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SOUTH AUSTRALIAN METROPOLITAN FIRE SERVICE

BUILT ENVIRONS SECTION POLICY 037

Fire Alarm Conditions of Connection

SCHEDULE 1

1.0		26 August 2013
Revision History: Version	**Revision Description**	**Date**
2.0		September 2020

List of Amendments:

Clause	Amendment
General editorial update to reflect changes to monitoring and AS1670.1 suite of standards	

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GLOSSARY

AS	Australian Standard
ASE	Alarm Signalling Equipment
CIE	Control and Indicating Equipment
DBEP	Designated building entry point (refer AS1670.1)
DSEP	Designated site entry point (refer AS1670.1)
EWCIE	Emergency Warning, Control & Indicating Equipment
EWIS	Emergency Warning and Intercommunication System
FBP	Fire Brigade Panel
FDAS	Fire Detection and Alarm System
FDCIE	Fire Detection Control & Indicating Equipment
FFF	Fire Fighters Facility
FRL	Fire-Resistance Level (as defined by the BCA/NCC)
LED	Light Emitting Diode
MFAS	Managed Fire Alarm Service
MFS	Metropolitan Fire Service
NCC	National Construction Code (formerly Building Code of Australia – BCA)
OWS/EWS	Occupant Warning System/Emergency Warning System
SHCIE	Special Hazards Control and Indicating Equipment

DEFINITIONS FOR THE PURPOSE OF THIS POLICY

Approved Fire Alarm Contractor	A person or company approved by the MFS as being qualified to perform installation/alterations/maintenance to systems connected to the MFS monitoring equipment.
Mimic Panel	A stand-alone panel containing an alphanumeric display that duplicates the FDCIEFBP display
Annunciator Panel	A geographical display incorporating lights that give indication of a subsystem connected to and monitored by the FDCIEFBP.
Integrated Fire Brigade Panel	A fire brigade panel here the CIE manual controls and indicators, or a separate set for manual controls and indicators, are arranged within the CIE enclosure to meet the requirements of AS4428.3.
Non-integrated (or remote) Fire Brigade Panel	A stand-alone fire brigade panel constructed as a separate unit that provides all the required functions and indications in its own enclosure.
MFAS	“Managed Fire Alarm Service” operated by Telstra on behalf of MFS & CFS, generally incorporating an ASE at each client’s premises with dual SIM cards communicating via separate ‘Wireless Internet Protocol’ (WIP) paths through the Telstra and Optus networks to the MFS Alarm Monitoring hardware.
SIM	“Subscriber Identity Module” – a type of data storage for mobile and other devices

REFERENCED DOCUMENTS

The following Australian Standards are referred to in this Schedule:

AS 1668.1	Australian/New Zealand Standard 1668 – '*The use of ventilation and air-conditioning in buildings'.*
AS 1670.1	Australian Standard 1670 – '*Fire detection, warning, control and intercom systems – System design, installation and commissioning'* Part 1: Fire.
AS 1670.3	Australian Standard 1670 - '*Fire detection, warning, control and intercom systems – System design, installation and commissioning'* Part 3: Fire Alarm Monitoring.
AS 1670.4	Fire detection, warning, control and intercom systems—System design, installation and commissioning Part 4: Emergency warning and intercom systems
AS 1670.5	Australian Standard 1670 - 'Fire detection, warning, control and intercom systems – System design, installation and commissioning Part 5: Special Hazards Systems AS 1851 Australian Standard 1851 – *'Maintenance of fire protection systems and equipment'.*
AS 2118	Australian Standard 2118 - '*Automatic fire sprinkler systems'*.
AS 2419	Australian Standard 2419 - '*Fire hydrant installations*'.
AS 14520.1	Australian Standard 14520 - '*Gaseous fire extinguishing systems – Physical properties and system design*'.
AS 4428.3	Australian Standard 4428 - '*Fire detection, warning, control and intercom systems – Control and indicating equipment'* Part 3: Fire Brigade Panel.
AS 4428.4	Australian Standard 4428.4 - '*Fire detection, warning, control and intercom systems – Control indicating equipment'* Part 4: Intercommunication systems for emergency purposes.
AS 4428.6	Australian Standard 4428.6 - 'Fire detection, warning, control and intercom systems – Alarm Signalling Equipment'
AS 4428.16	Australian Standard 4428.16 – 'Fire detection and alarm systems' – Emergency Warning Control & Indicating Equipment'.
AS 7240.1	Australian Standard 7240 – 'Fire detection and alarm systems' Part 1: Definitions
AS 7240.2	Australian Standard 7240 – *'Fire detection and alarm systems'* Part 2: Control and Indicating Equipment.
AS 7240.4	Australian Standard 7240 – *'Fire detection and alarm systems'* Part 2: Power supply equipment.

1 SCOPE AND GENERAL

1.1 Scope

This document details the requirements and standards for automatic fire alarm detection, occupant warning and emergency intercommunication systems and/or fire suppression systems, where monitored by the South Australian Metropolitan Fire Service (MFS).

