



MONITORING OF AUTOMATIC FIRE ALARM SYSTEMS AT REQUIRED PREMISES BY COMMERCIAL OPERATORS

Guidelines for Local Government and Building Approval Bodies



Purpose of this Guideline

This document sets out the new arrangements for the provision of Automatic Fire Alarm (AFA) systems monitoring by commercial service providers. It applies to premises determined under legislation as requiring a fire alarm system connected to the New South Wales Fire Brigades (NSWFB). This document provides guidance to those responsible for:

- migrating, approving or certifying the migration of existing AFA systems previously connected directly to the NSWFB system to connection through Service Providers;
- providing, approving or certifying new AFA installations connected through Service Providers to the NSWFB.

Provision of AFA Monitoring Services by Commercial Operators

The introduction of commercial operators known as Automatic Fire Alarm Service Providers (AFASPs) commenced in late 1999. Several service providers have contracted with the NSWFB to provide AFA

interconnections, monitoring and the automatic transmission of alarms of fire to the NSWFB.

- A list of the contract AFASPs is maintained on the NSWFB's internet site – <http://www.nswfb.nsw.gov.au/afa/afamain.html>.
- AFASPs may offer a range of services appropriate to the competitive market in which they operate. No restriction is placed on the number of AFASPs as the available market will determine the final number.
- Some AFASPs may offer fire monitoring plus value-added services incorporating aspects of building management and security. Owners and managers of premises may choose the AFASP that best fits their monitoring requirements.
- The NSWFB's major concern is the efficient monitoring of AFA systems. Other monitoring functions are of secondary consideration.
- The NSWFB will continue to monitor existing AFAs in the short term. This will reduce as premises transfer to the AFASPs.

Certain areas within the Greater Sydney Area (gSa) are mandated to close down as of 30 June 2001, with absolute close down of the entire gSa on April 30 2002. Requests for all new connections within the gSa should now be directed to the AFASPs rather than the NSWFB, regardless of location. Applications for connection outside the gSa will continue to be accepted until 31 December 2001. State-wide close down of the system is scheduled for 30 June 2003.

While managers/owners of premises which are currently connected to the NSWFB remain responsible for ensuring continuity of AFA monitoring during the migration process, it is acknowledged that this function will be carried out by the premises' AFA service company.

Geographic areas covered by AFASP's

Migration from the NSWFB system to the AFASPs started in the gSa in January 2000. The Government approved the implementation program State-wide. As the AFASPs infrastructure extends, wider migration will occur. Ultimately, all AFA monitoring will be carried out by the AFASPs, regardless of the geographic location of the premises being monitored.



Connection between required premises and the Monitoring Station must comply with the provisions of the BCA.



AFASP Monitoring Centres

Connection between AFASP's & NSWFB via Auspace using NSWFB Communications Protocol



**NSW Fire Brigades
Communication Centres**

Computer Aided Dispatch System (FireCAD)

Diagram 1. Connection between the premises, the AFASP Monitoring Centre and the NSWFB.

How Service Providers will Interconnect with the NSWFB and Protected Premises AFA Systems

Diagram 1 shows the connection between the premises, the AFASP's Monitoring Centre and the NSWFB.

- AFASPs may determine the most appropriate methodology for communicating between protected premises and their monitoring centres using cable-based, radio or combinations of both, providing the system meets with requirements of BCA (see heading Applicability of the BCA and Standards Australia).
- Alarms of fire will continue to be forwarded automatically without human intervention from protected premises to the NSWFB's Communications Centres. Only the mechanism of transmission, processing and delivering of alarms of fire to the NSWFB will change.
- Premises equipment status changes, isolates and faults are transmitted to the AFASPs rather than the NSWFB.

Overall Performance

Alarms of fire must be received at the AFASP's Monitoring Centre, processed and delivered to the NSWFB within 20 seconds. The primary telecommunications link between the protected premises and the AFASP must be monitored for integrity. A secondary link must also be provided. A dial-up service is permissible for this, provided it is tested at least once every 24 hours. It is also a requirement that this automatically establishes a connection to the AFASP on detection of failure of the primary link.

Regardless of the technology deployed communication between the protected premises and monitoring centre must attain an equivalent level of performance to that specified in AS1670.3.

Any failure within the system must be reported and corrective action initiated promptly by the AFASP.

Before connecting with a Commercial Operator

The works associated with the transfer of an existing automatic fire alarm connection from the NSWFB to a private service provider, and the transfer of a connection from one private service provider to another must not be carried until the necessary approvals and certification have been obtained.

Among other things, this is to ensure that the works proposed (including system performance and hardware) will comply with the standards prescribed by legislation.

