purpose designed and allowed for the deletion of audible warning in patient areas. Some audible tones have been replaced or supplemented with visual warning system (dual strobe lights). While these lights provide alert and evacuation warnings it was not possible to test them at the time of survey.

Warning Intercommunication Phones (WIP) are strategically located throughout the facility in fire hose reel / hydrant cupboards to assist in the coordination of an emergency or fire within. Signage has been included on the cupboard doors to indicate the WIP locations

12 Emergency Lights and Exit Signs

Emergency lighting and illuminated exit signs are provided throughout all areas of the facility. Generally the fittings appear to be in good order and condition and are considered serviceable.

No installation or maintenance details were available on site. It is understood that they are maintained under contract by GLS.

13 Emergency Exit Routes

The emergency exit routes provided were in accordance with the requirements of the BCA and were clear and available at the time of survey.

14 Exit Doors and Locking Devices

Generally the locking devices fitted to exit doors were satisfactory at the time of survey. These consisted of manual break glass units to release electric locks. It is assumed these locks release on activation of a fire or sprinkler alarm, however this process requires confirmation and included in the annual fire alarm / sprinkler tests of the building.

15 Fire Systems Interface Test

Due to the occupancy of this facility the system was not able to be tested as a part of the survey however the system should interface with:

- EWIS
- ADT Fire Monitoring (ACT Fire Brigade)
- Fire Fan Control Panel
- Fire Doors
- Egress door release

All need to be tested as part of the annual testing process.

16 General House Keeping

Generally the level of housekeeping was considered satisfactory and there are no recommendations in this regard.

17 Maintenance Records

The maintenance records in this facility consisted of log books for the FIP, EWIS and Sprinkler system which is satisfactory as per AS1851, and all disciplines are indicated as being serviced monthly.

Hydrants, Fire Hose Reels, Fire Blankets, fire and smoke doors and Fire Extinguishers all had maintenance tags however no log books or summary records were available on site for these disciplines.

Not all areas were accessible at the time of this audit however Pressure Testing and 6 monthly services appear to be up to date. There may be records available that confirm these units have been routinely tested however these were not available during survey,

Fire doors are required to be serviced 6-monthly for swinging doors. There may be records available that confirm this is being done which were not available during survey, however the maintenance tags in some instances do not reflect these test frequencies.

The Fire Services maintenance provider is to rectify maintenance records according to AS 1851 as part of routine service and maintenance.

ACT Government
Chief Minister, Treasury and Economic Development

ACT Government
Health

Building 12
Diagnostic & Treatment
The Canberra Hospital

Fire Services Condition Assessment Report

Address: Yamba Drive, Garran ACT
Customer: Chief Minister, Treasury and Economic Development Directorate
Date: 05 March 2015

Pyrosolv

Phone: 02 6260 2422 Email: admin@pyrosolv.com.au
66 Sheppard Street Hume ACT 2620
PO Box 1665 Tuggeranong DC ACT 2901
ABN: 93 493 460 208 ACN: 152 593 185

Table of Contents

1 Introduction

The report has been commissioned by the Chief Ministers, Treasury and Economic Development Directorate, Facilities Management to identify the condition of the existing fire systems and shortfalls in those systems at Building 12 Diagnostic & Treatment, The Canberra Hospital.

1.1 Executive Summary

The building was constructed prior to the introduction of the BCA when requirements for building design and construction was contained in the Building Manual ACT. The building was constructed for the Australian Government's Department of Housing and Construction who at that time were not bound to comply with the regulations.

Generally the systems installed are of a high standard and appropriate for the risk and therefore are considered adequate.

The systems however, must be maintained in accordance with AS 1851 to ensure correct operation in the event of a fire or other emergency.

A long term strategic plan is required for the future upgrading of specific buildings and the sites fire safety package with a clear direction relative to the types and capabilities of any new systems to be installed. This may include addressable and networked system to be able to more efficiently manage the maintenance of the system and effective management of a fire or other emergency within the hospital.

1.2 Limitations

This report has been prepared in good faith and due care. It has been based on a walk through inspection and review of the available documentation. Some areas were locked and not available for inspection at the time of the survey.

Verification of design, disassembly of equipment, or inspection of services in concealed spaces has not been included.

The standards used and referred to in this report are those that were in operation at the time of installation of the equipment. Where the equipment does not meet current standards, this is noted in the report. We note that any new and some replacement works required are to be in accordance with all current standards and the Building Code of Australia.

