

**DIRECTORATE OF ESTATES**

Local

*Policy, Procedure and Guidance Document EH&S 37***The Management of Fire Alarm Systems.**

<b>Document Originated:</b>	September 2007	<b>By:</b>	Fire Alarm Working Group
<b>Issue Number</b>	4	<b>Number of pages:</b>	13
<b>Approved by EMG:</b>	TBA	<b>Status:</b>	Approved Document
<b>Last revised:</b>	April 2016	<b>By:</b>	M. Bailey
<b>Next revision:</b>	April 2018	<b>By:</b>	M. Bailey

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## **1.0 Scope of Policy**

### **1.1 General**

- 1.1.1 This document sets out the policy and procedure for the management and control of University fire alarm systems.
- 1.1.2 The policy is intended to ensure that current legislation and best practice are achieved for the management of fire alarm systems as identified in current British Standards.
- 1.1.3 The provision of effective procedures and their formalising into written instructions is essential for ensuring safe systems of work on fire alarm systems. This document makes recommendations for the allocation of duties to personnel and the manner in which their duties should be performed.
- 1.1.4 It is noted that for non University premises where University staff are embedded the arrangement for the management of Fire Alarm Systems is the responsibility of the Duty Holder for the respective building.
- 1.1.5 The legal responsibility for the management of fire alarm systems in the University of Manchester is the employer recognised as the President and Vice Chancellor. Ultimate responsibility for day to day management of Fire Alarm systems is with the Directorate of Estates with the duties discharged as detailed in this document.

### **1.2 Departures from the policy**

- 1.2.1 Any departure to this policy shall be brought to the attention of the Responsible Person, whom shall advise the relevant Unit Manager of the departure.

## **2.0 Definitions**

### **2.1 Personnel**

- 2.1.1 **Responsible Person(s)** – An individual possessing adequate technical knowledge and having received appropriate training. In terms of the University, the Principal Electrical Engineer, Senior Electrical Engineer and Assistant Electrical Engineer will perform this role.
- 2.1.2 **Specialist Supervisors** – Individuals whom are Competent Persons and have the day to day responsibility for the other Competent Persons. In terms of the University, the Assistant Maintenance Manager (Contracts) and ELV Supervisor will perform this role.
- 2.1.3 **Competent Persons (Fire Alarms)** – Individual(s) appointed by the Responsible Person and Specialist Supervisor who has sufficient technical knowledge, training, experience and understanding of this policy to work safely on Fire Alarm Systems. In terms of the University the Estates Fire Alarm Technicians and Specialist Contractors will be in this category. Each competent person shall be appointed for a 2 year period, allowing them to work on any Fire Alarm system at the University.
- 2.1.4 **Emergency Incident Manager (EIM)** – Individual with designated responsibility of being in charge during emergency incidents at the University of Manchester.

2.1.5 **Fire Alarm Systems Working Group** – A group formulated to oversee the management of fire alarm systems and the implementation of this policy.

## **2.2 General**

2.2.1 **Master Fire Alarm Records** – Detailed records of all fire alarm systems compiled on a building basis, with details as per Appendix 1.

2.2.2 **System** abbreviation of Fire Alarm System

2.2.3 **Permit to Work** – A safety document authorised by the Responsible Person and Fire Officers.

2.2.4 **Isolation** – The effective and safe removal of any fire alarm device either electronically or physically.

2.12 **On / Off Watch Tags** – Safety signs which are affixed to the Fire Alarm panel giving procedural messages.

## **3.0 Roles and duties of personnel**

### **3.1 Role of the Responsible Person(s)**

3.1.1 The day to day responsibility for the management of University fire alarm systems.

3.1.2 To liaise with the University Fire Officer and the Statutory Authorities on the status/condition and development of University fire alarm systems.

3.1.3 To monitor on behalf of Estates Senior Management team the management of University fire alarm systems.

3.1.4 Implement and monitor the effectiveness of the Fire Alarm Systems Policy and Procedure document – to make timely recommendations for improvement as and when necessary.

3.1.5 Issuing of Permits to Work (PTW) for work on University fire alarm systems, as detailed in Section 4.

3.1.6 To specify the term of reference and monitor the effectiveness of Specialist Fire Alarm Contractors, so as to ensure that they are providing the service in accordance with this document.

3.1.7 To approve modifications to existing and new University fire alarm systems.

3.1.8 To develop and issue precise instructions relating to the maintenance and testing of University fire alarm systems.

3.1.9 To identify training needs and ensure that appropriate training is provided to enable competency on allocated task to be demonstrated.

