



THE UNIVERSITY *of* EDINBURGH

Health & Safety Department

Fire Safety Unit

FSU Guidance Note 1

Isolation or Loss of Fire Alarms

1) Introduction

- a) The vast majority of premises within the University of Edinburgh estate have some form of fire warning and detection installed within the building, to ensure the continuing safety of the staff, students and visitors who attend there. The loss of a fire alarm system may therefore present some increased risk to life safety should a building be occupied at the time of the loss. This document provides guidance and, sets out some principles to be followed when dealing with this type of incident.

2) Description

A fire warning and detection system consists of two distinct parts*.

- 1) The fire warning system: this consists of a series of manual call points and audible warning devices linked to a central control panel or multiple panels depending on the size and complexity of the premises. The purpose of this is to provide an audible and visual warning to building occupants should a fire be detected.
- 2) The detection system consists of strategically located smoke and heat sensors fitted, usually on the ceiling throughout the entire premises. The detection is linked via the control panels to the fire warning system which allows the alarm to be raised should a sensor detect the products of combustion.

**a building can have a fire warning system installed without any fire detection system however it cannot have a fire detection system installed without a fire warning system.*

3) Compliance

The **Fire (Scotland) Act 2005** and the **Fire Safety (Scotland) Regulations 2006** place a legal duty on the University to provide a suitable warning in case of fire within their premises, to allow all persons within to escape before being overcome by fire. Notwithstanding that, many of our premises are designed and constructed in accordance with a fire engineered solution, which requires the fire warning and detection systems being operational to allow safe occupation of the building.



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4) Causes of Loss of Fire Alarm and Detection Systems

a) Planned Event

i) Maintenance

Occasionally the fire detection requires to be isolated in specific areas to facilitate planned maintenance or alterations within a building and to remove the potential disruption caused by false fire alarm activations. Careful consideration is required in these circumstances, as isolating area can have a negative impact on the safety of the occupiers and compromise the fire escape strategy for the building. Where it is necessary to isolate an area, the table at **Appendix 1** should be used as a guide to assist the decision making process. Where any doubt exists or if a situation falls out with the scope of the guide, then advice should be sought from the University Fire Safety Unit.

Note: Any isolation should only effect the automatic detectors and under no circumstances should the manual call points be isolated unless prior approval is received from the University Fire Safety Unit.

ii) VIP Visit or Event

There are specific VIP events that may require a silent alarm procedure to be implemented. This may be at the request of the University senior management or the Police. It must be remembered that the safety of our people in our buildings is of the utmost importance and silencing any fire alarm can present significant risks if not managed correctly. The procedure in **Appendix 2** must be followed on all occasions where a silent alarm is implemented.

b) Unplanned Event

i) Maintenance

Unplanned maintenance to rectify urgent repairs with the building fabric or systems may impact on the fire detection installation. Fault repair will not normally involve large areas of a building and should be accommodated within the guidance contained in **Appendix 1**. However, should this involve a larger than normal area within an occupied building then consultation with the Fire Safety Unit is advised prior to works commencing.

ii) Fault

A fault that occurs within the fire alarm and detection system may render all or part of the system inoperative leaving the occupants of a building vulnerable in the event of a fire occurring and the University at risk should anyone be injured. If the premises are unoccupied then there is no requirement to implement temporary measures other than to initiate a response from the alarm engineers to repair. Occupied premises require to be dealt with as a matter of urgency, with all decisions taken documented to demonstrate compliance with the requirements of the relevant Fire Safety Legislation.



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5) Issues to Consider during Fault Conditions

a) Management Response Team

It is recommended that when a total or partial loss of the fire alarm occurs within an occupied building then a task and finish response team is convened to resolve the issue. The make-up of the team should ideally involve personnel with the authority to make the managerial decisions necessary to resolve the issue. It is advised that the following personnel are considered as part of the team:-

- i) School / MOBUG or Department representative
- ii) Fire Safety Unit representative
- iii) Estates representative
- iv) Local health & safety Adviser
- v) Security
- vi) Fire Alarm Engineer / Company representative
- vii) Ad-hoc representatives as necessary
- viii) Possible Fire & Rescue Service advice/authority

b) Type of premises

The risk to life when a fire alarm is defective is dependent on many influencing factors including the type of building affected. Factors to be considered during the planning phase include:-

- i) Type of construction (brick, stone, sandwich panel etc.);
- ii) Height of the building;
- iii) Age of the building (historic, listed, modern etc.);
- iv) Stand-alone location, attached to others, shared escape etc.)
- v) Occupant capacity
- vi) Premises subject to a licence conditions such as HMO; Entertainment, Liquor

c) Occupancy and Use

The type of groups occupying the premises and the nature of work carried out within requires to be taken into account when planning any response. Factors to be considered include:-