The audit was undertaken on the date of this report and issues that may have arisen after that date have not been included in this report.

2 The Building

This facility was purpose designed and constructed as a hospital (Diagnostic and Treatment section), to a high standard relative to fire safety.

It has the following constructional characteristics:

Summary of Construction Determination		Results
Classification		Class 9a
Number of storeys contained		3
Year of construction		1980s
Type of construction required		Type A
Block 1	Section 58	Garran

2.1 Maintenance

The fire safety systems in the facility are being maintained by SMI Fire Services.

3 Fire Systems Summary

	Provided	Adequacy	BCA	Recommendation
Fire Indicator Panel	Yes	Yes	Compliant	Program replacement in line with overall upgrade
Thermal and Smoke Detectors	Smoke	Yes	Compliant	Recommend replacement in line with overall upgrade
Sprinkler Systems	No	Yes	Compliant	Nil
Fire Hose Reels	Throughout	Yes	Acceptable	Nil
Fire Hydrants	Throughout	Yes	Compliant	Nil
Fire and Smoke Doors and Barriers	Yes	Yes	Compliant	Nil
Fire Extinguishers and Blankets	Throughout	Yes	Compliant	Recommend extinguisher boxes in areas of pigeon occupation
Evacuation and Warning Systems	Yes	Yes	Compliant	Nil
Emergency Lighting and Exit Signs	Yes	Yes	Compliant	Nil
Emergency Exit Routes	Yes	Yes	Compliant	Nil
Exit Door Locking Devices	Yes	Yes	Compliant	Nil
Fire Systems Interface Test	Yes	Yes	Compliant	Test as soon as possible
General Housekeeping	Satisfactory	Yes	Compliant	Nil
Maintenance Records	Partial	No	Partial	Maimtenance records to be kept on site as per AS 1851

4 Fire Indicator Panel

A Wormald / Tyco MX Fire Indicator Panel has been retrofitted into the existing Wormald F4000 FIP and is installed adjacent to the Emergency section on the ground floor of the building.

The system is connected via the required dual path to the accredited third party provider ADT Fire Monitoring service, which in the event of an alarm relays the signal to the ACT Fire Brigade.

The latest service log books for the FIP could not be located, however a substantial number of older log books were located in one of the cabinets below the FIP. As a result there is no evidence of a recent annual test date. The FIP batteries were most recently replaced in February 2014.

The block plans adjacent to the FIP clearly identify the areas covered by the system.

New MX fire system LCD mimic panels have been installed throughout building 12 next to existing old F4000 LED type mimic panel (cabinets), including in the roof plant room.

Parts of the fire system are aging and replacement parts are available for updating to suit the MX protocol. The system should be programmed for a full upgrade within 5 years.

Consideration should be taken into account as to whether the MX system is to be expanded or if it will be replaced to suit the new fire system recently installed in Building 1 for compatibility with possible future networking of the fire systems throughout the campus.

Gas Control Panel

A second FIP is located outside the lower level Records Management tenancy. This FIP is a Tyco / Wormald F3200 type and is utilised as a gas control panel for the IT Data Room. The gas utilised for the risk area is Tyco Inergen which is a harmless gas to humans in both fire or non-fire situations however is very effective for extinguishing fires. This system does not form part of this audit.

Fire Fan Control Panel

Incorporated within the FIP is the Fire Fan Control Panel (FFCP) which allows for the manual shut down of the Air Conditioning systems in the event of a fire.

Review FFCP operation and update display.

5 Thermal and Smoke Detectors

Conventional smoke detectors have been installed throughout the majority of areas in the building to the requirements of AS 1670, however some areas are still protected by thermal detectors. Heat detection is currently installed throughout the carpark and roof plant rooms. Duct detectors have been installed in Supply-Air and Return-Air ducts in the roof plant rooms.

It is understood that all detectors are connected to the Fire Indicator Panel.

Generally Olsen Smoke Detectors are installed with a mixture of other later version Tyco detectors.

Whilst these detectors are performing their design function a review of the overall systems will be required to determine the future of the overall package as installed within the complex.

A small section in the new SAPU area on level 2 identified as the Equipment Bay requires a smoke detector. The area has been divided off from the corridor with a bulkhead from the ceiling that is well over 300mm in height.

Programme upgrade of all detectors within 5 years. Estimated Cost: $45,000.