3.1.10 To attend a 3 monthly meeting of the Fire Alarm Systems Working Group.

3.1.11 To provide a 3 monthly written report to the Head of Professional Services.

3.1.12 To undertake other specific duties detailed within this document.

### **3.2 Role of the Maintenance Services Unit Manager**

- 3.2.1 To ensure that adequate resources are available to the Maintenance Services ELV Team.

### **3.3 Role of the Specialist Supervisors**

- 3.3.1 The day on day supervision of University fire alarm systems.
- 3.3.2 Ensuring that fire alarm faults are attended to within 4 hours.
- 3.3.3 Ensuring that the maintenance regime detailed in Section 5 of this document is adhered to.
- 3.3.4 Ensuring that the maintenance, inspection and testing undertaken by Competent Persons is carried out in accordance with the requirements of the current fire alarm British Standards, specifications issued and this document.
- 3.3.5 To identify training needs and ensure that appropriate training is provided to enable competency on allocated task to be demonstrated.
- 3.3.6 Ensuring that MSU technicians and plant operators undertake their duties as detailed in Section 3.5 of this document.
- 3.3.7 Arranging for isolation and connection of fire alarm systems as detailed in Section 4 of this document.
- 3.3.8 Assisting the Responsible Person in the approval process for new and modified fire alarm designs as detailed in Section 6 of this document.
- 3.3.9 Assisting the Responsible Person in the preparation of fire alarm specifications.
- 3.3.10 To undertake other specific duties detailed within this document.

### **3.4 Role of Competent Persons (Fire Alarms)**

- 3.4.1 Fire alarm (weekly) testing of fire alarm manual call points for allocated buildings.
- 3.4.2 Maintenance of University fire alarm systems in accordance with PPM instructions.
- 3.4.3 Reactive maintenance to University fire alarm systems.
- 3.4.4 Modifications, additions and remedial work to existing systems as necessary.
- 3.4.5 Isolation of systems (as directed by the Specialist Supervisor(s)).
- 3.4.6 Additional duties as instructed by the Specialist Supervisor(s).
- 3.4.7 Providing standby and call out cover for all University fire alarm systems.
- 3.4.8 Providing professional advice

### **3.5 Role of MSU Technicians / Plant Operators / Porters**

- 3.5.1 Fire alarm (weekly) testing and recording of fire alarm manual call points in their allocated buildings as directed by the Responsible Person / Specialist Supervisors.
- 3.5.2 New cabling only (to fire alarm systems)
- 3.5.3 Resetting of plant as directed by the Responsible Person or Specialist Supervisors.

### **3.6 Role of Maintenance Co-ordinator**

- 3.6.1 Ensure the maintenance programme is issued, returned, recorded and managed for:-
  - o Weekly fire alarm test from a different manual call point for each system.
  - o Periodic fire alarm testing programme for each system.
  - o Remedial work from the weekly, 6 monthly and annual inspections and testing programme.
- 3.6.2 Ensure that a 100% return for all Fire Alarm maintenance records is achieved.
- 3.6.3 Ensure that where worksheets indicate additional work is required – further worksheets are prepared via the Specialist Supervisors and are issued with clear and precise instructions, and to monitor that rework is completed within agreed timescale.
- 3.6.4 To audit the management system every 3 months so as to ensure compliance with this document.
- 3.6.5 To undertake other specified duties detailed within this document.

### **3.7 Role of the University Fire Officer**

- 3.7.1 Assisting the Responsible Person in the approval process for new and modified fire alarm designs as detailed in Section 6 of this document.
- 3.7.2 Authorisers of Fire Alarm Permit to Works.
- 3.7.3 Fire Risk Assessments and recommendations pertaining to Fire safety particularly in regard to Fire Alarms for this policy.
- 3.7.4 Providing professional support and advice

### **3.8 Role of Residences Manager and Team**

- 3.8.1 Ensuring that resources are available for the weekly testing of systems in assigned buildings.
- 3.8.2 Fire alarm (weekly) testing and recording of manual call points in their allocated buildings.

### **3.9 Role of DSU Manager and Capital Project Managers**

- 3.9.1 To ensure that their respective teams, and external designers comply with the requirements of this document.
- 3.9.2 To ensure that the Project Managers have written approval (PTW) from The Responsible Person prior to the works being carried out and adhere to the procedures detailed in this policy.

- 3.9.3 To ensure that contractors working under their control comply fully with this document and its appendices.

