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.

Some doors are tagged as being serviced however in some cases the door closer has been disconnected from the door, some doors close but don't latch, other doors close but have dropped on the hinges and can't close into the door frame.

It is recommended that damaged fire doors and associated hardware throughout the facility be repaired or replaced as necessary.

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.

There are concerns that dampers were not installed in accordance with the code at the time of construction.

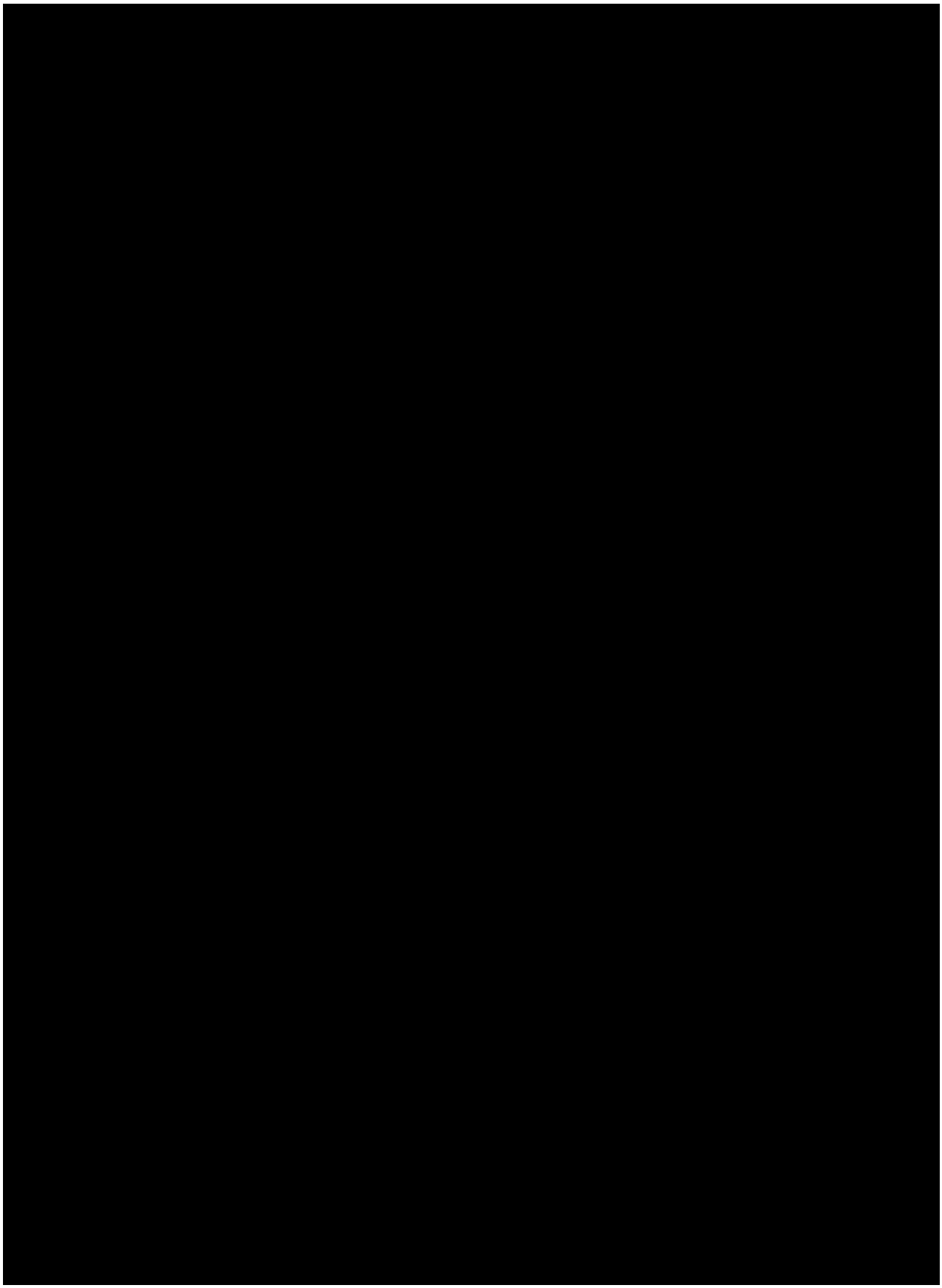
Evidence was not sited on site to indicate that the dampers have been tested or serviced as required.

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.

Generally Carbon Dioxide extinguishers have been installed within cupboards with Fire Hose Reels and Hydrants. The C02 fire extinguishers are considered the most appropriate in this situation. Locations are as detailed on the plans at item 18 of this report.



Fire extinguishers are tagged as having been serviced as indicated in the table above. Pressure testing of extinguishers is included in the maintenance

contract and some units require pressure testing as indicated in the table above

1st floor NE wing east end 3.5kg C02 has a broken handle and needs repair / replacement.

The office area on the North West end of the ground floor does not have any easy access to portable fire equipment or a hose reel. Recommend installing a general purpose dry powder ABE fire extinguisher.

The 5.0kg C02 in the plant room should be relocated away from the electrical DB.

11 EVACUATION AND WARNING SYSTEMS

A Simplex QE90 Emergency Warning and Communications system is installed within this facility.

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 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.

A full annual test of the system was completed 24/06/2014 and the batteries were replaced 27/05/2013.

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.

No additional work required at this time.

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 annual tested and as indicated in the log book the system provided the required signals to;

- EWIS
- ADT Fire Monitoring (Fire Brigade)
- AC Controls

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.

Include these items as part of the annual fire test.

16 GENERAL HOUSE KEEPING

Generally the level of housekeeping within the east side service corridor and plant room on the ground floor was not considered satisfactory as the area is being used for storage of used and damaged beds and equipment.

Tidy up area and remove storage

17 MAINTENANCE RECORDS

The maintenance records in this facility were log books for the FIP and EWIS which are considered satisfactory

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 the 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 has been 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 Health

Fire Services Condition Assessment Report

BUILDING 4 TCH - ANU MEDICAL SCHOOL

STEVE COOMBE FIRE & LIFE SAFETY PTY LTD
ABN 35 113 683 417
[redacted]

04 March 2015

INDEX

1 INTRODUCTION 3

2 THE BUILDING 4

3 FIRE SYSTEMS SUMMARY 5

4 FIRE INDICATOR PANEL 6

5 THERMAL AND SMOKE DETECTORS 6

6 FIRE SPRINKLER SYSTEMS 6

7 FIRE HOSE REELS 7

8 FIRE HYDRANTS 7

9 FIRE AND SMOKE DOORS AND BARRIERS 7

10 FIRE EXTINGUISHERS AND BLANKETS 7

11 EVACUATION AND WARNING SYSTEMS 8

12 EMERGENCY LIGHTS AND EXIT SIGNS 8

13 EMERGENCY EXIT ROUTES 8

14 EXIT DOORS AND LOCKING DEVICES 9

15 FIRE SYSTEMS INTERFACE TEST 9

16 GENERAL HOUSE KEEPING 9

17 MAINTENANCE RECORDS 9

18 FLOOR PLAN 10

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 safety systems and shortfalls in those systems at the ANU Medical School Building 4 at The Canberra Hospital.

1.1 EXECUTIVE SUMMARY

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 a walk through inspection and with information provided on available documentation. 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 applicable 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 during on the date of this report; any 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 teaching facility, to a high standard relative to fire safety.

It has the following constructional characteristics:

Summary of Construction Determination		**Results**
Classification		Class 9b
Number of storeys contained		2
Year of construction		2006
Type of construction required		Type A
Blocks 1	Section 58	Garran

2.1 MAINTENANCE

The fire safety systems in Building 4 are currently maintained by SMI Fire Services.

3 FIRE SYSTEMS SUMMARY

	Provided	Adequacy	BCA	Recommendation
Fire Indicator Panel	Yes	Yes	Compliant	Nil
Thermal and Smoke Detectors	Skeletal Smoke	Yes	Compliant	Nil.
Sprinkler systems	Yes	Yes	Compliant	Nil
Fire Hose Reels	Throughout	Yes	Acceptable	Nil.
Fire Hydrants	External only	Yes	Compliant	Nil
Fire and smoke doors and barriers	Yes Basement only	Yes	Compliant	Recommend checking passive fire rating basement switch-room
Fire Extinguishers and blankets	Throughout	Yes	Compliant	Recommend fire Extinguishers in basement
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	Partial	Partial	Not fully Compliant	Provide on-site log books or attendance summary records for FHR's, Extinguishers and Fire Doors testing

4 FIRE INDICATOR PANEL

A Wormald MX Fire Indicator Panel is installed in the foyer on the ground floor.

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

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

No additional works required

5 THERMAL AND SMOKE DETECTORS

Smoke detectors have been installed at exits and in front of the lift on both levels of the building to the requirements of AS 1668 (Skeletal Layout). Duct smoke 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.

No additional works required

6 FIRE SPRINKLER SYSTEMS

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

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

Monitoring is provided both for the Fire Brigade and at the building 1 main telephony reception office.

The system has been designed and installed to the requirements of AS 2118 and maintained to the requirements of AS1851.

The onsite test log book indicates that the last six monthly and annual tests have been conducted with the most recent annual test recorded on 19 September 2014.