- i) Office work primarily;
- ii) Teaching (classroom, lecture theatre);
- iii) Laboratory work
- iv) Hazardous materials or processes
- v) Sleeping accommodation
- vi) Out of hours work
- vii) Trained staff or students/visitors
- viii) Open to the public



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d) Existing Fire Risk Assessment

The existing fire risk assessment for the premises should be considered and any outstanding actions or risks taken account of when planning any response.

e) Extent of outage

A detailed report on the nature and extent of the loss from the alarm engineer will inform the decision making process. The difference between losing the alarm within a known small area or on a single floor and the entire building will influence future actions.

f) Duration of outage

A realistic estimate from the fire alarm maintenance contractor on the timescales required to return to normality will direct the response teams thinking.

g) Continued or Restricted Use of the premises

An assessment of the risk is required once all the influencing factors are obtained. This risk estimation will assist the decision on whether to continue to occupy, partially occupy or close the premises until the work is completed.

6) Potential Solutions

The undernoted are examples of processes that can be put in place to allow continued occupation of a building without a functional fire alarm.

a) Short Term: (couple of hours to 1 day)

- i)** Restrict the number of people or floors in use.
- ii)** Implement a fire watch using appropriate staff.
- iii)** Implement a temporary fire alarm (air horns, word of mouth etc.).
- iv)** Communicate process to building users.
- v)** Review the Fire Risk Assessment for the premises.

b) Long term: (more than 1 day)

- (1) Install a temporary system
 - (a) Air horns depending on building size?
 - (b) Radio controlled system?
 - (c) Single point battery operated?



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- (2) Communicate to building users
- (3) Review the Fire Risk Assessment
- (4) Consider re-location of staff
- (5) Closing building to all users until system fully functional
- (6) Restrict the numbers entering the building

7) Resilience

Recent experience has shown that the loss of a major component of the fire alarm system may cause significant delay to the repair of the system which may influence or extend any restrictions that are placed on the building users. It is advised that consideration is given to maintaining a small stockpile of system critical parts that would allow faster repair or replacement times by the contractors.

8) Appendices

Appendix One – extract from initial protocols doc.

Appendix Two – Sample VIP Protocol



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Appendix 1

Event	Area	Action
Small remedial works	Single room or small area with < 5 sensors	A
Planned contractual works	>5 sensors within a single apartment/floor	B
Larger contractual works	More than a single floor area or fire compartment	C

Action	
It is accepted that in all cases the Fire Warning System is provided for life protection within an occupied building.	
A	The covering of sensors with paper bags is acceptable and must be managed locally. All bags must be removed after the completion of works.
B	Sensors may be isolated where suitable arrangements are made with the incumbent contractual alarm engineers to effect this. Where excessive dust is likely to be produced as a result of any works consideration should be given to shielding the devices to reduce contamination. The system will require to be reinstated as soon as is practicable and where works are likely to be prolonged the requirement for suitable review of the Fire Risk Assessment will be required.*
C	A temporary system of CO or heat sensors requires to be provided and interfaced to the premises existing Fire Warning System (subject to a review of the Fire Risk Assessment*)

Note: Any isolations will be restricted to the automatic sensor only. On no account will any manual call points be isolated in any occupied building.

*Any reference to a Fire Risk Assessment for modification requires to be undertaken by the Fire Safety Unit



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Appendix 2

1. Request received for a silent alarm at a premises.
2. Head of school / department consider viability of request. i) Liaise with Estates and Fire Safety Unit. ii) Assemble a trained response team to manage the fire panel. iii) May require an attendance from fire alarm contractor to programme the panel and silence the sounders.
3. Response team requires three people to be present at the fire alarm panel for the duration of the event. Response team will require a reliable communication method.
4. One person monitors the panel. If alert sounds the following actions will be taken i) Interrogate panel and determine location. ii) Start timer – maximum delay 6 minutes. iii) Two members of team respond to locus to determine cause. iv) If further trace of fire found or believed the team will activate a call point. v) Person at panel monitor situation: if second device activates then they will enable the panel and activate the sounders to evacuate the building. vi) If the 6 minute window expires and no contact has been received from the search team then the panel should be enabled and the alarm sounded. vii) If the search team discover the cause of the alert and discover it is a false alarm then the panel can be re-set. viii) The team will then rendezvous back at the fire panel and continue to monitor the premises. ix) When the event is over the team will ensure that the fire panel is re-enabled and left in a fully functioning state.
5. Any issues noted should be passed to the organiser for further action.