### **3.10 Role of Head of PSU**

- 3.10.1 Providing support to the Responsible Person.
- 3.10.2 Providing support to other Unit Managers to enable them to discharge their respective responsibilities in respect of this policy and procedure.
- 3.10.3 Providing support to the EIM in out of hours fire alarm emergencies.
- 3.10.4 To monitor that this policy is adhered to.

### **3.11 Role of the Fire Alarm Systems Working Group**

- 3.11.1 The development of this Local Policy and Procedure document – ensuring that legislative and best practice requirements are incorporated.
- 3.11.2 Reviewing the quality of the fire alarm services, and making suggestions for improvement in Fire Alarm system standards and maintenance.
- 3.11.3 Acting as a 'critical friend' to the Responsible Person.

## **4.0 Procedures for project work affecting Fire Alarm Systems**

### **4.1 Projects in Occupied Buildings – System of work**

- 4.1.1 Any activity which may compromise the integrity of a fire alarm system shall require a valid Permit to Work. This will include any isolation of devices either electronically or physically which includes 'capping off' detectors, and any works associated with connection / disconnection of Fire Alarm systems or part of Fire Alarm systems.
- 4.1.2 To comply with this the Project Manager (or person in charge of the work) shall advise the University Fire Officer and Head of Faculty Estates of any planned isolations and agree a strategy for the work, this may include display notices, temporary alarms etc. Once agreed the Project Manager (or person in charge of the work) shall then raise a Permit to Work for the task. The Permit and accompanying documentation (Risk Assessments/Method Statements/Fire Officers Report) shall be submitted to the Responsible Person for approval. If approved the Permit to Work shall be authorised; if not approved the documents shall be returned to the Project Manager for amendment and subsequent approval.
- 4.1.3 To comply with the Work Procedures detailed in Section 4.3 and 4.4 the Project Manager (or person in charge of the work) shall advise the ELV Supervisors of the work required, the details of the Fire Officers Report, and Permit to Work. This shall be a minimum of 2 working days before the work is required.
- 4.1.4 The Project Manager (or person in charge of the work) shall issue the Permit to Work to the person carrying out the work.
- 4.1.5 It is incumbent upon the person carrying out the work to strictly adhere to the work procedures detailed in the Permit to Work.

- 4.1.6 On completion of the work the Permit to Work shall be signed off by the person carrying out the work and cancelled by the Project Manager (or person in charge of the work.)

#### **4.2 Projects in unoccupied buildings - System of Work**

- 4.2.1 This section deals with buildings that are fully handed over to the contractor. Agreement shall be reached between the University Fire Officer, Responsible Person, and the Project Manager that the Principle Contractor shall:-
- Assume responsibility for fire management on the site and will comply with all associated legislation.
  - Arrange (if agreed) for the existing system to be disconnected from the University's master fire alarm control station(s).
  - Arrange for the new system to be formally handed over to the Responsible Person, prior to allowing University staff to occupy the building.
- 4.2.2 The Project Manager shall:-
- Notify the Responsible Person that the system is out of commission between (date and date) and that the Principle contractor is responsible.
  - Notify the Maintenance Co-ordinator / Specialist Supervisor(s) that the system is out of commission between (date and date).
  - Advise Security Services the system is out of commission.

#### **4.3 Work Procedure – Fire Alarm 'Off Watch'**

- 4.3.1 All works associated with operational Fire Alarm systems shall be co-ordinated by the Specialist Supervisors or Competent Persons as appropriate.
- 4.3.2 When carrying out any works in which the integrity of the Fire Alarm System can not be guaranteed the following procedure shall be strictly adhered to:
- Before carrying out any work – obtain a valid Permit to Work for the task to be carried out.
  - Before carrying out any work notify the security control centre that the system is being taken off watch
  - Before carrying out any work - affix a 'Fire Alarm Off Watch' (As per Appendix 1) tag to the control panel.
  - Whilst the work is in progress - the requirement printed on the tag shall be strictly complied with.
  - The Competent Person carrying out the works shall ensure that the system is fully operational each evening prior to leaving site.
  - On completion of the works – the Competent Person shall remove the 'Fire Alarm Off Watch' tag, and reveal 'Fire Alarm on watch' (As per Appendix 1) tag. Advise building users / managers that the work on the fire alarm system is complete.
  - On completion of the works – the Competent Person shall notify the security control centre that work is complete and the Fire Alarm system is back on watch
  - The Competent Person shall record the event in the Fire Alarm Log Book
  - The PTW shall be closed on the Estates PTW system.