3-yearly valve overhauls were indicated as being done June 2012 and are due to be done again June 2015.

Sprinkler head spares and spanner were in the spares box as required.

Auto jacking pump is connected and locked in “auto” as is required.

No additional works 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.

Locations are as detailed on the plans at item 18 of this report with an additional hose reel in the plant room

Generally Fire Hose Reels are co-located within cupboards with a CO_2 fire extinguisher.

Hose reels are tagged as having been maintained as required. There is no recommendation for improvement in the Fire Hose Reel services.

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

No additional work required.

8 FIRE HYDRANTS

Internal hydrants are not installed, required or recommended in this facility.

Adequate external fire hydrants are provided which will provided the Fire Brigade with water supplies as required.

No works required.

9 FIRE AND SMOKE DOORS AND BARRIERS

The Building consists of basement, ground and one level above with a roof plant room above. The building does not have fire isolated stairwells.

The only fire doors installed are located at the electrical switch room, data room and underfloor access in the basement level which are considered adequate.

Recommend checking the passive fire rating in the main switch room including the exhaust air duct for a fire rated damper.

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 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 Reel.

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

All fire extinguishers were stamped on the maintenance tags as tested 02/2015 and are all up to date with pressure testing.

Recommend fire extinguishers be installed in the basement in the main switch room and data room areas, and in the store area as there aren't any fire extinguishers evident on this level.

11 EVACUATION AND WARNING SYSTEMS

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

The system was tested and considered appropriate for the risk.

The system interfaces with the FIP and sprinkler system and operates automatically on a fire / sprinkler alarm activation.

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

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 they are maintained by GLS.

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.

No additional work required at this time.

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 has been tested as indicated on the annual test sheets as stated in the site log books and was tested on 19 September 2014 and the system provided the required signals to;

- BOWS
- Tyco / ADT Fire Monitoring (Fire Brigade)

No additional work required at this time.

16 GENERAL HOUSE KEEPING

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

No work required

17 MAINTENANCE RECORDS

The maintenance records in this facility were log books for the FIP and sprinkler system which are up to date and considered satisfactory, and maintenance tags only for extinguishers, fire hose reels and Fire Doors.

The maintenance records in this facility for the fire doors in the basement were incomplete. None of the fire doors appeared to have the maintenance tags stamped as having been inspected within the last 6 months. No hardcopy summary records were available during the time this audit was completed.

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 Health

Fire Services Condition Assessment Report

BUILDING 5
CANBERRA HOSPITAL

STEVE COOMBE FIRE
& LIFE SAFETY PTY LTD
ABN 35 113 683 417
[redacted]

10 March 2015

INDEX

1 INTRODUCTION....3

2 THE BUILDING....4

3 FIRE SYSTEMS SUMMARY....5

4 FIRE INDICATOR PANEL....6

5 THERMAL AND SMOKE DETECTORS....6

6 FIRE SPRINKLER SYSTEMS....6

7 FIRE HOSE REELS....7

8 FIRE HYDRANTS....7

9 FIRE AND SMOKE DOORS AND BARRIERS....8

10 FIRE EXTINGUISHERS AND BLANKETS....8

11 EVACUATION AND WARNING SYSTEMS....10

12 EMERGENCY LIGHTS AND EXIT SIGNS....10

13 EMERGENCY EXIT ROUTES....10

14 EXIT DOORS AND LOCKING DEVICES....11

15 FIRE SYSTEMS INTERFACE TEST....11

16 GENERAL HOUSE KEEPING....11

17 MAINTENANCE RECORDS....11

18 FLOOR PLAN....13

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 5, The Canberra Hospital.

1.1 OVERVIEW

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.

Sections of the building have been recently upgraded and utilised as a Medi-Hotel

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.

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 an accommodation and teaching facility for the Canberra Hospital staff.

The occupancy remains basically unchanged with the exception of some small areas used as office areas.

No alternative solution documentation or signage was sighted for this building

It has the following constructional characteristics:

Summary of Construction Determination		**Results**
Classification		Class 3 & 9b
Number of storeys contained		3
Type of construction required		Type A
Blocks 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	Yes	Yes	Compliant	Nil
Sprinkler systems	No	Yes	Compliant	Nil
Fire Hose Reels	Yes	Yes	Acceptable	Nil.
Fire Hydrants	Yes	Yes	Compliant	Nil
Fire and smoke doors and barriers	Yes	No	Non Compliant	Consider upgrading as funds permit or address via an alternative solution.
Fire Extinguishers and blankets	Yes	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	Complaint	Nil
General housekeeping	Satisfactory	Yes	Compliant	Nil
Maintenance records	Partial	No	Partial	Maintenance records required on site as per AS1851

4 FIRE INDICATOR PANEL

A FireNet addressable Fire Indicator Panel is installed in the entry foyer air-lock of this facility.

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 onsite log book states that the system is being maintained to the requirements of AS 1851 by SMI Fire Services and tested monthly. The most recent annual test record as indicated in the site log book was completed on 28/10/2014.

The FIP batteries have been indicated as being replaced on 18/02/2013. No record was available to indicate these batteries have had a 2-yearly test completed as per AS1851, therefore they should be scheduled for testing or replaced.

The block plan clearly identifies areas covered by the system.

No additional work required.

5 THERMAL AND SMOKE DETECTORS

Hochiki addressable smoke detectors have been installed throughout building 5 and Hochiki addressable heat detectors have been installed in areas susceptible to dust and shower blocks / kitchenette areas.

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

It was noted there were some old conventional detectors on external eaves that would be remaining from the recent fire services upgrade due to the eaves being asbestos. It is assumed these detectors are not connected to the FIP.

Extra detectors are required in level 3 corridors as they currently do not meet the spacing requirements of AS 1670. Estimated Cost $250 each.

6 FIRE SPRINKLER SYSTEMS

A Sprinkler system is not installed, required or recommended.

No additional work required.

7 FIRE HOSE REELS

The following fire hose reels are installed in the complex.

Hose reels are tagged as having been maintained as required.

While all locations (not within 4 m of an exit) and the water supply may not meet current requirements there is no requirement to upgrade unless a major refurbishment is being conducted.

No additional work required.

8 FIRE HYDRANTS

Internal hydrants are provided adjacent to Fire Hose Reels as detailed in item 7 above, within this facility.

External ball valve and pillar street hydrants are also available which will provide adequate coverage for the building. It is unknown as to who is maintaining these external hydrants.

No works required.

9 FIRE AND SMOKE DOORS AND BARRIERS

Fire doors have been provided to separate each wing, each floor into two smaller compartments and to separate the wing from the central core, refer to drawings in item 18.

This building was constructed prior to the introduction of the BCA and designed to the requirements of the Australian Government at that time which may have allowed different compartment sizes and did not require the separation of each sole occupancy unit to be provided with a fire rating which is required by the requirements of the BCA of today.

It is understood that this issue may be addressed with a “Fire Engineered Solution” which has to our knowledge not yet been undertaken.

Consequently the existing situation relative to fire compartmentation has been approved and therefore considered satisfactory at this stage.

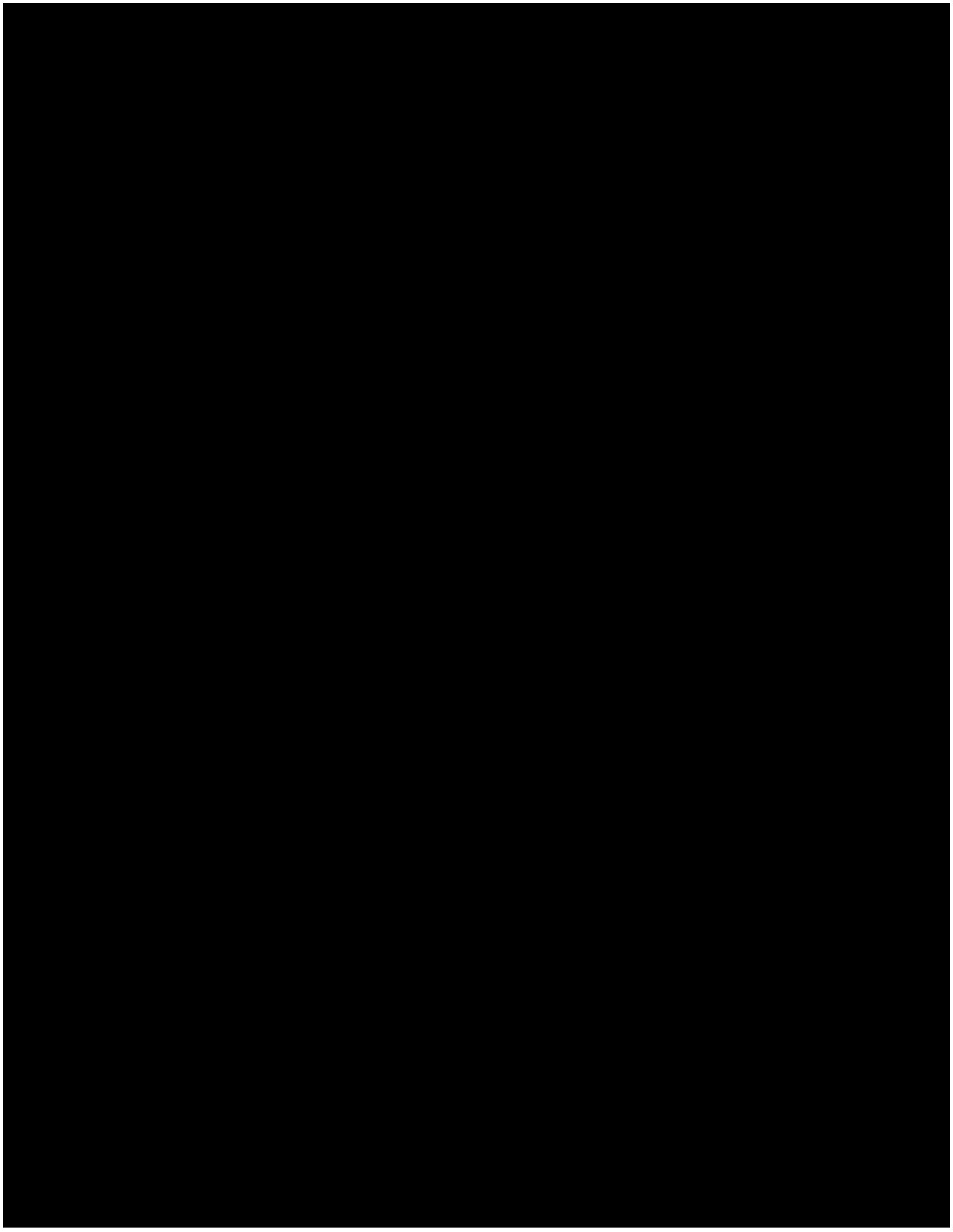
Consider upgrading as funds permit or address via an alternative solution.