This document does not undermine the minimum requirements of the National Construction Code.

1.2 Application

This document is “Schedule 1” as referred to in the “MFS Agreement to Connect”.

This document provides detail to approved fire alarm contractors to enable the design, installation and alteration of systems to meet MFS requirements.

This document provides detail to the building owner/occupier as to their responsibilities.

1.3 Approved Contractors

The MFS will not accept fire alarms for monitoring unless the installation/upgrade has been performed by a MFS approved fire alarm contractor. For approved contractor requirements contact the Fire Alarms Officer for further details.

2 APPLICATION AND APPROVALS

2.1 Notice to the MFS prior to the commencement of work on site

2.1.1 Commencement notification

The Contractor responsible for the work shall notify the MFS at least fourteen (14) days prior to the commencement of any work to:

- Install a fire alarm detection or suppression system; or
- Alter or add to an existing fire alarm detection or suppression system.

This applies to any fire suppression or detection system, which is to be, or currently is, connected to MFS monitoring equipment.

Final site address shall be confirmed with this Department at the earliest opportunity and shall be resolved prior to completing the Telstra MFAS forms.

2.1.2 Extent of Works – Alarm Alterations (Existing Installations)

Where the scope of works are limited to alterations of existing installations (see 1.2 above) as outlined below, the contractor must make application to the MFS Community Safety Department via the “Application for MFS Monitored Fire Alarm Connection / Alteration” form

1. FDCIE / EWCIE replacement
2. Upgrading of Fire Fan Control Panel
3. Provision of FDCIE Graphic User Interface
4. General Fire Safety Upgrade Works (e.g. work subject to Section 71 and/or Section 53A of the SA Development Act 1993)
5. Alterations to ASE inputs and programming (affecting ASE reporting to monitoring centre)
6. Any alteration or extension to an existing “dry” alarm or EWS system
7. Any alteration or extension to an existing “wet” (sprinkler/suppression) system, where the end-of-line valve is relocated to suit the new works.

2.1.3 Lodgement of Notification

Notification shall be in writing, on the standard MFS form:

- **"*Application for MFS Monitored Fire Alarm Connection / Alteration"***

And shall be accompanied by the following MFS forms:

- ***MFS Alarm Connection and Monitoring "Agreement to Connect"***
- ***MFS Monitored Alarm – "Required Information***".

Exception - If the work is an addition or alteration to an existing monitored system, the '*MFS Alarm Connection and Monitoring Agreement*' forms are not required, providing the current owner/s details are correct as shown on MFS records.

NOTE: The Agreement Forms are to be filled out by the Owner and the Contractor and forwarded to the MFS (with any other required documentation).

Copies of the above forms are available on the MFS Website (https://mfs.sa.gov.au/community-safety/forms-for-downloading/) or by request from the MFS Alarms Officer, Community Safety and Resilience Department.

If there is any doubt as to whether Agreement Forms are required, contact the MFS Alarms Officer for clarification.

2.1.4 Site Plan with Application

The above documentation shall be submitted to the MFS, accompanied by a site plan in accordance with Clause 2.2 of this Schedule.

2.1.5 Telstra Managed Fire Alarm Service Application

An application for a Telstra MFAS shall be forwarded to the MFS Alarms Officer for approval. Upon approval, the MFS will forward the application to Telstra for processing.

2.2 Site plans to be lodged with the *Application for Fire Alarm Connection / Alteration* form

2.2.1 Preparation of Site Plan

Site plans lodged with the MFS shall be drawn to scale, preferably on A4 size paper, with A3 size paper being the maximum size drawing acceptable to the MFS for large and complex projects. Site plans shall include the following information, which is pertinent to MFS operations:

- Designated site entry point (DSEP), where applicable
- Vehicular access-ways within the site suitable for use by MFS appliances;
- Designated Building Entry Points (DBEP)Fire fighter entry points to the building/buildings and, where applicable, the location of any fire lift or fire isolate/disabled stair, ramp or passageway;
- The location of any sprinkler valve room, valve set, booster connection, pump;
- The location of any FDCIE, FBP, and any other fire protection indicating device (annunciator panel etc);
- The location of any EWCIE, and;
- The location of any fire control room and other specialist fire suppression system, e.g. gas suppression system.

NOTE: MFS Heavy Urban Pumpers can only operate on hard standing surfaces that can withstand vehicular loads of up to 27 tonnes.

MFS aerial appliances have much higher point load requirements. Liaise directly with this department for further information.

2.3 Scope of work

2.3.1 Fire system coverage and compliance

It is incumbent on the Contractor to indicate if the proposed FDAS, EWS or suppression system:

- Provides full or partial coverage to the premises; and
- Complies with the requirements of this Schedule.

The Contractor shall provide a written summary detailing the scope of proposed works.

NOTE: Depending on the scope of works, the MFS Alarms Officer will make the determination on whether an inspection is required, pursuant to Regulation 83 (4) of the Development Regulation 2008.