As a minimum recommend installing smoke detection and remote indicators in electrical distribution board cupboards. Estimated Cost: $280 per detector.

6 Fire Sprinkler Systems

A sprinkler system is not installed specifically for this building, nor is it required or recommended. The sprinkler system however has been extended from Building 1 to include the main loading dock area only of building 12.

7 Fire Hose Reels

Fire hose reels are strategically located throughout the building and provide adequate coverage for occupant to reach all areas of the floor in the event of a fire. Water supply for this system is taken off the hydrant service.

Locations are as detailed on the plans at item 18 of this report.

Generally Fire Hose Reels are co-located within cupboards with a Fire Hydrant and a CO2 fire extinguisher.

Hose reels are tagged as having been maintained as required and there is no recommendation for improvement in this service.

Water supply for this service is taken directly off the Hydrant service.

During the time of survey it was found that at least 5 fire hose reels were not up to date with 6 monthly testing as indicated on the maintenance tags.

Recommend installing covers over fire hose reels in lower level car park and service areas susceptible to pigeon droppings. Estimated Cost: $200 per unit.

8 Fire Hydrants

Internal hydrants are installed to provide firefighting water to the ACT Fire Brigade.

Locations are as detailed on the plans at item 18 of this report.

Generally Fire Hydrants are co-located within cupboards with a Fire Hose Reel and a CO2 fire extinguisher.

Fire Hydrants are tagged as having been maintained as required.

The water supply for this system is off the hydrant booster located in Building 1, refer comments in the report on that building.

Ball valve street hydrants are available which will provide adequate coverage externally of the building. It is unclear at this time as to whom is servicing the external hydrants..

Storz couplings have been fitted to all hydrants to facilitate ease of connection of Fire Brigade equipment, these couplings are provided with a rubber seal which if not protected will dry, drack and dislodge. Blank caps appear to have been fitted to all Storz couplings.

A dedicated Hydrant Booster assembly has been installed on the edge of the service road at the south west corner of Building 12 specifically for Building 12.

During the time of survey it was found that at least 5 fire hydrants were not up to date with 6 monthly testing as indicated on the maintenance tags, and at least 2 hydrants were missing maintenance tags.

9 Fire and Smoke Doors and Barriers

[redacted]

The building has six external fire egress stairs fire rated from the floor levels. Generally fire separation has been provided between floors however the inspection revealed cable risers require checking and fire sealing. Details of all areas for this purpose could not be achieved for this report

Internal fire barriers have been provided as shown in item 18. It was not possible during the survey to inspect the fire barriers above the fire doors throughout the building however it is understood that major works will be required to rectify bulkheads above these doors which have been breached by wiring and not fire stopped.

The passive fire rating of the flammable store, radiation store and the like in the stand-alone structure on level 1 between the public car park and the loading dock driveway requires proper assessment. There are fire doors on these store rooms (which haven't been serviced for a few years) however there are also open vents without dampers in the walls of the stores. This configuration null and voids any fire rating compliance.

Commission passive fire protection contractor to rectify all defects in bulkheads above fire doors and fire walls generally and assess the level 1 stores area.

Develop a procedure to ensure that cabling, mechanical and hydraulics works are validated as having been completed – including the reinstatement of penetrated fire barriers.

Fire Doors

Fire doors are in compliance with the BCA and AS1905 have been installed and are subject to regular inspection and testing as required by AS1851.

At the time of survey it was found that at least 24 fire and smoke doors were not up to date with 6 monthly testing as indicated on the maintenance tags. A number of these fire doors labelled as such by certification tags did not have maintenance tags. One pair of doors in the loading dock appear to have been replaced however they already have slight damage and are missing maintenance tags.

Fire Dampers

Fire dampers have been installed in fire walls / barriers throughout the complex.

Australian Standards required dampers to be inspected, tested and serviced every 10 years. No evidence was available to show that this testing has been carried out.

10 Fire Extinguishers and Blankets

Portable special risk fire extinguishers are installed throughout to provide facilities for occupant to attack a fire in the building. Fire blankets have also been installed in operating theatre areas and kitchenette / staff room areas.

Generally Carbon Dioxide extinguishers have been installed which are considered the most appropriate in this situation. Locations are as detailed on the plans at item 18 of this report.

CO2 fire extinguishers are co-located within cupboards with a Fire Hose Reel and a Fire Hydrant.