Note: The sliding fire door in the basement requires servicing as it was last tested in 2012. A manual test of the door did not release the door at first. After a few attempts at pulling on the door it appeared to free it up to a point where it did close. There is also a power supply and batteries at the sliding fire door labelled “sliding fire door strobe lights supply” which requires immediate servicing as the gel-cell batteries have split.

Note: The Plant Room in the basement lift foyer has a pair of fire doors and dampers (with solder links) above that don’t appear to have been serviced as there are no maintenance tags or evidence as such.

No other additional work required at this time with exception to maintenance issues.

10 FIRE EXTINGUISHERS AND BLANKETS



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

A fire blanket in the level 1 east wing kitchenette requires proper installation as it is currently lying in a cupboard.

No other additional work required at this time with exception to maintenance issues.

11 EVACUATION AND WARNING SYSTEMS

A QE90 EWIS panel has been incorporated into the FIP cabinet and the system is integrated with the FIP and operates automatically on fire alarm.

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

Warden Intercom Phones have been installed in hydrant / Fire Hose Reel cupboards

Recommend installing new signage on the cupboard doors identifying the location of the WIP's.

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 our understanding GLS are maintaining this service.

Recommend an emergency light be installed over the FIP / EWIS panel.

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.

No additional work required at this time.

14 EXIT DOORS AND LOCKING DEVICES

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

No additional work required

15 FIRE SYSTEMS INTERFACE TEST

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

- OWS
- Tyco / ADT Fire Monitoring (Fire Brigade)
- Fire Doors
- AC Shutdown

No additional work required

16 GENERAL HOUSE KEEPING

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

No work required

17 MAINTENANCE RECORDS

The maintenance records in this facility were log books for the FIP and EWIS which are considered satisfactory

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 the 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 and 3-monthly for sliding fire doors. There may be records available that confirm this has been 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 Health

Fire Services Condition Assessment Report

BUILDING 6 CANBERRA HOSPITAL

STEVE COOMBE FIRE & LIFE SAFETY PTY LTD
ABN 35 113 683 417
[redacted]

6 March 2015

INDEX

1 INTRODUCTION 3

2 THE BUILDING 4

3 FIRE SYSTEMS SUMMARY 5

4 FIRE INDICATOR PANEL 6

5 THERMAL AND SMOKE DETECTORS 6

6 FIRE SPRINKLER SYSTEMS 6

7 FIRE HOSE REELS 7

8 FIRE HYDRANTS 7

9 FIRE AND SMOKE DOORS AND BARRIERS 8

10 FIRE EXTINGUISHERS AND BLANKETS 8

11 EVACUATION AND WARNING SYSTEMS 9

12 EMERGENCY LIGHTS AND EXIT SIGNS 9

13 EMERGENCY EXIT ROUTES 9

14 EXIT DOORS AND LOCKING DEVICES 10

15 FIRE SYSTEMS INTERFACE TEST 10

16 GENERAL HOUSE KEEPING 10

17 MAINTENANCE RECORDS 10

18 FLOOR PLAN 11

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 safety systems and shortfalls in those systems at Building 6 Canberra Hospital.

1.1 OVERVIEW

While 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.

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 for office accommodation and for the Canberra Hospital. The occupancy remains basically unchanged.

It has the following constructional characteristics:

Summary of Construction Determination		**Results**
Classification		Class 5
Number of storeys contained		3
Type of construction required		Type A
Blocks 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	Yes	Yes	Compliant	Nil
Sprinkler systems	Not required	Not applicable	Compliant	Nil
Fire Hose Reels	Twelve	Yes	Acceptable	Nil
Fire Hydrants	Twelve	Yes	Compliant	Nil
Fire and smoke doors and barriers	Yes	No	Compliant	Nil
Fire Extinguishers and blankets	Yes	Yes	Compliant	Nil
Evacuation and warning systems	OWS Provided	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	Partial	No	Partial	Maintenance records to be in compliance with AS1851

4 FIRE INDICATOR PANEL

A FireNet addressable Fire Indicator Panel is installed in the foyer of this facility.

The system is connected via the required dual path to the ADT Fire Monitoring service, who in the event of an alarm relay the signal to the Fire Brigade.

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 October 2013. The FIP batteries were most recently replaced in April 2013.

The block plan clearly identifies areas covered by the system.

No additional works are required at this time.

5 THERMAL AND SMOKE DETECTORS

Addressable Hochiki smoke detectors have been installed throughout all areas of this facility with exception to kitchenettes, shower rooms and Plant Rooms where Hochiki addressable heat detectors have been installed.

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

No additional works are required.

6 FIRE SPRINKLER SYSTEMS

A Sprinkler system is not installed, required or recommended.

No additional work required.

7 FIRE HOSE REELS

The following fire hose reels are installed in the complex.

Hose reels are tagged as having been maintained as required.

While all locations (not within 4 m of an exit) and the water supply may not meet current requirements there is no requirement to upgrade unless a major refurbishment is being conducted.

No additional work required.

8 FIRE HYDRANTS

Internal hydrants are provided adjacent to Fire Hose Reels as detailed in item 7 above, within this facility. It is understood that these are maintained by SMI Fire Services

External ball valve and pillar street hydrants are available which will provide adequate coverage for the building. At the time of survey it was unclear as to who was maintaining these hydrants.

No works required.

9 FIRE AND SMOKE DOORS AND BARRIERS

Fire doors have been provided to separate each wing into two smaller compartments and each floor and to separate the wing from the central core, refer to drawings in item 18.

Fire doors have also been installed to fire stairs.

Fire Separation is considered satisfactory

No additional work required at this time.

10 FIRE EXTINGUISHERS AND BLANKETS

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

A significant number of extinguishers were identified as being out of pressure test date, did not have appropriate signage, were mounted incorrectly or had the identification band covered with a maintenance provider sticker. These issues need to be rectified for compliance.

The extinguisher in the Plant Room below Level 1 has deteriorated to the extent it should be condemned and replaced.

A fire blanket should be installed to the Level 1 West wing Kitchenette.

Recommend replacement 3.5kg CO2 for the Plant Room below Level 1. Estimated Cost $280.

Recommend supply and installation of a fire blanket to the L1 West Kitchenette. Estimated Cost $120.

11 EVACUATION AND WARNING SYSTEMS

As a part of the Fire Alarm system, occupant warning is provided in the form of wall-mounted speakers connected to a tone generator in the FIP.

The system is integrated with the FIP and operates automatically on fire alarm.

Horn speakers and surface-mount speakers are installed throughout and it is understood that these can be heard in all areas.

No additional works are 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.

Directional exit signs throughout the building need to be assessed and rectified.

There appears to be no emergency or exit lighting installed in the basement, sub-level plant room or the stairwell leading up to Level 1.

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

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.

The north west wing evacuation plan has the building shown at the wrong aspect.

The

No additional work required at this time.

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 tested during the survey and the FIP provided the required signal to;

- OWS
- ADT Fire Monitoring (Fire Brigade)
- Fire Doors

No additional work required

16 GENERAL HOUSE KEEPING

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

No work required

17 MAINTENANCE RECORDS

The maintenance records in this facility was a log book for the FIP which is considered satisfactory, and maintenance tags only for extinguishers, hydrants, fire hose reels and Fire Doors.

No hardcopy summary records were available during the time this audit was completed.

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

Building 6 Sub-level Plant Room:

No drawings were supplied, however the following defects were noted:

- Fire door is out of service date (09/12)
- CO2 fire extinguisher is out of service date (09/12) and out of Pressure Test date (04/96)
- Floor vent to tunnel has solder links, no evidence of servicing being completed.
- Emergency and Exit lighting has not been installed in this Plant Room, the Basement, or the stairwell leading from the Basement to Level 1.