2.4 Acknowledgement of Approval

2.4.1 Issue of approval documentation

A successful applicant shall be issued with MFS *"Fire Alarm Detection and Suppression System Connection / Addition / Alteration Approval'* documentation. This record of approval shall be obtained from the MFS prior to the execution of any work on site.

3 FIRE DETECTION AND ALARM SYSTEMS

3.1 Compliance with Australian Standards

3.1.1 Compliance with AS 1670.1

All fire detection and alarm systems which are to be monitored by the MFS shall be installed to comply with this document and AS 1670.1, unless specific alternatives have been agreed to by the Built Environment Section of the Community Safety and Resilience Department.

3.1.2 Compliance with AS 7240.2 & AS4428.3

(i) FDCIE's complying with AS 7240.2 shall have an integrated Fire Brigade Panel complying with AS 4428.3 or a Fire Brigade Panel complying with AS4428.3.

(ii) Addressable FDCIE/FBP shall identify and display the individual actuating devices in addition to displaying the zone in alarm.

(iii) The isolate/disable facility within an addressable FDCIE/FBP shall be capable of isolating the individual actuating devices within the zone in alarm.

3.1.3 Multi-sensor detection

Fire detection and alarm systems incorporating multi-sensor type detectors shall be discussed with, and agreed upon by the Built Environment Section of the Community Safety and Resilience Department on a job-by-job basis.

3.2 Non-standard systems

The connection of non-standard systems will generally only be considered by this Department where the system has been designed as part of a performance solution or as agreed to by the relevant Building Fire Safety Committee under Section 71 of the SA Development Act.

NOTE: For clarification, liaison with the MFS Built Environs Manager or Alarms Officer may be necessary.

3.3 Acceptance of Fire Protection Equipment

All commercial products used in fire protection, fire detection and fire alarm systems that are to be monitored by the MFS, shall meet the evidence of suitability requirements of the National Construction Code of Australia (NCC).

3.4 FDCIE Alarm Signalling Equipment (ASE)

The ASE shall comply with the following:

- Be located within the FBP cabinet or a document cabinet mounted adjacent to the FBP.
- The MFS Fire Alarm Monitoring Number shall be clearly marked in characters not less than 5mm high on the front cover of the ASE unit.
- The MFS Fire Alarm Monitoring Number shall be clearly marked in large characters on the front cover of the Fire Alarm Maintenance Log Book and Fire Service Attendance Book e.g. 040/177.

3.5 Control switches and indication within the FDCIE cabinet

Control switches, push buttons and indicators shall be provided at the FDCIE/FBP in accordance with AS1670.1, for:

- each stair pressurisation fan; and
- any other fan required for smoke control purposes, with one switch serving each fan, except where these comprise a group of fans and each fan has individual stop start status indication, one switch may be used for the group; and
- each installed fire pump, in accordance with the requirements of MFS Built Environs Section Policy No. 006 '*Control & Indication for Diesel & Electric Fire Pumps'*.

NOTE: Whilst sprinkler and hydrant pumps have other specified control and indication requirements, the colour coding of indication lights and the principles embodied in AS 1670.1 shall apply.

3.6 Annunciator, and Mimic Panels

Mimic/Annunciator Panels shall not be able to reset or disable an alarm, or silence occupant warning.

When using an alphanumeric display, the information displayed shall be the same as that displayed by the FBP.

3.7 The provision of cabinets for other facilities

Where the FBP cabinet has insufficient space to contain any of the following:

- The ASE; and
- Fire Service Block Plans, Fire Service Attendance Log Book, and
- any required Fire Alarm Maintenance Log Book; and
- any building précis documentation; and
- copies of any Performance Solutions agreed to by the MFS; and
- any other pertinent equipment, such as switches and indication for smoke control fans or documents required by the MFS or Council,

an additional Lockwood 003 locked document cabinet shall be provided adjacent to the FBP cabinet to contain the above items.

NOTE: This is to ensure that all relevant documentation, as required above, is secure and remains in situ for attending MFS crews and building management.

The document cabinet may be located beneath the FBP provided that where the ASE is also located in the cabinet, the I-key control of the ASE is not less than 600mm above finished floor level.

3.8 Fired Brigade panel (FBP) requirements

3.8.1 Location

FBP shall be located in accordance with AS1670.1 and shall not be located within a fire pump room and shall be appropriately acoustically separated from any such rooms.

3.8.2 Accessibility

The lock to the door of the cabinet or panel shall be operable by a Lockwood ‘003’ key.

Where the FBP is installed within lockable joinery, the lock shall be operable by a Lockwood 003 key,

Where the FBP is located within a Fire Control Room, access to the Fire Control Room will be via a building master key.

3.8.3 Operating Instructions

Due to the variety in types of FBP and differing modes of operation, concise written instructions shall be provided. Instructions shall be displayed inside the FBP enclosure.