- Pursuant to the Environmental Planning and Assessment Act (EP&A Act) development consent must be obtained from the local council. For works by or on behalf of the Crown, a construction certificate must be obtained from the relevant council or an accredited certifier.
- Crown works do not require a construction certificate, but section 115M of the EP&A Act requires that the works be certified as complying with the technical provisions of the State's building laws.
- **Note:** The Department of Urban Affairs and Planning (responsible for administering the EP&A Act) is seeking to have the changeover works categorised as 'complying development'. This will remove the need for a development consent **and** a construction certificate.

It will allow a **single** certificate (a complying development certificate) to authorise the proposed works before they begin. These can be issued by either council or an accredited certifier and a determination in respect of an application must be made within seven days of lodgement of the application with the council or the certifier.

Once the necessary authorisations to proceed (that is, the necessary consents/certification) have been obtained it is required that either council or an accredited certifier be appointed to oversee the changeover works. The appointed authority is referred to in the EP&A Act as the principal certifying authority.

Approval and certification of the connection of with private service providers of new AFA installations that form part of a new development will be dealt with as part of the overall approval and certification for that development.

Applicability of the BCA and Australian Standards

Both the EP&A Act and the contract between each AFASP and the NSWFB require that the monitoring system, including the connection therewith, comply with the Building Code of Australia (BCA).

- The BCA is a fully performance-based building code. All building work must comply with the Performance Requirements of the BCA. This can be achieved by complying with the Deemed-to-Satisfy Provisions of the Code or by developing an Alternative Solution.
- With respect to AFAs, the BCA Deemed-to-Satisfy Provisions reference certain Australian Standards that detail acceptable criteria for the installation and performance of monitoring systems

- Compliance with the Deemed-to-Satisfy Provisions is not mandatory and alternative technology (via an Alternative Solution) can be employed provided it clearly demonstrates that it complies with the BCA's relevant Performance Requirements (and be accepted by the council or private certifier).

Example: Some AFASPs elect to provide communication via the Supervisory Control and Data Acquisition (SCADA) methodology specified by AS4418.2, and therefore claim Deemed-to-Satisfy status under the BCA. Others adopt performance-based strategies (Alternative Solutions). Either approach is valid.

Ultimately it is the demonstrable overall performance of the system in relation to its compliance with the BCA that is important, rather than how it is achieved.

- Independent certification of a AFASP solution will assist in determining Deemed-to-Satisfy or Alternate Solutions compliance. All equipment linking the protected premises to the AFASP must satisfy the requirements of the Australian Communications Authority.

The premises Alarm Signalling Equipment (ASE) may incorporate multiple inputs to facilitate integration of several alarm and sprinkler systems in a single building, separate buildings on a common site; or potentially, even entire building management systems. While obvious cost benefits may accrue from sharing a single communications channel between premises and the AFASPs, certain requirements apply to multiple AFAs on a common site. Integration of multiple systems on a large or high risk site via the one ASE may be undesirable unless the system design mitigates against single point of failure.



Fire CAD - NSWFB Communications Centres.

Overall System Performance

- Alarm of fire detected at AFASP Monitoring Centre within 15 seconds and sent automatically to the NSWFB within a further 5 seconds (20 seconds overall) without human intervention.
- AFA status changes, isolates and faults received at AFASP within 10 minutes.
- Telecommunications links between protected premises and AFASP monitored for integrity and failure detected within 90 seconds.
- Communications link availability between the premises and the AFASP in accordance with AS 1670.3 - achieved through a dual communications path (as appropriate).
- Communications link failure between AFASP and NSWFB detected within 30 seconds.
- Telecommunications protocol as defined in AS 4418.2 is not mandatory.

Further Information

The following information is maintained on the NSWFB web site

(<http://www.nswfb.nsw.gov.au/afa/afamain.html>)

- frequently asked questions (from the perspective of the premises manager)
- names and contact details for the current AFASPs
- the contract between each AFASP and the NSWFB
- the list of NSWFB fees chargeable to the AFASPs
- the communications specification between the AFASP and the NSWFB
- the NSWFB interpretation of AS1670.1 and AS2118.1 as they apply to AFAs connected through AFASPs

NSW FIRE BRIGADES

Our Core Business

Prevention

Education of the public and the development and assistance with implementation of safety regulations

Fire Suppression

Rapid and efficient control of incidents

Hazmat

Control and management of hazardous material incidents

Rescue

Provision of land based rescue services

Natural Hazards

Assistance to the combat agencies, particularly in the early stages.

Additional information is available from the NSWFB website at: www.nswfb.nsw.gov.au

AFA information line: **1800 151 614**

For advice on the AFA approvals process and building regulations contact the Fire Prevention Division

Tel: **(02) 9742 7400**

Information on telecommunications or commercial aspects may be obtained from the Communications Alarms Administrator Tel: **(02) 9742 7469**



Our Mission

TO MINIMISE THE IMPACT OF EMERGENCY INCIDENTS ON THE COMMUNITY

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