Building 6 Roof Plant Areas:

No drawings were supplied, however the following defects were noted:

- North East Plant Room
    - 5kg CO2 extinguisher is out of service date (09/13) and out of Pressure Test date (03/07) and requires signage and re-hanging
- Central Plant Room
    - Entry Fire Door is out of service date (03/14)
    - Recommend Emergency Light over stairs
    - 5kg CO2 extinguisher is out of service date (02/14) and out of Pressure Test date (11/06) and requires correct signage
- North West Plant Room
    - 5kg CO2 is out of service date (09/13) and out of Pressure Test date (03/07) and requires signage and hanging
- South West Plant Room
    - 3.5kg CO2 extinguisher is out of service date (09/13) and out of Pressure Test date (09/96), is located too close to the MSSB and requires signage.

ACT Government
Chief Minister, Treasury and Economic Development

ACT Health

Fire Services Condition Assessment Report

BUILDING 7
CANBERRA HOSPITAL

STEVE COOMBE FIRE & LIFE SAFETY PTY LTD
ABN 35 113 683 417
[redacted]

23 February 2015

INDEX

1 INTRODUCTION....3

2 THE BUILDING....4

3 FIRE SYSTEMS SUMMARY....5

4 FIRE INDICATOR PANEL....6

5 THERMAL AND SMOKE DETECTORS....6

6 FIRE SPRINKLER SYSTEMS....6

7 FIRE HOSE REELS....7

8 FIRE HYDRANTS....7

9 FIRE AND SMOKE DOORS AND BARRIERS....7

10 FIRE EXTINGUISHERS AND BLANKETS....8

11 EVACUATION AND WARNING SYSTEMS....8

12 EMERGENCY LIGHTS AND EXIT SIGNS....9

13 EMERGENCY EXIT ROUTES....9

14 EXIT DOORS AND LOCKING DEVICES....9

15 FIRE SYSTEMS INTERFACE TEST....9

16 GENERAL HOUSE KEEPING....10

17 MAINTENANCE RECORDS....10

18 FLOOR PLAN....11

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 safety systems and shortfalls in those systems at Building 7 Canberra Hospital.

1.1 EXECUTIVE SUMMARY

While 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.

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 an accommodation facility however it is now used as a drugs and alcohol rehabilitation center.

It has the following constructional characteristics:

Summary of Construction Determination		**Results**
Classification		Class 9a
Number of storeys contained		2
Type of construction required		Type B
Blocks 1	Section 58	Garran

2.1 MAINTENANCE

The fire safety systems in the building 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	Thermal and Smoke throughout	Yes	Non Compliant	Provide additional smoke detection in file room and upper level entrance lobby
Sprinkler systems	Not required	Not applicable	Compliant	Nil
Fire Hose Reels	Four	Yes	Acceptable	Nil
Fire Hydrants	Not applicable	External provided	Compliant	Nil
Fire and smoke doors and barriers	Yes	Yes	Compliant	Nil
Fire Extinguishers and blankets	5 X CO2 1 X FB	No	Non Compliant	Recommend new extinguisher and fire blanket to lower level staff room kitchen.
Evacuation and warning systems	Yes	Yes	Compliant	Recommended upgrade
Emergency lighting and Exit signs	Yes	Yes	Compliant	Recommend new emergency light in lower level staff room
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	Incomplete	No	Non Compliant	Nil

4 FIRE INDICATOR PANEL

A Wormald F4000 Fire Indicator Panel is installed in the upper level foyer of this facility.

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

The on site 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 September 2014. The FIP batteries were most recently replaced in September 2013.

This system also monitors detectors in buildings 8 and 9. The block plan clearly identifies areas covered by the system.

No additional works are required at this time.

5 THERMAL AND SMOKE DETECTORS

Smoke detectors have been installed throughout most areas in this facility. Original thermal detectors are still existing in some areas of the building.

It would appear that a file room has been provided north east corner of level 1 which has no detector. The upper level entrance lobby also has no detector installed.

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

Provide and install a smoke detector in file room. Estimated Cost $250

Provide and install a smoke detector in upper level entrance foyer. Estimated Cost $250

Recommend upgrading the remainder of original thermal detectors in the building to smoke detectors. Estimated Cost $2,000

6 FIRE SPRINKLER SYSTEMS

A Sprinkler system is not installed, required or recommended in this building.

No additional works are required.

7 FIRE HOSE REELS

The following fire hose reels are installed in the facility.

Hose reels are tagged as having been maintained as required.

No additional works are required at this time.

8 FIRE HYDRANTS

Internal hydrants are not provided within this building.

Adequate external fire hydrants are provided which will provided the Fire Brigade with water supplies as required.

No works required.

9 FIRE AND SMOKE DOORS AND BARRIERS

As this facility consists of a single fire compartment fire doors are not required, provided or recommended.

However a fire isolated stair has been provided in the south west corner of the building. The fire door is tagged as having been maintained as required.

No additional works are required at this time.

10 FIRE EXTINGUISHERS AND BLANKETS

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

It would appear that a staff room and kitchen has been provided on the north side of level 1 which has no extinguisher or fire blanket.

At the time of audit the CO2 extinguisher adjacent FHR Level 2 north east was not mounted as the hook had broken off the wall.

Fire Services maintenance provider to conduct repairs as required to re-mount extinguisher.

Provide and install a small powder (ABE) extinguisher and Fire Blanket in lower level staff room kitchen. Estimated Cost $100

11 EVACUATION AND WARNING SYSTEMS

A Wormalds QE90 Emergency Warning and Intercommunications System is installed in the facility.

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

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

Warden intercommunications phones have been provided and may be used.

The on site 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 September 2014. The EWIS batteries were most recently replaced in September 2013.

While this system is not required its replacement with a BOWS is recommended during the next refurbishment or within the next 5 years.

Upgrade EWIS with BOWS in the next 5 years. Estimated Cost $15,000

12 EMERGENCY LIGHTS AND EXIT SIGNS

Emergency lighting and illuminated exit sign are provided throughout most 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 they are maintained by GLS.

It would appear that a staff room and kitchen has been provided on the north side of level 1 which has no emergency light.

Provide and install new emergency light in lower level staff room. Estimated Cost $270

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.

No additional works are required.

14 EXIT DOORS AND LOCKING DEVICES

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

No additional works are required at this time.

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 (Fire Brigade)

No additional works are required at this time.

16 GENERAL HOUSE KEEPING

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

No additional works are required at this time.

17 MAINTENANCE RECORDS

The maintenance records in this facility were log books for the FIP and sprinkler system which are up to date and considered satisfactory, and maintenance tags only for extinguishers, fire hose reels and Fire Doors.

The maintenance records for extinguishers and fire blankets were incomplete. A CO2 extinguisher was found to have no maintenance tag, and two of the lower level units were not stamped as having been inspected within the last 6 months. No hardcopy summary records were available during the time this audit was completed.

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 Health

Fire Services Condition Assessment Report

BUILDING 8
CANBERRA HOSPITAL

STEVE COOMBE FIRE
& LIFE SAFETY PTY LTD
ABN 35 113 683 417
[redacted]

23 February 2015

INDEX

1 INTRODUCTION....3

2 THE BUILDING....4

3 FIRE SYSTEMS SUMMARY....5

4 FIRE INDICATOR PANEL....6

5 THERMAL AND SMOKE DETECTORS....6

6 FIRE SPRINKLER SYSTEMS....6

7 FIRE HOSE REELS....7

8 FIRE HYDRANTS....7

9 FIRE AND SMOKE DOORS AND BARRIERS....7

10 FIRE EXTINGUISHERS AND BLANKETS....8

11 EVACUATION AND WARNING SYSTEMS....8

12 EMERGENCY LIGHTS AND EXIT SIGNS....8

13 EMERGENCY EXIT ROUTES....9

14 EXIT DOORS AND LOCKING DEVICES....9

15 FIRE SYSTEMS INTERFACE TEST....9

16 GENERAL HOUSE KEEPING....9

17 MAINTENANCE RECORDS....9

18 FLOOR PLAN....10

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 safety systems and shortfalls in those systems at Building 8 Canberra Hospital.

1.1 EXECUTIVE SUMMARY

While 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.

1.2 LIMITATIONS

This report has been prepared in good faith and due care. It has been based on a walk through inspection and with information provided on available documentation. Some areas were locked or 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 applicable 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 an accommodation facility however it is now used as office and consulting areas.

It has the following constructional characteristics:

Summary of Construction Determination		**Results**
Classification		Class 9a
Number of storeys contained		2
Type of construction required		Type B
Blocks 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	No	Yes	Compliant	Nil
Thermal and Smoke Detectors	Generally thermals throughout and connected to FIP in building 7	Yes	Compliant	Replacement of the thermal detectors is recommended within the next 3 years
Sprinkler systems	Not required	Not applicable	Compliant	Nil
Fire Hose Reels	One	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	3 X CO2 1 X FB	Yes	Compliant	Nil
Evacuation and warning systems	No	Yes	Compliant	Recommend a new speaker in disabled toilet
Emergency lighting and Exit signs	Yes	Yes	Compliant	Recommend a new emergency light in disabled toilet
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	Incomplete	No	Non Compliant	Nil

4 FIRE INDICATOR PANEL

A Fire Indicator Panel is not installed in this building.