An example of such a notice is given below:

Fire Brigade Panel operation complying with AS 4428.3

- *Press the 'Next' to view all Circuit/Zone/Devices in alarm. If the "Multiple Alarm" indicator is not illuminated then there is only one active alarm.*
- *Press the RED 'Silence / Resound Alarms" button to silence the audible alarms, when appropriate to do so.*
- *After investigation, press the GREEN 'Reset' control. This resets the system, including air-conditioning.*
- *If the system indicates a faulty device following a 'Reset', press the YELLOW 'Isolate' control, which will isolate the device currently displayed.*

Note: Neither the reset or disable control will operate unless the silence alarms control has been pressed.

3.9 Vaults/Strong-rooms/SA Power Network Sub-Stations & Enclosures

Where an addressable system is not installed, the room shall be provided with positive alarm area identification by means of a separate alarm group at the FBP or a remote LED mounted externally to the room so as to be clearly visible to the attending MFS crews.

Where more than one strong-room or more than one SA Power Networks sub-station or enclosure is contained on the same story, one alarm group may be acceptable for rooms of the same use, provided a remote LED is installed adjacent to the door entry to each room served by the common Circuit/Zone.

NOTE: All remote LED plates shall be marked with Alarm Zone (Circuit/Zone/Device number), device number and type of detector, in accordance with Clause 3.11 below.

3.10 Identification of concealed detectors

Identification of each concealed detector shall comply with the requirements of AS 1670.1. Consideration shall be given to the safety apparel worn by fire fighters and the size of the access points for all concealed detectors. It is therefore important to align the detector indicator to the position of entry.

Where access is particularly difficult and operational requirements may be affected, the MFS may require the provision of remote indicators for concealed detectors regardless of the type of fire detection system installed

It is therefore incumbent on the Fire Alarm Contractor to ensure that there is consultation with the MFS Alarms Officer before inspection.

NOTE: All remote LED plates shall be marked in accordance with Clause 3.11.

3.11 Identification of devices

Each device incorporated into the fire detection and alarm system (FDAS) shall be uniquely identified.

Each device shall be labelled with the Alarm Zone, Device Number and Type of detector (and loop number where applicable).

For example, manual call points, flow switches, pressure switches and monitored valves, sounder bases, & input/output devices are considered part of the FDAS.

Identification on the device shall be consistent with the information displayed at the FBP. The Blockplan Legend and the device number shall read the same as the display on the FBP.

An example of device identification includes:

(For Alarm Zone 1, Loop 2, and detector number 23 which is a photo optical type smoke detector)

AZ 1 – 023P

L2 – Z1 – 023P

AZ 1 – L2 – 023P

Z1 – L2 – 023P

L2 – P023 – Z1

The type of detector (or other device) information shall be permanently inscribed on the detector head (or device) as noted below:

C Carbon monoxide (CO) detector; or

I Ionisation or combustion detector; or

M Multi-sensor detector; or

P Photo optical smoke detector; or

T Thermal detector fixed or rate of rise.

ASD Aspirated Smoke Detection

MCP Manual Call Point

F/S Flow Switch

P/S Pressure Switch

M/V Monitored Valve

IMPORTANT: The type identification shall not be inscribed on the detector base as future changes could result in a different detector having incorrect identification.

3.12 LED indicator

LED indication shall be provided on all detectors and shall be integral to the device in accordance with AS 1670.1.

Detectors shall be orientated so that the LED is immediately visible from the direction of fire fighter access. This is of particular importance in concealed spaces.

3.13 External warning devices

In accordance with AS 1670.1, a Visual Alarm Device (VAD) shall be installed, visible from the main approach to the building and located as near as practical to the doorway accessing the FBP.

If the VAD is not clearly visible from the main approach to the building then an audible device will be required in addition to the strobe.

3.14 Fire Alarm Block Plans

At the time of inspection/connection, three (3) sets of Block Plans shall be provided to the inspecting officer; one (1) set in PDF format for retention by the MFS Community Safety and Resilience Department, and two (2) hard copy sets to be stored within the FDCIE.

Block plans shall:

a) Be A3 or A4 size (as most appropriate for readability).

b) Be bound into a booklet with the sheets protected from damage by clear plastic envelopes.

c) Show access paths to any concealed detectors e.g. access panels and removable tiles.

d) The booklet front cover shall be clearly labelled in 10mm uppercase lettering:

FIRE ALARM PLANS
- DO NOT REMOVE -
FOR FIRE SERVICE USE ONLY

e) The plans shall be numbered, at least one per floor level, which show:

i) the building outline; and

ii) where relevant, a master site or key plan on each page (include Street name references or significant landmark to assist with orientation), and

iii) any internal full height walls/partitions; and

iv) means of access to each room in the building; and

v) the location of each detector/manual call point (using AS 1670 symbols); and

vi) location of Warden Intercom Point phones and Master Evacuation Control Panel (using the standard symbol required by the relevant Australian Standard); and

vii) any additional information necessary so that every installed detector may be accessed by the attending MFS crews; and

viii) North orientation.