Portable fire extinguishers have been strategically located throughout the facility are considered adequate in number, type and locations.

Portable fire extinguishers have been as required to be serviced/inspected every 6 months and pressure tested every 5 years. However at the time of survey it was found that at least 15 fire extinguishers in this building, of which 6 were located in roof plant rooms, were overdue for 5-yearly pressure testing.

Fire extinguishers are tagged as having been maintained as required. However a minimum of 20 fire extinguishers and fire blankets were found during this survey to be overdue for 6 monthly testing as indicated on the maintenance tags.

A 3.5kg C02 fire extinguisher is missing from the hydrant / FHR cupboard level 2 south west fire exit and requires replacement.

A 9Lt Air/Water fire extinguisher was located in a cupboard in the new SAPU section of level 2. This unit has not been serviced or pressure tested for some time, is not required and should be removed.

A significant number of units did not have appropriate signage as required by AS2444.

An extinguisher on the Level 1 maintenance underground carpark has been contaminated with Pigeon droppings. This unit should be replaced as it is a health risk to any future user, and placed in an extinguisher cabinet to protect from any more biological contaminant.

Recommend supply and installation of a new 3.5kg CO2 extinguisher in a new extinguisher cabinet. Estimated Cost $440.

11 Evacuation and Warning Systems

A Tyco QE90 Emergency Warning and Communications system is installed within this facility. The new panel has been retrofitted into the original Ampac EWIS cabinet and is located next to the FIP.

The system is connected to the FIP and operates automatically on a fire alarm.

Flush speakers are installed throughout with exception to horn speakers in the plant rooms, and car park / service areas, and it is understood that these can be heard in all areas.

This system was purpose designed in accordance with AS1670 and allowed for the deletion of audible warning in patient areas. Some audible tones have been replaced or supplemented with visual warning system (dual strobe lights). While these lights provide alert and evacuation warnings it was not possible to test them at the time of survey.

Warning Intercommunication Phones (WIP) are strategically located throughout the facility to assist in the coordination of an emergency or fire within.

12 Emergency Lights and Exit Signs

Emergency lighting and illuminated exit signs are provided throughout all areas of the facility. Generally the fittings appear to be in good order and condition and are considered serviceable.

No installation or maintenance details were available on site, it is understood that they are maintained under contract by GLS.

13 Emergency Exit Routes

The emergency exit routes provided were in accordance with the requirements of the BCA and were clear and available at the time of survey.

14 Exit Doors and Locking Devices

Generally the locking devices fitted to exit doors were satisfactory at the time of survey.

15 Fire Systems Interface Test

Due to the occupancy of this facility the system was not able to be tested as a part of the survey however the system should interface with:

- EWIS
- ADT Fire Monitoring (ACT Fire Brigade)
- Fire Fan Control Panel
- Fire Doors

All need to be tested as part of the annual testing process.

16 General House Keeping

Generally the level of housekeeping was considered satisfactory and there are no recommendations in this regard.

17 Maintenance Records

The maintenance records in this facility were not located at the time of the audit. Hydrants, Fire Hose Reels, Fire Blankets, fire and smoke doors and Fire Extinguishers all had maintenance tags (with exception to a few items) however no log books or summary records were available on site for these disciplines.

Not all areas were accessible at the time of this audit however Pressure Testing and 6 monthly services were overdue on a number of fire extinguishers and 6 monthly testing on some fire blankets. There may be records available that confirm these units have been routinely tested however these were not available during survey, and in some instances the maintenance tags did not reflect these test frequencies.

Fire doors are required to be serviced 6-monthly for swinging doors. There may be records available that confirm this is being done which were not available during survey, however the maintenance tags in some instances do not reflect these test frequencies.

The same also applies to some hydrants and fire hose reels as indicated within this report.

The Fire Services maintenance provider is to rectify maintenance records according to AS 1851 as part of routine service and maintenance.

ACT Government
Chief Minister, Treasury and Economic Development

ACT Government
Health

Building 13 Helipad

The Canberra Hospital

Fire Services Condition Assessment Report

Address: Yamba Drive, Garran ACT
Customer: Chief Minister, Treasury and Economic Development Directorate
Date: 24 March 2015

Pyrosolv
Phone: 02 6260 2422 Email: admin@pyrosolv.com.au
66 Sheppard Street Hume ACT 2620
PO Box 1665 Tuggeranong DC ACT 2901
ABN: 93 493 460 208 ACN: 152 593 185

Table of Contents

1 Introduction

The report has been commissioned by the Chief Ministers, Treasury and Economic Development Directorate, Facilities Management to identify the condition of the existing fire systems and shortfalls in those systems at Building 13 Helipad and carpark at The Canberra Hospital.