#### **4.4 Work Procedure – Fire Alarm ‘On Watch’**

- 4.4.1 This procedure is when the integrity of the Fire Alarm system is not affected, but integrity of individual points. This work shall still be co-ordinated by the Specialist Supervisors or Competent Persons as appropriate.
- 4.4.2 The person carrying out the work shall comply with the requirements detailed in the Permit to Work, Fire Officers Risk Assessment and associated RAMS.
- 4.4.3 On completion of the works the event shall be recorded in the Fire Alarm Log Book and closed on the Estates PTW system.

### **5.0 Procedures for Maintenance work affecting Fire Alarm systems**

#### **5.1 Work Procedure**

- 5.1.1 On occasions where maintenance work (Work arranged and managed by Maintenance Services Unit) affects the integrity of fire alarm systems the consequential work to the fire alarm system will be co-ordinated and controlled by the Specialist Supervisors and Competent Persons as necessary.

### **6.0 Maintenance of Fire Alarm systems**

#### **6.1 Assessment of University fire alarm systems**

- 6.1.1 An assessment of all University fire alarm systems shall be regularly carried out to determine their suitability (fit for purpose). The assessment will be fed into the building Fire Risk Assessment, and shall be used to assess priority for spending against the Long Term Maintenance Budget (LTM) and identifying any short term day on day maintenance improvements which may be necessary.

#### **6.2 Planned Preventative Maintenance (PPM)**

- 6.2.1 Planned preventative maintenance of fire alarm systems shall be put in place to ensure that the fire alarm systems are effectively maintained in accordance with the requirements of BS5839. The maintenance shall consist of;
  - Weekly Testing: a different manual call point shall be tested for each/every fire alarm system on a weekly basis. The tests shall be recorded on a Weekly Test Sheet.
  - The fire alarm system shall be subject to periodic inspection a minimum of twice per annum. The actual number of visits will be determined by a Risk Assessment, with all parts the system being inspected / tested at least once within a 12 month period.

The results of all inspection, maintenance and testing shall be recorded in the Fire Alarm Log Book and the associated worksheets returned to the Maintenance Co-ordinator within 5 working days of the scheduled test.

- 6.2.2 The Maintenance Co-ordinator shall coordinate the maintenance activities ensuring a 100% return of issued worksheets are received within the stipulated time periods.

In the event of a failure to return completed worksheets the Maintenance Co-ordinator shall inform the Responsible Person.

- 6.2.3 The staff employed to undertake all maintenance activities shall be Competent Persons, with the exception of weekly testing who as a minimum shall be trained in fire alarm systems awareness.
- 6.2.4 If during the Planned Maintenance there is a need to carry out further work this shall be raised immediately by the Specialist Supervisor and follow the Procedures in Section 6.3.

### **6.3 Reactive Maintenance**

- 6.3.1 During normal working hours (Monday to Friday, 8:00am to 3:30 pm) fire alarm faults shall be attended to within 4 hours - the procedure shall be:
  - The Help Desk shall receive, log the call and notify the Specialist Supervisor(s).
  - A Competent Person shall be instructed to investigate following the procedures detailed in Section 4.
  - The Competent Person to affect repair, complete report and close job.
  - The event shall be recorded in the Fire Alarm Log Book and the associated jobsheet recorded and closed down accordingly.
- 6.3.2 Outside normal working hour's fire alarm faults shall be attended to within 4 hours – the procedure shall be:
  - Security shall receive , log the call and notify the Duty Engineering Supervisor
  - The Supervisor shall instruct Security to call Competent Persons to attend.
  - A Competent Person shall be instructed to investigate following the procedures detailed in Section 4.
  - The Competent Person to affect repair, complete report and close job.
  - The event shall be recorded in the Fire Alarm Log Book and the associated job sheet recorded and closed down accordingly.
- 6.3.3 In the event that the fire alarm system can not be repaired immediately the issue shall be escalated as necessary immediately. This escalation process could involve Security / Specialist Supervisors / Responsible Person / Fire Officer / Senior Management / EIM as necessary. This will ensure that immediate action is taken to affect the necessary repair, providing temporary alarm systems, notify building occupants etc.
- 6.3.4 Temporary alarm systems shall be maintained by Competent Persons and be available any time to Security staff for immediate installation.

## **7.0 Design / Installation of Fire Alarm Systems**

### **7.1 General**

- 7.1.1 The Directorate of Estates is committed to ensuring that all new fire alarm systems and any modification to existing systems are designed and installed to meet the relevant British Standard(s), the Directorate of Estates Design Teams Guide this Policy document and the University of Manchester Standard Electrical Specification..

### **7.2 Fire Alarm design**

- 7.2.1 Designs shall be completed by designers who have had formal training in the design

of fire alarm systems, and shall be required to demonstrate that they are competent by providing evidence that they have obtained relevant FIA certificates.