f) Include a Legend at the front of the set of plans, which shall:

i) list each separate zone and identify the floor number and block plan number where each listed group appears; and

ii) include a key of the symbols used; and

iii) where relevant, master site plan;

g) Each zone shall have a different colour, and use the same colour for identification in the Legend at the front of the Block Plans.

h) Be maintained in an accurate and legible condition at all times by the incumbent Fire Alarm Maintenance Contractor.

i) Where an Aspirated Detection System is installed, liaise with the CSRD Alarms Officer regarding how the area covered by the ASD will be displayed on the Block Plan

3.15 Secondary alarm facility

The MFS will accept and monitor the following connections as secondary inputs via the ASE:

- Pump Run (fire pump running);
- Pump Isolate/disable (fire pump isolate/disabled);
- Pump room fault;
- Monitored Valve (fire valve tamper switches);
- Tank Level (firefighting water level requires monitoring)
- FDCIE/FBP power supply failure. Fault condition. Disable condition.

The connection of detection and suppression systems as secondary inputs is not permitted.

3.16 Occupant Warning system

Any occupant warning system designed to arouse sleeping occupants and is monitored by the MFS shall provide a minimum sound pressure level of 75dB(A) at the bedhead.

3.17 Fire Pump Controls and Indication

Fire pump control and indication shall comply with the requirements of MFS Built Environs Section Policy No. 006 ‘Control & Indication for Diesel & Electric Fire Pumps’.

4 FIRE SPRINKLER SYSTEMS

4.1 Compliance with the National Construction Code (Volume 1).

Sprinkler systems that are required to be connected to the MFS shall comply with Australian Standard 2118 'Automatic Fire Sprinkler Systems 'unless specific alternatives have been supported by the Built Environment Section of the MFS Community Safety and Resilience Department.

Confirmation of compliance with the appropriate Standard may be required from an independent organisation.

4.2 Non-standard systems

The connection of systems that do not comply with the appropriate Australian Standard will only be considered, where the system has been designed on a performance-based concept and the Built Environment Section of the MFS Community Safety and Resilience Department has agreed upon such alternatives.

Proposed systems installed to international design standards (eg. NFPA, Factory Mutual, UL) are considered to be non-standard systems.

NOTE: Liaison with the MFS Built Environs Manager will be necessary for clarification on the acceptance of non-standard systems.

4.3 Sprinkler valve rooms

The location of sprinkler control valve rooms shall be approved by the MFS and should generally be at ground level.

All valves (except those located in fire isolated stairwells of multi-story buildings) shall be located in a secure room or enclosure, and where possible, adjacent to the main entry to the building.

Valves shall not installed within a fire pump room. If installed adjacent the fire pump room, acoustic separation shall be provided.

Where the enclosure is located outside the building, it shall be weatherproof and not more than 25 metres distance from a door gaining access to the protected building.

Minimum room dimensions for sprinkler alarm valves shall be not less than:

- 1850mm deep x 1400mm wide x 2100mm high for the first valve set; and
- An increase in room width of not less than 900mm for each additional valve set installed within the room,

Unless specifically approved by the MFS, building services other than those necessary for the operation of the equipment contained within the room/enclosure shall not pass through or be located in it.

NOTE: FDCIE/FBP shall not be installed in Sprinkler Valve Rooms.

4.4 Sprinkler fire alarm connection

Unless otherwise approved, initiation of a fire alarm to the MFS via the ASE shall be in accordance with the relevant Australian Standard.

For stand-alone sprinkler installations, where there is no FDCIE/FBP on site, the following shall apply:-

- For a premises with a single sprinkler installation, the installation shall be connected as a “Primary” input to the ASE.
- For a premises with multiple sprinkler installations reporting to a single ASE, each installation or installation group (control valves located together and typically sharing a common supply manifold), shall be connected as separate “Primary” inputs the ASE unless otherwise approved by the MFS.
- This will enable attending crews to proceed immediately to the identified valve set, to ensure correct operation and to identify the area of operation for immediate investigation, shut down or boosting purposes.

Where sprinkler installations are supervised by an FDCIE/FBP, a common “wet” alarm signal may be programmed as a single “Primary” input on the ASE for each sprinkler control valve installation, or installation group, unless otherwise approved by the MFS. Each pressure switch/flow switch (actuating device) at each sprinkler control valve shall be identified at the FBP.

Where actuating devices are supervised by an addressable input/output (I/O) device, the I/O device shall be labelled with its FBP identifier.

4.5 Sprinkler boosters

The fire service booster point for sprinkler valves shall be installed:

- within an external wall of the sprinkler valve room/enclosure; or
- within any required fire hydrant booster cabinet; or
- in a remote location as approved by the MFS.

Any cabinet doors and equipment located within the booster shall comply with the requirements of AS 2419 ‘Fire hydrant installations’, except that:

- the wording on the door shall read 'SPRINKLER BOOSTER', 'HYDRANT AND SPRINKLER BOOSTER' or 'COMBINED HYDRANT AND SPRINKLER BOOSTER' as appropriate in 75mm uppercase lettering of contrasting colour to that of the background; and

- Hydrant outlets intended to be used to supply the system shall be located within the booster cabinet, unless an alternative arrangement is approved by the MFS.