1.1 Executive Summary

Generally the fire equipment installed is appropriate for the risk and therefore are considered adequate.

The fire equipment must be maintained in accordance with AS 1851 to ensure correct operation in the event of a fire or other emergency.

1.2 Limitations

This report has been prepared in good faith and due care. It has been based on a walk through inspection and review of the available documentation.

Verification of design, disassembly of equipment, or inspection of services in concealed spaces has not been included.

The standards used and referred to in this report are those that were in operation at the time of installation of the equipment. Where the equipment does not meet current standards, this is noted in the report. We note that any new and some replacement works required are to be in accordance with all current standards and the Building Code of Australia.

The audit was undertaken on the date of this report and issues that may have arisen after that date have not been included in this report.

2 The Building

This facility was originally purpose designed and constructed as a concrete structure 2 level car park. A section of the upper level carpark has been fenced off and utilised as the Helipad.

It has the following constructional characteristics:

Summary of Construction Determination		Results
Classification		Class 10
Number of storeys contained		2
Type of construction required		Type C
Block 1	Section 58	Garran

2.1 Maintenance

The fire safety equipment is being maintained by SMI Fire Services.

3 Fire Systems Summary

	Provided	Adequacy	BCA	Recommendation
Fire Indicator Panel	No	Yes	Compliant	Nil
Thermal and Smoke Detectors	No	Yes	Compliant	Nil
Sprinkler Systems	Not required	Not applicable	Compliant	Nil
Fire Hose Reels	No	Yes	Acceptable	Nil
Fire Hydrants	Not applicable	External provided	Compliant	Nil
Fire and Smoke Doors and Barriers	No	Yes	Compliant	Nil
Fire Extinguishers and Blankets	Yes	Yes	Compliant	Install extinguishers in a box
Evacuation and Warning Systems	No	Yes	Compliant	Nil
Emergency Lighting and Exit Signs	Yes	Yes	Compliant	Nil
Emergency Exit Routes	Yes	Yes	Compliant	Nil
Exit Door Locking Devices	Yes	Yes	Compliant	Nil
Fire Systems Interface Test	Not applicable	Yes	Compliant	Nil
General Housekeeping	Satisfactory	Yes	Compliant	Nil
Maintenance Records	Partial	Yes	Partial	No service summary record

4 Fire Indicator Panel

A fire indicator panel is not installed or required.

5 Thermal and Smoke Detectors

Smoke and thermal detectors are not required

6 Fire Sprinkler Systems

A sprinkler system is not required

7 Fire Hose Reels

A fire hose reel is not installed, required or recommended.

8 Fire Hydrants

Internal hydrants are not provided in this facility.

External Ball valve street hydrants are available which will provide adequate coverage. It is unclear at this time as to whom is servicing the external hydrants.

9 Fire and Smoke Doors and Barriers

Fire doors are not required.

10 Fire Extinguishers and Blankets

There are 2 x 9lt AFFF fire extinguishers and 3x 3.5kg C02 fire extinguishers installed at the entrance gate to the Helipad.

A 3.5kg C02 is installed in a cabinet just inside the gate. The cabinet door could not be released for inspecting without breaking the glass on the door, and the cabinet is in need of upgrading as it is quite weather beaten.

The other four fire extinguishers were mounted on 2 poles just outside the gate. These extinguishers should be protected from weather and possible vandalism.

Recommend replacing the cabinet inside the gate with a new cabinet and also recommend installing the other 4 fire extinguishers in an enclosure

Supply and install extinguisher cabinets to all extinguishers. Estimated Cost $320 per unit

11 Evacuation and Warning Systems

A Building Occupant Warning System is not installed, required or recommended in this building.

12 Emergency Lights and Exit Signs

Emergency lights and illuminated exit signs are not installed in this facility.

13 Emergency Exit Routes

The emergency exit routes provided were in accordance with the requirements of the BCA and were clear and available at the time of survey.

14 Exit Doors and Locking Devices

Not required.

15 Fire Systems Interface Test

Not required.

16 General House Keeping

Generally the level of housekeeping was considered satisfactory and there are no recommendations in this regard.