The fire detection system is monitored by the FIP in building 7.

No additional works are required at this time.

5 THERMAL AND SMOKE DETECTORS

Thermal detectors have been installed throughout virtually all areas in this facility as required at the time of construction, with exception to upgraded areas where some smoke detection has been installed.

It is understood that all detectors are connected to the Fire Indicator Panel. In building 7

As smoke detectors would be the preferred alternative and required by current standards the replacement of the thermal detectors with smoke detectors is recommended as funds permit or within the next 3 years.

It appears that the upper floor has had some minor works completed recently, and a new entry room area requires a new detector.

Remote Indicators are required to be installed at each Distribution Board; it is assumed there is a smoke detector inside each DB cupboard as it is a requirement of AS 1670.1.

Replacement of the thermal detectors is recommended within the next 3 years. Estimated Cost $7,000

Provide and install remote indicators to DB cupboards.
Estimated Cost $500

Install a new detector in the 1st floor office area. Estimated Cost $250

6 FIRE SPRINKLER SYSTEMS

A Sprinkler system is not installed, required or recommended.

No additional works are required.

7 FIRE HOSE REELS

The following fire hose reels are installed in the facility.

Hose reels are tagged as having been maintained.

No additional work required.

8 FIRE HYDRANTS

Internal hydrants are not provided within this facility.

Ball valve and pillar street hydrants are available which will provide adequate coverage for the building. We understand these hydrants are maintained by SMI Fire Services.

No additional works are required.

9 FIRE AND SMOKE DOORS AND BARRIERS

As this facility consists of a single fire compartment and fire doors are not required, provided or recommended.

No additional works are required at this time.

10 FIRE EXTINGUISHERS AND BLANKETS

The following fire extinguishers are installed throughout the facility;

Type	Location	Last Inspected	Appeared Charged	Test Level	Pressure Tested
CO_2	Adjacent FHR	May 2014	☑	*	2012
CO_2	West Wing corridor	Nov 2014	☑	*	2012
CO_2	First floor lobby	Nov 2014	☑	*	2012
FB	Staff room	May 2014	☑	*	NA

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

The free-standing plant room associated with this building contains an Electrical Switchboard, and did not have an extinguisher installed at the time of this survey.

Provide and install new 5kg CO2 extinguisher to external Plant Room. Estimated Cost $250

11 EVACUATION AND WARNING SYSTEMS

An Emergency Warning and Intercommunications system panel is not installed in, required or recommended in this facility.

The Emergency Warning System is monitored by the EWIS in building 7.

A disabled toilet on the lower level west wing does not appear to have a speaker.

Recommend installation of a new speaker in the disabled toilet in the west wing. Estimated Cost $180

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. GLS are maintaining the emergency and exit lighting.

A disabled toilet on the lower level west wing does not appear to have an emergency light.

Recommend installation of a new emergency light in the disabled toilet in the west wing. Estimated Cost $270

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.

No additional works are required at this time.

14 EXIT DOORS AND LOCKING DEVICES

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

No additional works are required at this time.

15 FIRE SYSTEMS INTERFACE TEST

The installed system was indicated as being tested during the last annual test as written in the annual test sheet in the log book at the FIP in Building 7.

No additional works are required

16 GENERAL HOUSE KEEPING

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

No work required

17 MAINTENANCE RECORDS

The maintenance records in this facility are Maintenance Tags for extinguishers, fire blankets and fire hose reels, and these were incomplete. Some units did not have the maintenance tags stamped as having been inspected within the last 6 months. No hardcopy summary records were available during the time this audit was completed.

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 Health

Fire Services Condition Assessment Report

BUILDING 9
CANBERRA HOSPITAL

STEVE COOMBE FIRE
& LIFE SAFETY PTY LTD
ABN 35 113 683 417
[redacted]

23 March 2015

INDEX

1 INTRODUCTION....3

2 THE BUILDING....4

3 FIRE SYSTEMS SUMMARY....5

4 FIRE INDICATOR PANEL....6

5 THERMAL AND SMOKE DETECTORS....6

6 FIRE SPRINKLER SYSTEMS....6

7 FIRE HOSE REELS....7

8 FIRE HYDRANTS....7

9 FIRE AND SMOKE DOORS AND BARRIERS....7

10 FIRE EXTINGUISHERS AND BLANKETS....7

11 EVACUATION AND WARNING SYSTEMS....8

12 EMERGENCY LIGHTS AND EXIT SIGNS....8

13 EMERGENCY EXIT ROUTES....8

14 EXIT DOORS AND LOCKING DEVICES....8

15 FIRE SYSTEMS INTERFACE TEST....8

16 GENERAL HOUSE KEEPING....9

17 MAINTENANCE RECORDS....9

18 FLOOR PLAN....10

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 safety systems and shortfalls in those systems at Building 9 Canberra Hospital.

1.1 EXECUTIVE SUMMARY

While 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.

1.2 LIMITATIONS

This report has been prepared in good faith and due care. It has been based on a walk through inspection and with information provided on available documentation. 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 applicable 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 an accommodation facility consisting of three separate blocks with two, two bedroom units on each level total of 12 units.

It has the following constructional characteristics:

Summary of Construction Determination		**Results**
Classification		Class 2
Number of storeys contained		2
Type of construction required		Type B
Blocks 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	No	Yes	Compliant	Nil
Thermal and Smoke Detectors	Thermals throughout and connected to FIP in building 7	Yes	Compliant	Recommended upgrading thermal detectors with smoke detectors within the next 3 years.
Sprinkler systems	Not required	Not applicable	Compliant	Nil
Fire Hose Reels	Nil	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	12 X Water 12 X FB 12 X ABE	Yes	Compliant	Nil
Evacuation and warning systems	Yes Residential smoke alarms	Yes	Compliant	Recommend upgrading within the next 3 years.
Emergency lighting and Exit signs	No	Yes	Compliant	Nil
Emergency Exit routes	Yes	Yes	Compliant	Nil
Exit door locking devices	Yes	Yes	Compliant	Nil.
Fire Systems Interface test	NA	Yes	Complaint	Nil
General housekeeping	Satisfactory	Yes	Compliant	Nil
Maintenance records	Yes	Yes	Compliant	Nil

4 FIRE INDICATOR PANEL

A Fire Indicator Panel is not installed in this facility.

The fire detection system is monitored by the FIP in building 7.

No additional works are required at this time

5 THERMAL AND SMOKE DETECTORS

Thermal detectors have been installed throughout all area in accordance with AS 1670 in this facility as required at the time of construction.

It is understood that all detectors are connected to the Fire Indicator Panel. In building 7

As smoke detectors would be the preferred alternative and required by current standards the replacement of the thermal detectors with smoke detectors is recommended as funds permit or within the next 3 years.

Replacement of the thermal detectors with smoke detectors is recommended within the next 3 years.

A budget cost is difficult to determine at this stage as there are various options available which also includes upgrading the FIP in Building 7 to addressable therefore enabling addressable smoke detection and sounder bases in the apartments.

No additional works are required at this time

In addition to the above system a hard wired smoke alarm system has been retrofitted in accordance with AS 3786 at the time of installation. While this system is the only system required by Building codes the retention of the AS 1670 system is recommended to detect and notify of a fire in an unoccupied unit.

When the smoke detectors are upgraded and occupant warning installed this system would be redundant and could be removed

The continued maintenance of smoke alarm system is recommended until smoke detectors and OWS is installed

6 FIRE SPRINKLER SYSTEMS

A Sprinkler system is not installed, required or recommended.

No additional work required.

7 FIRE HOSE REELS

Fire hose reels are not installed, required or recommended in this facility.

No additional work required.

8 FIRE HYDRANTS

Internal hydrants are not provided within this facility.

Ball valve and pillar street hydrants are available which will provide adequate coverage for the building. It is our understanding these hydrants are maintained by ActewAGL.

No works required.

9 FIRE AND SMOKE DOORS AND BARRIERS

Each unit is afforded fire separation from the adjacent as required. It was not possible to inspect the barrier in concealed spaces at the time of survey, Due to the layout of the units fire doors are not required to units.

No additional work required at this time.

10 FIRE EXTINGUISHERS AND BLANKETS

While it was not possible to survey every unit some were inspected and it is understood that all of the units are fitted with the same portable fire equipment.

Every unit has;

One Fire Blanket	Total 12, and
One x 2kg AB(E) type fire extinguisher	Total 12.

Of the extinguishers inspected all were adequately maintained and are relatively new and are not overdue for pressure testing.

The Portable fire extinguishers and fire blankets have been strategically located in the laundries with easy access to the kitchen and are considered adequate in number, type and locations.

No additional work required at this time.

11 EVACUATION AND WARNING SYSTEMS

Occupant warning is provided as a part of the smoke alarm system which could be removed when the smoke detection system is upgraded (refer item 5).

Activation of heat detectors within building 9 activates external fire alarm bells.

A system of internal sounders or occupant warning speakers should be installed in each apartment and the external bells removed. There are a number of options available to achieve this and a budget price can only be determined on a preferred option

12 EMERGENCY LIGHTS AND EXIT SIGNS

Emergency lighting and illuminated exit sign are not required in the Facility.