- All booster cabinet doors shall be fitted with a "Budget Lock" unless otherwise agreed with the MFS

4.6 Sprinkler/Combined System Pumps

The MFS recommends sprinkler protection in accordance with AS 2118, be provided in all pump rooms.

A permanent, water resistant, fade-resistant block plan shall be fixed on the pump room wall, showing all information required in accordance with AS 2118.

4.7 Sprinkler block plans

A permanent, water resistant, fade-resistant block plan shall be fixed adjacent to the sprinkler alarm valve, showing all information required in accordance with AS 2118.

The Contractor is to supply a further electronic copy (preferred) or paper hard copy of the plan to the MFS Alarms Officer at or before the time of inspection/connection.

NOTE: Where sprinkler installations serve a large building complex, portable plans similar to those employed for detection systems may be required to show valve set coverage, location of flow switches, test valves and other pertinent firefighting details.

4.8 Valve monitoring (anti-tamper devices)

Additional valve monitoring devices may be required in addition to the requirements of AS 2118. The inspecting officer will assess such requirements on a job-by-job basis. Such devices shall be identified in accordance with Clause 3.12.

4.9 Document cabinet

A metal cabinet, keyed to Lockwood "003" shall be provided in each sprinkler valve room of sufficient size to contain:

- any required portable block plans;
- records of required tests and inspections;
- any required building précis; and
- any other required information or documentation.

5 SPECIAL FIRE SUPPRESSION SYSTEMS

5.1 Gaseous fire extinguishing systems

Unless otherwise approved, all gaseous fire suppression systems are to be installed in accordance with the relevant Australian Standard. System components shall comply with the relevant Australian Standards. Where no Standards exist, components shall be subject to acceptance by the MFS and the authority having jurisdiction.

A SHCIE shall be provided adjacent to and outside the main entry door to the protected area.

Any services within the protected area which, if left running, would impair the efficiency of the system shall be shut down prior to or simultaneously with the release of the extinguishing agent. The operation of the SHCIE shall isolate/disable air handing systems to ensure room integrity during discharge.

Provision shall be made for the prompt and safe removal of any discharged fire suppressant in the protected area after a fire has been extinguished. This may require the use of mechanical exhaust. Such exhaust fans shall be clearly identifiable and labelled with controls within the relevant SHCIE.

Operating instructions and specialist instructions should be provided at the SHCIE for MFS use.

5.2 Other specialised suppression systems

Water mist, Liquid Chemical / Saponification, Foam, Deluge and other special suppression systems shall be discussed with the MFS prior to their design and installation to ensure compatibility with fire service operational procedures and MFS policy.

6 EMERGENCY WARNING & INTERCOM SYSTEMS (EWIS)

6.1 General

EWIS systems shall comply with AS 1670.4.

The Fire Warden Intercom System shall comply with AS4428.4.

The EWCIE shall be located adjacent to or within line of sight of the FDCIE.

All warning systems shall be automatically initiated by alarm signals from the detection/suppression system.

NOTE: MFS preference is that a pre-recorded female voice message be incorporated in both alert and evacuate signals. MFS Built Environs Section Guideline No. 023 'Emergency Evacuation of Cinemas' details specific evacuation system requirements and voice messages.

6.2 Plans and instructions

A set of operating instructions shall be provided adjacent to the EWCIE, affixed in a clearly visible location for MFS crews.

Warden Intercom Point phone/handset locations shall be shown on all Block Plans with the standard symbol required by the relevant Australian Standard.

For larger complexes, colour coding shall be used to identify EWIS zones.

7 FIRE SERVICE KEY ACCESS

7.1 Access keys general

Unless a building having a fire alarm connection is continuously occupied and 24 hour access for MFS crews is assured, door keys shall be provided to access all parts of the building.

Keys shall also be provided to access and control any installed emergency lifts.

Master keying shall be employed to reduce the number of key types necessary. Unless otherwise approved, not more than four different keys will be accepted for any one building.

There may be buildings whereby keys are not held at all, and/or, not held for accessing all parts of the building. This would need to be agreed between the building owner/management and MFS Built Environs.

7.2 Number of keys sets provided to MFS

All Buildings having a rise in storeys of four (4) or more shall provide two (2) sets of access keys.

All metropolitan Adelaide buildings, outside the Adelaide City Council area, require two sets of keys in all cases.

NOTE: If in doubt, contact the Fire Alarms Officer to ascertain how many sets of keys are required.

7.3 Fire service/emergency lift control keys

A fire service keyed switch facility is to be provided in the lift lobby at the storey affording egress to a public place.

This key may be a security key, mastered to the main building key system providing it is removable in all positions.