17 Maintenance Records

The fire extinguishers were last serviced 8/2014 as indicated on the maintenance tags.

The pressure testing on all fire extinguishers is up to date; they are due for pressure testing at the end of 2015.

No service summary records were available on site.

The Fire Services maintenance provider is to rectify maintenance records as part of routine service and maintenance.

18 Floor Plan

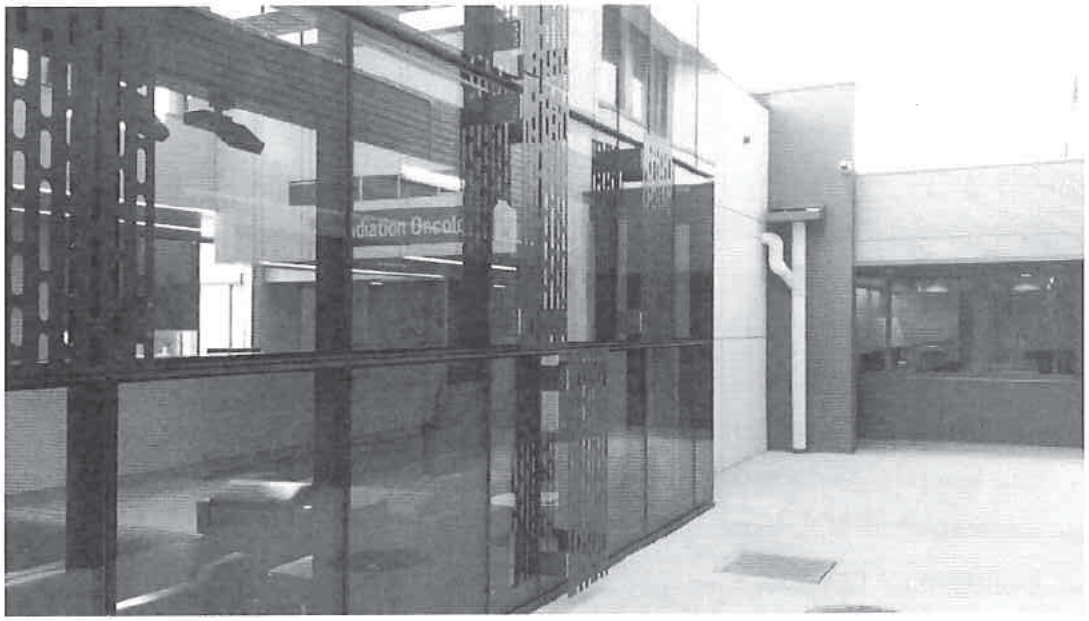
Drawings were not available.

ACT Government
Chief Minister, Treasury and Economic Development

ACT Government
Health

Building 20

The Canberra Hospital



Fire Services Condition Assessment Report

Address:	Yamba Drive, Garran ACT
Customer:	Chief Minister, Treasury and Economic Development Directorate
Date:	27 April 2015

Pyrosolv

Phone: 02 6260 2422 Email: admin@pyrosolv.com.au
66 Sheppard Street Hume ACT 2620
PO Box 1665 Tuggeranong DC ACT 2901
ABN: 93 493 460 208 ACN: 152 593 185

Table of Contents

1 Introduction

The report has been commissioned by the Chief Ministers, Treasury and Economic Development Directorate, Facilities Management to identify the condition of the existing fire systems and shortfalls in those systems at Building 20 Canberra Hospital, Garran.

1.1 Overview

The building appears to have been constructed in compliance with the BCA No alternative solution signage or documentation was evident on site.

Generally the systems installed are of a high standard and appropriate for the risk and therefore are considered adequate.

The systems must be maintained in accordance with AS 1851 to ensure correct operation in the event of a fire or other emergency.

A long term strategic plan is required for the future upgrading of specific buildings and the sites fire safety package with a clear direction relative to the types and capabilities of any new systems to be installed. This may include addressable and networked system to be able to more efficiently manage the maintenance of the system and effective management of a fire or other emergency within the hospital.

1.2 Limitations

This report has been prepared in good faith and due care. It has been based on a walk through inspection and review of the available documentation. Some areas were locked and not available for inspection at the time of survey, specifically the plant room on the roof.

Verification of design, disassembly of equipment, or inspection of services in concealed spaces has not been included.

The standards used and referred to in this report are those that were in operation at the time of installation of the equipment. Where the equipment does not meet current standards this is noted in the report. We note that any new and some replacement works required are to be in accordance with all current standards and the Building Code of Australia.