An emergency light has been installed in the main corridor of each apartment to assist in an emergency egress situation should power fail.

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.

No additional work required at this time.

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 tested during the annual test of building 7.

No additional work required

16 GENERAL HOUSE KEEPING

Generally the level of housekeeping was considered satisfactory.

No work required

17 MAINTENANCE RECORDS

The maintenance records in this facility for extinguishers and fire blankets consisted of the dates stamped on the maintenance tags only. No hardcopy summary records were available on site during the time this audit was completed,

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

Mechanical Services Condition Audit

for

TCH Building 1 Garran, ACT

Prepared by:

Echelon Consultancy and Training
PO Box 1560
FYSHWICK ACT 2609

Telephone: 6299 7727
Facsimile: 6299 7756

Version: 1.01 Reviewed: LM
May 2016 Approved: PM

Table of Contents

Section 1 - Introduction *1*

1.01 Building Summary **1**

1.02 Intent of the Report **1**

1.03 Methodology **2**

1.04 References and Acknowledgements **5**

1.05 Report Clarifications **6**

Section 2 – Executive Summary *7*

Section 3 – Mechanical Services *8*

3.01 Cooling Plant **8**

3.02 Boiler Plant **9**

3.03 Airside Plant **10**

3.04 Mechanical Switchboards **11**

3.05 Project Scheduling **11**

Attachments

Attachment	Description	Revision
A	Asset Condition Scoring – Summary	Version 1.01
B	Asset Condition Scoring – Mechanical	Version 1.01

Section 1 - Introduction

1.01 Building Summary

Canberra Hospital (TCH) is an acute care teaching hospital of approximately 600 beds, and a tertiary referral centre that provides a broad range of specialist services to the people of the ACT and South East NSW. Canberra Hospital is the largest public hospital in the region, supporting a population of almost 540,000, with strong links to community-based services that provide continuity of care for patients.

Building 1 remains the original and hub for TCH. This building has been functional for over 40 years and remains the central hub and core for operations within TCH. The building contains significant critical mechanical services infrastructure, with major operating and recovery theatres located throughout the building. Between 1990 and 1995 the building received significant mechanical services upgrades with central chiller and boiler plant configurations. This infrastructure operates 24 hours/7 days to meet the unique operational requirements for this building.

1.02 Intent of the Report

Building 1 has been earmarked for capital replacement but must remain operational for the next decade while supporting infrastructure and services are developed in the surrounding precinct. Given the significant quantity of critical mechanical services infrastructure across Building 1, the TCH department responsible for capital planning and ongoing asset maintenance, being PM&M, have sought specialist assistance in developing a CAPEX program across the Building 1 mechanical services portfolio. Echelon Consultancy and Training have been engaged by PM&M to develop a condition, lifecycle and risk assessment for the building mechanical services, with the key intent of the deliverables within the Echelon report to include:

- Determine the age, condition and lifecycle position of key building mechanical services.
- Determine the criticality of the individual assets and their impact to key risk components such as business continuity, workplace health and safety and environmental impact.
- Develop a plant condition index strategy for the assessed services.
- Provide ranking and CAPEX recommendations to address lifecycle and obsolescence with key assets for the remaining 10 years of operable life of Building 1.

1.03 Methodology

Echelon Consultancy and Training Pty Limited have been engaged by the TCH to assess the lifecycle position and develop capital works funding plans for key building mechanical services for Building 1. The assessment strategy looks to define a 1 to 5 score against four key condition criteria and three risk criteria to allow both a lifecycle/condition status as well as risk to TCH in operating the asset. This will allow a ranking of both asset condition versus the risk to business operations. Funding is based on industry standard documentation such as AIRAH Economic Lifecycle of Plant Guidelines, Cordell's Commercial and Industrial Building Cost Guides, and Lifecycle Costing for Facilities Guidelines by Dell'Isola & Kirk.

A project specific condition and risk matrix was developed as the basis for scoring individual asset condition and operational risks. The condition and risk assessment criteria utilised for the assessment of the mechanical services is as follows:

Asset Assessment

	Red	**Orange**		**Green**	
CONDITION & CRITERIA	**SCORE #1**	**SCORE #2**	**SCORE #3**	**SCORE #4**	**SCORE #5**
ASSET CONDITION	Asset is not functional due to failure of componentry. Asset would be deemed **"unserviceable"**	Asset has a significant number of operational defects and backlog remedial maintenance requirements. Asset would be deemed **"poor condition"**	Asset has operational defects which have minimal impact on asset capabilities. Asset is in "**fair condition**" with backlog maintenance issues to be addressed with reactive maintenance.	Asset has minor operational defects which have no impact on asset capabilities. Asset is in "**good condition**" with backlog maintenance issues to be addressed during routine maintenance.	Asset is running as intended with no backlog remedial works or operational risks. Asset would be deemed **"as new"**

STATUTORY COMPLIANCE	The asset would be deemed an **"extreme breach"** of statutory requirements. The continued use of the asset may result in serious WHS consequences, financial implications or litigation	The asset would be deemed a **"serious breach"** of statutory requirements. The continued use of the asset would very likely result in serious WHS consequences	The asset would be deemed a **"breach"** of statutory requirements. The continued use of the asset may result in serious WHS consequences	Asset has **minor statutory** deficiencies requiring effective engineered **solutions**	There are no statutory issues with the installation or operation of the asset. **Nil Issues**
ASSET LIFECYCLE & OBSOLESCENCE	**Asset has expire**d as a viable and usable asset. The asset has reached or has past the end of its expected operational, economical and/or design lifecycle. Asset is not supported by the manufacturer and would be deemed **"unserviceable"**	Asset is **approaching the end** of its expected operational, economical and/or design lifecycle. Asset has limited manufacturer support and availability of spare parts. Asset due for **replacement or overhaul within the next 2 years.**	Asset is approaching or has reached **mid/ late lifecycle** with an expectation of **replacement or upgrade of the asset in the next 5 years**. Asset supported by manufacturer with spare parts readily available.	Asset is **early to mid-lifecycle.** Typically asset would be outside DLP and warranty period and functioning normally. There is **no expectation of replacement of the asset in the next 5 to 10 years** however upgrade or overhaul of the asset may be required to allow the asset to meet its anticipated lifecycle.	Asset is in new condition. Typical of plant and equipment within the project DLP or still under manufacturer's warranty. Asset would be deemed **"as new".** There is **no expectation of replacement in the next 10 years**.
FIT FOR PURPOSE	The application of the asset is incorrect for the operational requirements. Asset would be deemed **"unserviceable"** in its current utilisation**.**	Asset is **not fit for purpose** and would have accelerated deterioration or reduced performance in current application.	Asset is **performing the functions require**d however the utilisation of the asset may reduce the operational, lifecycle and performance capabilities of the asset.	The asset is **generally fit for purpose**, however the current utilisation may impact on operation and lifecycle expectations.	The **correct utilisation, operation and selection** of the asset or system.

Risk Assessment

	Red	Orange		Green	
CRITERIA	**SCORE #1**	**SCORE #2**	**SCORE #3**	**SCORE #4**	**SCORE #5**
RISK TO BUSINESS CONTINUITY	**Extreme impact** and risk on business continuity. **Extreme consequences** on business operations resulting in total loss of operational capabilities.	**Very High risk** to business continuity. The asset failure will result in significant disruption to operations and consequences.	**High risk** to business continuity with asset failure resulting in partial disruption to services and/or operations	**Moderate risk** to business continuity with asset or system failure resulting in minor disruption to services and/or operations	**Low risk** to business continuity with asset or system failure having negligible impact on services or operations.
ENVIRONMENTAL RISKS	**Extreme environmental risks with a v**ery likely environmental impact (EPA notification and investigation) resulting in litigation, financial or safety implications. Catastrophic irreversible environmental harm	**Very high environmental risks** with significant implications to the environment with financial and litigation implications. High environmental harm and long term recovery. High profile community concerns raised requiring significant rectification measures.	**High environmental risk** rand measurable environmental harm - medium term recovery.	**Moderate environmental risks** with medium term, immaterial effect on environment/co mmunity (EPA notification requirement)	**Low risk** to the environment which can be managed with effective maintenance or remedial works. Short term, immaterial effect on environment/co mmunity
WHS RISKS	**Extreme risk to** Workplace Health and Safety. Possible **extreme consequences** resulting in serious injury or death. Significant business interruption or cessation of business due to non compliance with regulators	**Very High** WHS risks resulting in serious or permanent injury. Restriction of business by regulators	**High risk** to WHS including fines and penalties by regulator	**Moderate risks** WHS implications for the asset and its operation. Possible WHS consequences resulting in injury and possible censure/intervent ion/fines by regulator	L**ow risk** WHS implications for the asset and its operation.

Criticality

	Red	Orange		Green	
CRITERIA	**S1**	**S2**	**S3**	**S4**	**S5**
ASSET CRITICALITY	Asset or asset system has the highest level of criticality and would have a total disruptive impact to Business Continuity. i.e. The facility would need to close until asset or asset systems repaired or replaced.	Asset or asset system has a high level of criticality and would have a significant disruptive impact to Business Continuity. i.e. Portions of the facility may need to close until asset or asset systems repaired or replaced.	Asset or asset system has a medium criticality and would have moderate impact to Business Continuity. i.e. the asset or asset system would need to be isolated until the asset is repaired or replaced.	Asset or asset system has a low criticality and would have minimal impact to Business Continuity.	Asset or asset system has minimal criticality and would have no impact to Business Continuity.