- 7.2.2 Designs shall be fully detailed on CAD drawings and there shall be an accompanying specification for the work.
- 7.2.3 The design shall be discussed with and approved by the Responsible Person, University Fire Officer and Specialist Supervisor(s). Any amendments shall be recorded and new CAD drawings and specifications issued.

### **7.3 Installation**

- 7.3.1 The designer shall ensure that the work is installed in strict accordance with the recorded design and specification.
- 7.3.2 In the event that the design needs to be modified to meet site conditions written approval shall be sought from the Designer. The CAD drawings and specification shall be amended to take the approved modifications into account.
- 7.3.3 The system shall be fully commissioned by a Competent Person to ensure compliance with all relevant Standards.
- 7.3.4 Where significant changes to the fire alarm systems have been made or new systems have been installed the Project Manager shall seek advice from the Responsible Person regarding the correct procedure to be adopted for any training of staff. Training shall include the use and interpretation of the information from the panel and procedures for maintaining the system.
- 7.3.5 On completion of the works the Project Manager shall arrange a formal handover of the fire alarm system. In all cases a fully completed Commissioning Certificate shall be issued at handover.
- 7.3.6 Each and every project which involves building work shall give due consideration to the impact of building alterations upon the fire alarm system. Particular consideration shall be given to the installation / removal of partitions affecting the performance of equipment.

## **8.0 Training**

### **8.1 General**

- 8.1.1 An ongoing commitment to training and refresher training shall be adopted.
- 8.1.2 The Responsible Person, Specialist Supervisor(s), University Fire Officer, Fire Alarm technicians shall complete the relevant Fire Industry Association (FIA) formal training courses.
- 8.1.3 The Specialist Supervisors shall in addition to the formal training detailed above, arrange for toolbox talks for MSU Technicians working in the Fire Alarm Team as required.
- 8.1.4 Manual Call Points (Weekly) Testers shall attend a (minimum) annual toolbox refresher talks with The University Fire Officer and the Specialist Supervisor.
- 8.1.5 Local Policy and Procedure document training, all University staff engaged in the management control, design, installation, maintenance or testing of fire alarm

systems shall also be required to attend a training session on the requirements of this policy, Procedure and Guidance document.

- 8.1.6 A training needs analysis shall be carried out by the Responsible Person in conjunction with the Fire Alarm Systems Working Group.

## **9.0 System Management**

### **9.1 Audit**

- 9.1.1 The Maintenance Co-ordinator shall carryout a 3 monthly formal audit to ensure that all issues have been actioned and that the records are up-to date. The results of the audit shall be forwarded to the Responsible Person.  
The results of the audit shall be an agenda item for the Fire Alarm Systems Working Group.

### **9.2 Records**

- 9.2.1 Worksheets, technical reports and records relating to Maintenance (Planned and Reactive) activities shall be managed via the Estates Asset Management system under the direction of the Maintenance Co-ordinator.
- 9.2.2 Technical reports pertaining to Maintenance activities shall also be kept by the Specialist Supervisors as they deem necessary.
- 9.2.3 All records relating to Permits will be retained in the Estates Permit to Work system.
- 9.2.4 All records shall be held for a minimum period of 5 Years following which (non working documents, historical test reports etc) they shall be archived.
- 9.2.5 There shall be a pilot scheme utilising logbooks – which if successful will be rolled out to all buildings / systems. The logbook will be in close proximity to Main Fire Alarm Panels and shall be used for recording any activity on the associated Fire Alarm system.

## Appendix 1 – On / Off Watch Tags

ON WATCH	OFF WATCH
<p>Refer to Directorate of Estates Policy Document EH &amp; S 37 "Management of Fire Alarms"</p>	<p>Refer to Directorate of Estates Policy Document 'The Management of Fire Alarm Systems' EH &amp; S 37</p>
<p><b>SYSTEM ON WATCH - MONITORED</b></p> <p>Activation of this system will cause the building to be evacuated.</p>	<p>Arrange for system to be returned to normal working IMMEDIATELY work ceases.</p>
<p><b>PERMIT TO WORK</b></p> <p>No works are to be carried out on this fire alarm system without a valid Permit To Work. Contact the Estates Helpdesk (92429) for advice.</p>	<p>Keep a look-out in case the system detects a real fire when off watch.</p> <p>Contact</p> <p>Main Security – 275 2726</p> <p>Fallowfield Security – 237 2493</p> <p>If any sounders are selected off, someone must stay at the panel to put them back on if an alarm is indicated.</p>