8 ADDITIONAL REQUIRED DOCUMENTATION

8.1 Completion certificates

The Contractor shall supply the MFS Fire Alarms Officer with copies of the completion certificates and/or installers statements as per the relevant Standard.

This documentation is required to be supplied to the inspecting officer at or prior to inspection.

8.2 Building System Précis of Operation

Building system précis of operation will be required where the integration of building management and fire systems is reasonably complex and shall comply with MFS Built Environment Guideline 026.

8.3 Layout plans and other information

For large or complex projects, additional documentation may be required to be kept in the Fire Control Room or Fire Control Centre, such as architectural and mechanical drawings, wall charts and other schematic drawings.

Such requirements are to be determined on a job-by-job basis. Contact the MFS Alarms Officer for further discussion on this matter.

9 SITE INSPECTION AND CONNECTION TO THE MFS

9.1 Site inspection prior to connection

An inspection of the premises will be carried out provided that the following conditions have been met:

a) The ASE must be installed and the preliminary line test procedure completed.

b) The building or portion of the building is complete, ostensibly free of building contractors and is not a construction site.

NOTE: The determination of what is and what is not a construction site will be decided by the MFS Alarms Officer, giving due consideration to the safety of MFS crews and building occupants in the event of an emergency in the particular building.

If the Officer is in doubt as to the safety of personnel, both civilian and fire service, inspection and connection will not take place. Generally, a site will be considered a building site if building work is still occurring and/or PPE (hard hats, safety boots, safety glasses & high visibility clothing) is required.

c) The installing contractor is in attendance at the time of inspection.

d) Any other contractor or labour necessary to test the system and ancillary functions is in attendance at the time of inspection.

e) The Owner, or his/her representative, should be in attendance at the time of inspection, however if this is not possible then the appropriate paperwork that is normally required to be completed by the owner, shall be available.

f) All materials and equipment necessary to carry out the test and inspection are available on site at the time of the inspection.

g) The installed system(s) is (are) complete and has (have) been fully tested to ensure compliance with the appropriate Standards and/or conditions of approval.

h) Any installed fire hydrant and hose reel facility has been previously inspected and flow tested to the written satisfaction of the MFS, unless specific circumstances as agreed by the MFS preclude this.

NOTE: It is in the best interest of the Fire Alarm Contractor to ascertain whether any fire hydrant or hose reel work is being carried out in the premises to which a fire alarm connection is required. If this is the case, please notify the MFS of this fact so that a MFS Flow Test can be scheduled prior to alarm connection. A connection certificate will not be issued unless all hose reels/hydrants/boosters have been tested.

i) All documentation for the project in accordance with the requirements of this Schedule has been completed. All required documents shall be on site at the time of inspection, if not previously supplied.

j) All required keys are available on site at the time of inspection. The Contractor will be responsible to ensure that keys are available. The alarm connection will not be completed unless all keys are available.

k) Where any significant and/or outstanding issues are considered to compromise the following items, connection may be refused where:

- MFS cannot verify the approved facilities have been installed and operate satisfactorily; and/or
- Occupant &/or firefighter safety is at risk; and/or
- The MFS's ability to efficiently and effectively deliver service is impaired.

9.2 Unsatisfactory inspection

If, at the time of site inspection and test, any requirements of the 'MFS Alarm Connection and Monitoring Agreement' are not met, connection may be refused and a "Defect Report" issued to the Fire Contractor.

The Fire Alarms Officer in the Community Safety and Resilience Department will be required to be contacted to arrange a suitable time/date for a subsequent on-site inspection and connection upon rectification of any outstanding deficiencies.

9.3 Satisfactory inspection

Upon satisfactory completion of an inspection and test, the installation may be connected to MFS monitoring equipment and a MFS Fire Alarm Certificate of Connection issued to the Contractor.

NOTE: The Certificate of Connection confirms that the fire alarm detection and suppression system is connected to MFS monitoring equipment and that the MFS is receiving a signal.

A Fire Alarm Certificate of Connection does not confirm that the building or installed fire alarm detection and suppression systems comply with the requirements of the BCA or any Australian Standard or other legislative requirement, and shall not be used as evidence of such compliance.

10 INSTALLATION MAINTENANCE

10.1 Maintenance

The responsible MFS recognised contractor shall be available at all times to attend and rectify any faults detected within any of the fire safety equipment nominated in this Schedule.

Any critical faults that relate to an installed fire detection / suppression system shall be reported to the relevant authority (Council) and the MFS Community Safety and Resilience Department.

Any maintenance work carried out shall be recorded in the Maintenance Log Book.

AS 1851 prescribes monthly testing of automatic fire detection and alarm systems, however, weekly testing is recommended by the MFS, particularly in premises with sleeping occupancies. Such testing may be performed by suitably trained on-site personnel.

Where fire alarm maintenance will involve the shut-down of any part of the building which eliminates the installed fire detection/protection coverage, the MFS shall be notified before commencement of the work and on completion of the work after subsequent reinstatement of the system.