1.04 References and Acknowledgements

The following information was utilised for the purposes of the condition audit on the mechanical services at the TCH Building 1 and includes:

- Condition and risk assessment for the mechanical services undertaken by Echelon Consultancy and Training.
- Review of existing Installation, Operation and Maintenance manuals and technical material for the installed assets where available and provided by PM&M.
- AIRAH Economic Lifecycle of Plant Guidelines.
- Cordell's Commercial and Industrial Building Cost Guides.
- RS Means Facilities Maintenance and Repair Cost Data Guides.
- Lifecycle Costing for Facilities – Dell'Isola & Kirk.

1.05 Report Clarifications

The audit of the building mechanical services undertaken on TCH Building 1 is a 'snap shot' review of the lifecycle position and condition of key components as assessed by Echelon Consultancy and Training. The assessments are generally based on the technical review carried out by Echelon Consultancy and Training and review of provided technical material from PM&M. This audit is not a building compliance audit but looks to define the condition of the individual assets and systems when benchmarked against industry standards and the operational requirements for the various systems in supporting TCH operations. Throughout the audit, Echelon Consultancy and Training assessed the age and condition of assets and asset systems with a holistic view of the asset or asset system. While there are a number of asset systems such as the BMS, switchboards, variable speed drives, exhaust systems, etc which have had component or system upgrades and refurbishments, the overall condition scores contained within this report reflect the overarching lifecycle position of the remaining and/or original infrastructure.

For the purposes of this audit, the Building Management System (BMS) was excluded from the lifecycle audit as it forms part of a separate contract which is currently managed through Control & Electric. It is envisaged that the lifecycle position, functionality and upgrade path for this asset is currently being effectively managed outside of this CAPEX program.

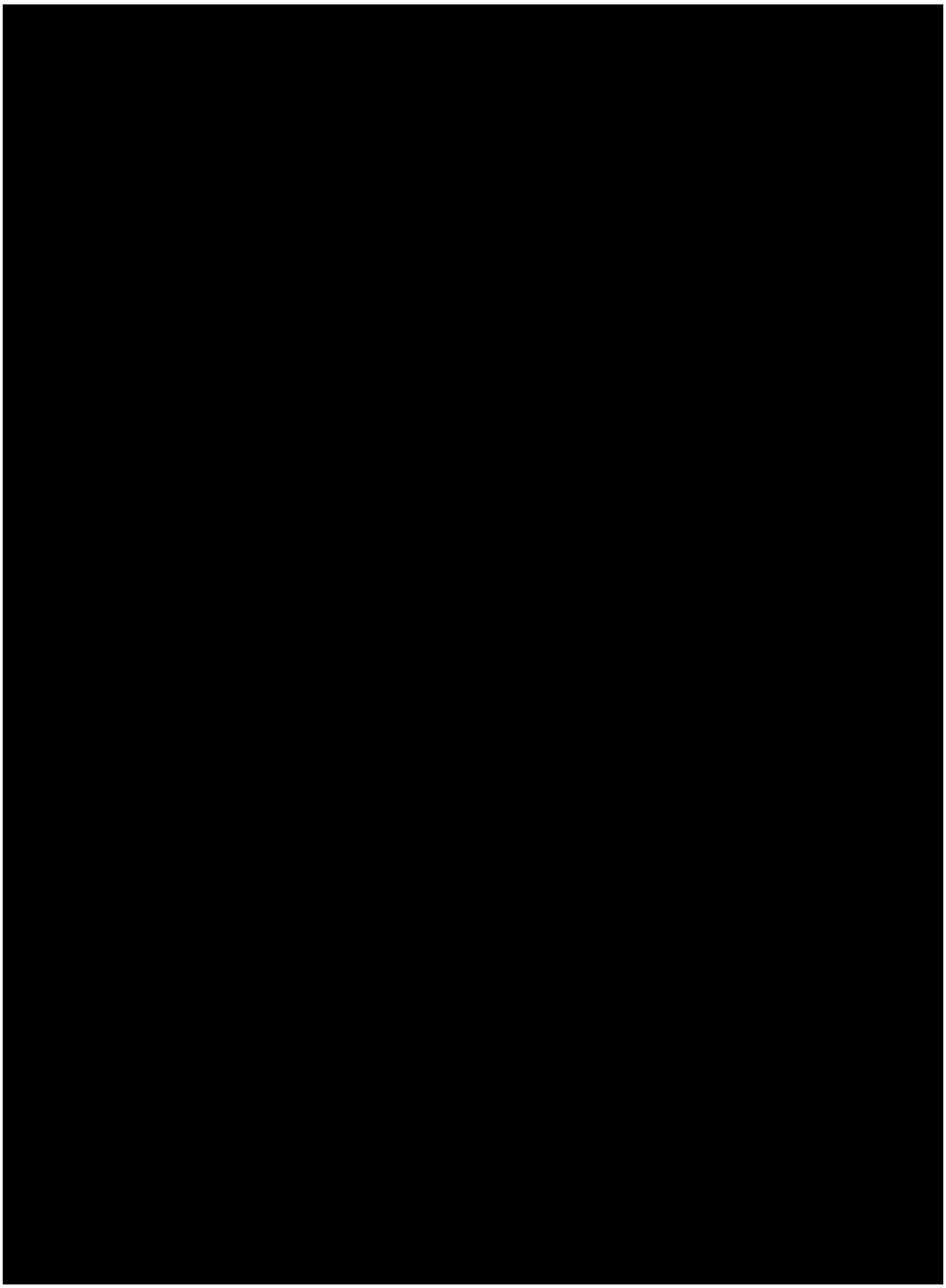
Section 2 – Executive Summary

[redacted] The anticipated capital expenditure for the next decade to maintain operational and functionality of the assets is as follows:

Year	Capital Expenditure
2016/17	$254,000
2017/18	$718,550
2018/19	$370,361
2019/20	$159,052
2020/21	$144,650
2021/22	$109,762
2022/23	$138,697
2023/24	$146,010
2024/25	$142,572
2025/26	$117,130
Total	**$2,300,784**

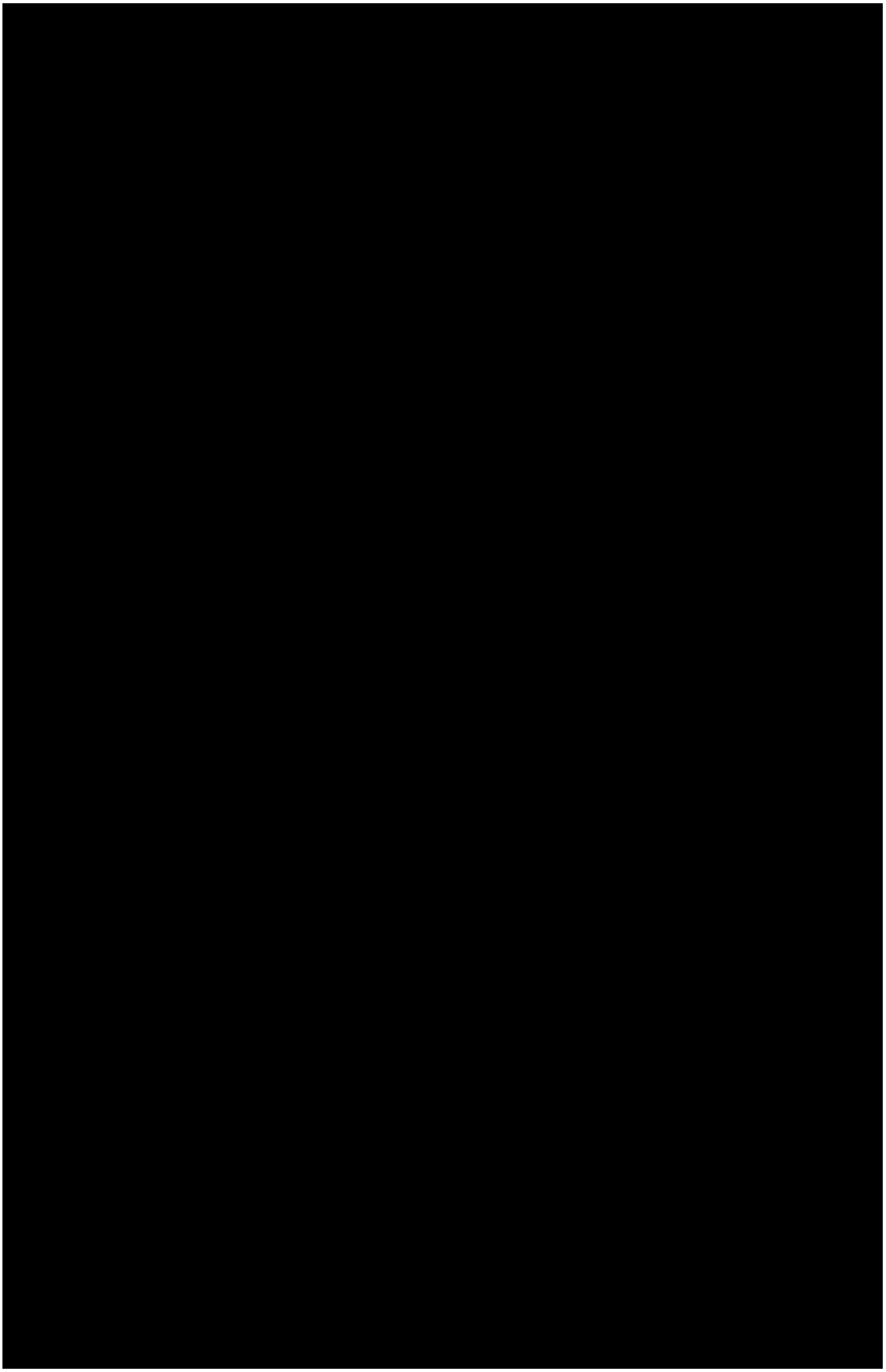
Section 3 – Mechanical Services

3.01 [redacted]