The audit was undertaken on the date of this report and issues that may have arisen after that date have not been included in this report.

2 The Building

This facility was purpose designed and constructed as a Radiation Oncology facility to a high standard relative to fire safety. Building 20 originally formed part of Building 3.

It has the following constructional characteristics:

Summary of Construction Determination		Results
Classification		Class 9a
Number of storeys contained		1
Year of construction		2000's
Type of construction required		Type A
Block 1	Section 58	Garran

2.1 Maintenance

The fire safety systems in the Hospital have been maintained by SMI Fire Services.

The onsite log books suggest that the last annual test of the system was completed in May 2014

3 Fire Systems Summary

	Provided	Adequacy	BCA	Recommendation
Fire Indicator Panel	Yes	Yes	Compliant	Nil
Thermal and Smoke Detectors	Smoke	Yes	Compliant	Nil
Sprinkler Systems	No	Yes	Compliant	Nil
Fire Hose Reels	Throughout	Yes	Acceptable	Service as required by AS1851
Fire Hydrants	Throughout	Yes	Compliant	Service as required by AS1851
Fire and Smoke Doors and Barriers	Yes	Yes	Compliant	6 monthly service overdue on some doors
Fire Extinguishers and Blankets	Throughout	Yes	Compliant	Pressure test and service as required by AS1851
Evacuation and Warning Systems	Yes	Yes	Compliant	Nil
Emergency Lighting and Exit Signs	Yes	Yes	Compliant	Nil
Emergency Exit Routes	Yes	Yes	Compliant	Nil
Exit Door Locking Devices	Yes	Yes	Compliant	Nil
Fire Systems Interface Test	Yes	Yes	Complaint	Nil
General Housekeeping	Satisfactory	Yes	Compliant	Nil
Maintenance Records	No	Partial	Partial	Maintenance records to be kept in compliance with AS1851

4 Fire Indicator Panel

A FireSense / Notifier 2800 Fire Indicator Panel is installed in the in the waiting area behind the reception area on the ground floor of building 20.

This panel is monitored separately by the Tyco / ADT third party provider monitoring to the ACT Fire Brigade.

The block plan clearly identifies the areas covered by the system.

The original FIP was a FireSense / Inertia 2600 which was replaced by the 2800, and relocated below the EWIS panel to utilise the power supply for ancillary functions.

The obsolete 2600 FIP below the EWIS panel should have the external door Perspex either replaced or painted as it is now a device box and not an FIP therefore all references to it previously being an FIP should be removed.

5 Thermal and Smoke Detectors

Smoke detectors have been installed throughout all areas of the building to the requirements of AS 1670.

The detectors are conventional Hochiki types.

It is understood that all detectors are connected to the Fire Indicator Panel in this building.

The waiting / change rooms area with the large skylight located near LINEC 2 should have detection installed.

6 Fire Sprinkler Systems

A Sprinkler system is not installed within this building.

No additional work required.

7 Fire Hose Reels

Fire hose reels are strategically located throughout the building and provide adequate coverage for occupant to reach all areas of the floor in the event of a fire. Water supply for this system is taken off the hydrant service.

[redacted]

Locations are as detailed on the plans at item 18 of this report.

Hose reels are tagged as having been maintained as required and there is no recommendation for improvement in this service.

Water supply for this service is taken direct off the Hydrant service.

No additional work required.

8 Fire Hydrants

Internal hydrants are installed to provide firefighting water for the Fire Brigade.

Locations are as detailed on the plans at item 18 of this report.

Ball valve and pillar street hydrants are available which will provide adequate coverage externally of the building. It is our understanding these external hydrants are maintained by ActewAGL however the external hydrant near the ambulance dock doesn't have a maintenance tag.

Hydrant . Internal Fire Hydrants are tagged as having been maintained as required.

A new Hydrant booster and cabinet has been installed at the access road between the Building 28 Multi level Carpark and building 20

Storz couplings have been fitted to all hydrants to facilitate ease of connection of Fire Brigade equipment as well as caps

No additional work required.

Water Supply

The water supply for the hydrant services are supplied from the town's main hydrant supply

9 Fire and Smoke Doors and Barriers

Fire and smoke compartmentation has been built into building 20

It was not possible during the survey to inspect the fire barriers above the fire doors.

