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Authorised: Manager Built Environment Branch

GL-10: ALARM INVESTIGATION FACILITIES, IN ACCORDANCE WITH AUSTRALIAN STANDARD 4428.10 – DFES ACCEPTANCE

PURPOSE:

To provide guidance to building owners, managers, and agents on DFES requirements when applying to DFES for acceptance of the installation of an alarm investigation facility (AIF) into new and existing fire detection and alarm systems installed in accordance with AS 1670.1 and AS 1670.2. This includes but is not limited to fire indicator panels (FIP) and sub indicator panels (SIP) complying with the requirements of AS 4428.1.

INTRODUCTION:

Building owners, managers or agents who experience frequent nuisance false fire alarms may consider incorporating an AIF in their fire detection and alarm system. An AIF provides the facility for appropriately trained staff to delay the automatic transmission of alarm signals to DFES and may also be designed to delay the automatic operation of an occupant warning system for a pre-set time (investigation time).

The purpose of an AIF is to allow designated staff, time to confirm the presence or absence of a fire so that the automatic transmission of fire alarms to DFES and automatic operation of occupant warning systems can be avoided if the alarm is found to be false, or of a type that is not a fire emergency.

Note: *Australian Standard 4428.10 section 1.2 “Application” states that an AIF may only be installed where the installation has been sanctioned by the local fire department (DFES).*

COMMENT:

It is acknowledged by DFES that an AIF installed in fire detection and warning systems is an effective means of reducing spurious alarms being transmitted and limiting inconvenience to building occupants. It is considered that such facilities have the potential to reduce the overall safety afforded by detection and alarm systems, due to the human intervention factor.

An AIF should not be considered as the primary means of overcoming the negative effects of spurious alarm activation and it is imperative that the cause of the alarms be investigated before pursuing this option.

From DFES experience, false alarm problems may be addressed successfully without resorting to the installation of an AIF, by identifying the possible causes and systematically eliminating them. This was demonstrated in a Perth building where steam from a bathroom was found to be activating the smoke detector head located in the centre of the hotel room when the bathroom doors were opened. After fitting a small grille vent in the bottom of the bathroom doors, the steam was more effectively extracted by the bathroom air extraction system and this resulted in an almost total reduction in false alarms.

Consequently, the installation of an AIF will not be considered by DFES until all possible alternative options have been explored. Steps to eliminate spurious alarms are as follows:

Step 1

Identify known causes of the false alarms.

Review false alarm history and arrange by activation cause e.g. steam, smoke, water, physical etc (work with alarm maintainer to determine causes)

Step 2

Eliminate known causes of false alarms by administrative action and or remedial works

Step 3

Review and monitor detection system performance. If spurious alarms persist then apply to DFES for acceptance of AIF

APPLICATION TO DFES TO SANCTION AN AIF INSTALLATION

When making application to DFES to sanction the installation of an AIF, it will be necessary to provide a report to the DFES Built Environment Branch documenting the following aspects of the case in question:

- State known causes of alarm (provided in step 1);
- Provide information on what action has been taken to reduce the quantity of spurious alarms (provided in step 2);
- Provide draft staff procedures that would be implemented to manage the installation and operation of the AIF devices e.g. Who, What, Where, and When etc;
- Provide a draft training program for the implementation and reoccurring operation of the proposed AIF devices;
- Provide a declaration that the AIF will be installed and operated in strict compliance with Australian Standards 4428.10 – 1998 Fire Detection, warning control and intercom systems, control and indicating equipment Part 10, Alarm investigation.
- Details of any existing fire safety facilities that would complement the installation of an AIF.
- Written comment from the DFES Manager Direct Brigade Alarms confirming that the installation will not breach contractual requirements for DFES monitoring.

REFERENCES:

Building Code of Australia, ACT, Australia. ABCB
International Fire Engineering Guidelines, (2005 Edition), ABCB.

LEGISLATION:

Australian Standard 4428.10 - Fire detection, warning, control and intercom systems
– Control and indicating equipment Part 10 Alarm investigation.

Building Act 2011
Building Regulations 2012 (as amended)

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Should the information provided in this guideline require further clarification, please contact DFES Built Environment Branch via email beadmin@dfes.wa.gov.au

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Contact us

Department of Fire and Emergency Services
Emergency Services Complex
20 Southport Street West Leederville WA 6007
PO Box P1174 Perth WA 6844
Email: beadmin@dfes.wa.gov.au
Web: www.dfes.wa.gov.au

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