3.02 [redacted]

3.03 [redacted]



3.04 [redacted]

3.05 Project Scheduling

The critical operational requirements within Building 1 would make any significant mechanical and electrical services upgrades difficult to implement and generally cost prohibitive. Given the majority of the mechanical and electrical assets would have operational lifecycles in the order of 20 to 30 years, replacement of any significant quantity of asset infrastructure this late in the building lifecycle would not realise effective utilisation of any replaced assets. There are however several high risk assets which need to be addressed.

While the attached capital management plan outlines a rolling contingency plan to address the lifecycle and obsolescence for key airside and thermal plant infrastructure, there are a number of alternative mitigation strategies which could be implemented which need further investigation and costing, but would include options such as:

[redacted]

The budgets and feasibility of these are not included in this report.

ACT Government
Chief Minister, Treasury and Economic Development

ACT Government
Health

Building 1

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 1
1.1 Overview 1
1.2 Limitations 1
2 The Building 2
2.1 Maintenance 2
3 Fire Systems Summary 3
4 Fire Indicator Panel 4
5 Thermal and Smoke Detectors 4
6 Fire Sprinkler Systems 5
7 Fire Hose Reels 5
8 Fire Hydrants 6
9 Fire and Smoke Doors and Barriers 6
10 Fire Extinguishers and Blankets 7
11 Evacuation and Warning Systems 8
12 Emergency Lights and Exit Signs 8
13 Emergency Exit Routes 8
14 Exit Doors and Locking Devices 8
15 Fire Systems Interface Test 9
16 General House Keeping 9
17 Maintenance Records 10
18 Floor Plans 11

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 1, The Canberra Hospital.

1.1 Overview

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.

Fire safety systems have been upgraded including a retrofit of an automatic wet pipe sprinkler system and upgrading of the FIP and EWIS panels.

All 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. Building 1 has been recently upgraded to start this process as a new addressable FIP has been installed which has the networking capabilities.

1.2 Limitations

This report has been prepared in good faith and due care and 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.

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 were in applicable 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, 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		12
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	Nil
Thermal and Smoke Detectors	Smoke	Yes	Compliant	Nil
Sprinkler Systems	Yes	Yes	Compliant	Nil
Fire Hose Reels	Throughout	Yes	Acceptable	Nil
Fire Hydrants	Throughout	Yes	Compliant	Provide blank caps to all Hydrants
Fire and Smoke Doors and Barriers	Yes	Yes	Compliant	Nil
Fire Extinguishers and Blankets	Throughout	Yes	Compliant	Nil
Evacuation and Warning Systems	Yes	Yes	Compliant	Nil
Emergency Lighting and Exit Signs	Yes	Yes	Compliant	Emergency lights required in meeting rooms
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	Yes	Yes	Compliant	Nil

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 FIP annual test was recorded in February 2014. The FIP batteries were most recently replaced in December 2013.

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

Network (Node) Panel

[redacted]

The requirement for this network node was due to the project consultants' design of a detection system to AS1670 specifications and subsequent installation of the detection throughout level 5. It is unknown as to the reason for smoke detection to be installed to AS1670 in a sprinkler protected building as the BCA and Australian Standards indicates a requirement for a skeletal smoke detection system only.

Fire Fan Control Panel

[redacted] 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.

As this system upgrade is relatively new it is assumed the FFCP controls and indications were tested and commissioned on completion of the project, however no documentation was evident on site

5 Thermal and Smoke Detectors

Old Olsen conventional smoke detectors have been installed throughout the majority of the building to the requirements of AS 1668 (skeletal layout). Some of the recently refurbished areas of the building has new Tyco and Hochiki smoke detectors installed. [redacted] smoke detection installed to AS 1670.1, which is above beyond what is required in the BCA for a sprinkler protected building.

At the time of survey no access was available to Level 4 due to construction works.

It is understood that all detectors are connected to the new Fire Indicator Panel. Notifier 2800 field module boxes have been installed in a riser on each level of the building where the existing conventional detection zones have been terminated

Recommend smoke detectors be installed within 3m of lift shafts in compliance with the BCA Estimated cost $250 per detector.

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 due to the retro-fit nature of the sprinkler and drencher systems installation.

The system is controlled by valve sets in the sprinkler valve room, which is located between the Fire Control Room and the Sprinkler/Hydrant Pump Room. This causes concern due to the noise levels that could be expected in the area in a fire situation making control of the emergency in the control room somewhat difficult.

The following valve sets control the system:

The onsite log books indicate that the last six-monthly and Annual tests have been conducted as required. All alarm valve assemblies appear to have been replaced within the last 2 years therefore the valve overhauls are up to date.

Water Supply

The water supply for the sprinkler and hydrant services are supplemented by tanks on Level 13 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.

Maintenance

The servicing and maintenance of the diesel / electric hydrant and/or sprinkler pump are carried out by SMI Fire Services. The last recorded annual test date for the pumpsets was in September 2013. Defects were noted during this test and there is no indication that they have been redtified.

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.

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

The water supply for this system is [redacted]

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..

Storz couplings have been fitted to 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. The installation of a blank cap is recommended to all Storz couplings.

Recommend Storz fitting and blank cap for the hydrant in the Level 1 Kitchen. Estimated cost $220.

9 Fire and Smoke Doors and Barriers

The building consists of nine levels above ground floor with a fire isolated stair at each end and a central smoke isolated stair which has been upgraded [redacted]

It was not possible during the survey to inspect the fire barriers above the fire doors however it is understood that works will be required to rectify the bulkheads above these doors of which some have been breached by wiring and other services and require re fire sealing.

Other fire barriers have been strategically located throughout the complex to divide the area into smaller fire compartments. The concept of these barriers is illustrated in the drawing in this report. This survey has revealed however that the majority of fire barriers have been breached by cabling not being effectively fire stopped. This includes penetrations above and below electrical switchboards in cupboards. This matter requires remedial attention.

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.

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 AS1851.

Fire doors on electrical switchboard cupboards throughout the building have de-rating labels on the spines of the doors. All tags and fire door signage should be removed from these doors with exception to the de-rating tag.

[redacted] however at the time of the survey the door could not be manually released. Smoke detectors and warning signs are also required on either side of the door

[redacted] If this is to be kept open a magnetic door holder should be fitted to the door to release on a fire alarm activation.

Fire Dampers

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

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

There are concerns that dampers were not installed in accordance with the code at the time of construction.

Evidence was not sited to indicate that the dampers have been tested or serviced as required.

There is a damper in the wall section above a fire door in the basement archive room. A flexible cable to an exit light passes through this damper. This cable must be rerouted.

Ensure all fire dampers and solder links are inspected, serviced and maintained / replaced 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.

Generally CO2 fire extinguishers are co-located within cupboards with a Fire Hose Reel and a Fire Hydrant and are considered the most appropriate in this situation. Locations are as detailed on the plans at item 18 of this report.

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.

Fire extinguishers are tagged as having been maintained as required.

A 5.4kg C02 fire extinguisher was located in the level 2 west side egress passageway behind the Pharmacy which was not indicated as belonging there. It was empty and severely overdue for servicing and pressure testing. This unit does not appear to be required and should be removed.

Fire extinguisher location signs require updating in some areas to the requirements of AS2444, in particular in plant room areas.

11 Evacuation and Warning Systems

An Inertia (FireSense) I2000 Emergency Warning and Communications system is installed within this facility with the MECP located adjacent to the FIP in the Fire Control Room. Previous comments regarding noise is repeated regarding the noise levels that could be expected in the area in a fire situation making control of the emergency in the control room somewhat difficult.

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 EWIS annual test was recorded in February 2014 however a six-monthly test has been recorded in January 2015. The EWIS batteries have not been replaced since the system was upgraded in July 2013.

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

Flush speakers are installed throughout levels 5 and 2 and it is understood that these can be heard in all areas. Horn speakers have been installed in plant rooms and service areas. Strobe lights have been installed in the level 11 plant room.

The occupant warning system was purpose designed in accordance with A1670 on levels 3 – 10 (with exception of level 5) 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 of 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.

Recommend installation of an emergency light to the Level 1 Induction/Training Room. Estimated cost $270.

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.

General lighting needs to be maintained in the stairwells; in particular the level 1 area of the centre west stairwell.

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.