NOTE: Unless this Clause is complied with, any ASE left in the 'Test' or 'Isolate/disable' position for a prolonged period without notification may result in a fire appliance attending and investigating the building. This is a chargeable occurrence.

11 BUILDING OWNER'S RESPONSIBILITY

11.1 Emergency phone numbers

The Owner shall provide a list of names and telephone numbers for not less than three (3) after-hours contact persons, who can be contacted in the event of a fire alarm or fault, found by the MFS.

Such lists shall be available at the time of inspection and connection, and be kept up to date at all times. Any changes made to the contact names and telephone numbers shall be forwarded in writing to:

Manager Communications, SA Metropolitan Fire Service, GPO Box 98, Adelaide SA 5001.

NOTE: It is incumbent on the Owner/occupier to notify the MFS of any changes / alterations to the above names or telephone numbers as and when they occur. This includes any changes to the Fire Alarm Contractor.

11.2 Avoidable alarm (unwanted false alarms)

Owners are advised that a charge for fire service attendance may be made for fire alarm calls where the alarm is caused by an irresponsible act or other cause deemed avoidable by the MFS.

Many unwanted false alarms have been attributed to the following:

- Incorrect and/or poor maintenance of the installed system;
- Incorrect testing or operation of the installed system;
- Workmen on the premises using disc cutting or heat-generating equipment which trigger the installed fire system; or
- Failure to take adequate precautions to protect fire equipment from damage.

The final responsibility for maintenance of the installed system to ensure correct operation, as required by legislation and/or the appropriate Australian Standard, rests with the Owner/occupier of the building.

Additional information regarding MFS charging for false alarms and how to avoid false alarms is available on the MFS web site: http://www.mfs.sa.gov.au/site/fire_alarms.jsp

11.3 MFS procedure for fire alarm response – Unoccupied buildings

Upon receipt of an automatic fire alarm, the MFS will respond to the building as quickly as possible and investigate the area of the alarm.

Where the premises are unoccupied at the time of the alarm, the building Owner/occupier will be notified and advised of any pertinent details regarding defects or the cause of the alarm.

The Owner shall then execute any actions necessary to reinstate the building to its proper operating condition. This shall be done as soon as possible regardless of the time of day.

11.4 MFS procedure for fire alarm response – Occupied buildings

Upon receipt of an automatic fire alarm, the MFS will respond to the building as quickly as possible and investigate the area of the alarm.

Where the building is occupied, the building Occupier will be notified and advised of any pertinent details regarding defects or the cause of the alarm.

It will be incumbent on the Occupier to notify the Owner of any defect found or cause of the alarm on the premises. The Owner will not necessarily be notified by the MFS.

The Owner shall then execute any actions necessary to reinstate the building to its proper operating condition. This shall be done as soon as possible regardless of the time of day.

11.5 Maintaining MFS Monitoring Requirements

It is an offence to leave the system unmonitored (i.e. leaving it in test, isolate, offline, primary communication fail, secondary communication fail or total communication fail). If it is necessary to leave it in this state for any reason, the MFS shall be notified. Any condition that prevents the system sending a signal to the MFS shall be rectified immediately. Failure to do so may result in a fine up to $5000, affect insurance on the property and/or occupancy of the premises.

If there is an issue with the Alarm Signalling Equipment (ASE), it may be necessary to contact Telstra, as they are the responsible entity, under the Terms and Conditions of the Telstra MFAS connection providing that the monthly access fee is paid.

11.6 Request for disconnection of MFS monitoring

The MFS cannot approve alarm monitoring disconnections. If a building owner no longer requires their system to be monitored by the MFS, the applicant shall lodge an application to request disconnection, accompanied by a letter from the Relevant Statutory Authority (Council) approving the disconnection.

Until the MFS approves an 'application for alarm disconnection', the applicant will remain liable to comply with the terms of the agreement (including the payment of all fees and charges in relation to the connection and monitoring of the protected premises).

Once approved by the Relevant Statutory Authority (Council) an application will also need to be lodged with Telstra to disconnect and remove the MFAS ASE. The application to disconnect requires authorisation by the MFS 'Alarms Officer' before being forwarded to Telstra for processing. (Note that Telstra 'Terms and Conditions of the MFAS' will also apply in relation to disconnection and removal of the ASE from the premises)

11.7 Change of Ownership

If the ownership of the protected premises changes, the applicant will provide the MFS with a written request with the details of the current owner and the proposed new owner within 28 days from the date of transfer of ownership of the protected premises.

In addition, a new 'Agreement to Connect' form, 'Required Information' form and keys will need to be supplied where applicable.

The MFS will not refund any fees paid in advance by the applicant under this agreement.

A Telstra MFAS 'Change of Lessee' form will also need to be completed by the outgoing and incoming parties and forwarded to Telstra.

11.8 Shut down of any 'Essential Safety Provisions'

It is the responsibility of the owner of the building to ensure there are appropriate alternative emergency management procedures, should any essential safety provision for that building be inoperable for any reason, even if the time is minimal.