Recommendations: Develop a procedure to ensure penetrated fire barriers are resealed and serviced.

Fire Doors

Fire doors in compliance with the BCA and AS1905 have been installed and are subject to regular inspection and testing as required by AS 1851.

Fire Dampers

Fire dampers have been installed in fire walls / barriers throughout the complex.

Australian Standards required dampers to be inspected, tested and serviced every 10 years.

Ensure all fire dampers are inspected, serviced and maintained as required.

10 Fire Extinguishers and Blankets

Portable special risk fire extinguishers are installed throughout to provide facilities for occupant to attack a fire in the building.

Carbon Dioxide and AB(E) fire extinguishers have been installed which are considered the most appropriate in this situation. Locations are as detailed on the plans at item 18 of this report.

Generally CO_2 fire extinguishers are co-located within cupboards with a Fire Hose Reels and a Fire Hydrant.

The approach taken throughout the remainder of the hospital is fully supported however for some reason this approach has not been continued in the Oncology building where ABE extinguishers have been installed rather than the CO_2 extinguishers.

Portable fire extinguishers have been as required to be serviced/inspected every 6 months and pressure tested every 5 years.

Fire extinguishers are tagged as having been maintained however the majority are indicating on the maintenance tags as being overdue. Pressure testing of extinguisher needs to be addressed as some of the units are overdue.

No other additional work required at this time.

11 Evacuation and Warning Systems

An Inertia I2000 Emergency Warning and Communications system is installed within this facility.

The system is connected to the FIP and operates automatically on a fire alarm activation.

Flush speakers are installed throughout and it is understood that these can be heard in all areas.

The system was purpose designed in accordance with AS 1670 and allowed for the deletion of audible warning in patient areas. Some audible tones have been replaced or supplemented with visual warning system (strobe lights).

Warden Intercommunications Phones (WIP) are strategically located throughout the facility to assist in the coordination of an emergency or fire within.

An annual test of the EWIS system is indicated as having been completed 27/05/2014

No additional work required at this time.

12 Emergency Lights and Exit Signs

Emergency lighting and illuminated exit sign are provided throughout all areas of the facility. Generally the fittings appear to be in good order and condition and are considered serviceable.

No installation or maintenance details were available on site, it is understood that they are maintained by hospital staff.

No additional work required at this time.

13 Emergency Exit Routes

The emergency exit routes provided were in accordance with the requirements of the BCA and were clear and available at the time of survey.

14 Exit Doors and Locking Devices

Generally the locking devices fitted to exit doors were satisfactory at the time of Survey.

No additional work required at this time.

15 Fire Systems Interface Test

The installed system was not tested during the survey however the on-site annual test record indicates the FIP provided the required signal to:

- EWIS

- ADT Fire Monitoring (ACT Fire Brigade)

Due to the operation needs of the hospital it was not possible to test the operation of:

- Fire Fan Control Panel
- Fire Doors
- Electric Locks

It is recommended a full function test be included for future annual testing processes.

16 General House Keeping

Generally the level of housekeeping was considered satisfactory and there are no recommendations in this regard.0.

17 Maintenance Records

The maintenance records in this facility were log books for the FIP and EWIS panels which are considered satisfactory. Hydrants, Fire Hose Reels, Fire Blankets, fire and smoke doors and Fire Extinguishers all had maintenance tags however no log books or summary records were available on site for these disciplines.

The roof plant room was not accessible at the time of this audit however Pressure Testing and 6 monthly services were overdue on a significant number of fire extinguishers. There may be records available that confirm these units have been routinely tested which weren't available on site, however in some instances the maintenance tags aren't reflecting these test frequencies.

Fire doors are required to be serviced 6-monthly for swinging doors. There may be records available that confirm this is being done which weren't available on site, however the maintenance tags in some instances do not reflecting these test frequencies.

ACT Government
Chief Minister, Treasury and Economic Development

ACT Government
Health

Building 22
Health & Clinical Records
The Canberra Hospital

Fire Services Condition Assessment Report

Address: Yamba Drive, Garran ACT
Customer: Chief Minister, Treasury and Economic Development Directorate
Date: 19 March 2015

Pyrosolv
Phone: 02 6260 2422 Email: admin@pyrosolv.com.au
66 Sheppard Street Hume ACT 2620
PO Box 1665 Tuggeranong DC ACT 2901
ABN: 93 493 460 208 ACN: 152 593 185

Table of Contents