

# Phased evacuation

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 Owner: **Assistant Commissioner, Operational Policy**  
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## Key point summary

The purpose of this policy is to ensure that all personnel are familiar with the concept of phased evacuation and of the operational considerations and procedures to be considered and employed where appropriate when attending incidents in which such a strategy is in use. The following items are a summary of essential operational action:

- The Incident Commander (IC) on arrival should designate someone to go to the fire control centre (FCC) where provided or to the reception/fire alarm area in other cases and liaise there with the senior fire marshal (SFM).
- Consider requesting attendance of senior fire safety officer (SFSO) to assist in the FCC.
- Check which floors have been evacuated and which remain occupied - this check to include the number and location of any disabled persons.
- Assess the fire situation and implement firefighting operations and consider continuing or interrupting the evacuation sequence dependent upon the prevailing situation.
- Use the public address system to keep building occupants informed and reassured, so as to assist in an orderly evacuation taking place if an evacuation is required.
- Maintain close liaison with building management and fire marshals to ensure that evacuation proceeds in accordance with pre-arranged plans.

# 1 Introduction

## Background

- 1.1 Traditionally in the UK the means of escape from fire for the occupants of simple premises have been based on the principle of 'simultaneous evacuation' whereby all occupants leave the building at the same time.
- 1.2 More complex premises could choose to operate a 'multi phase evacuation' known as 'phased evacuation' in which different parts of a building are evacuated in a sequence of phases, those parts of the building expected to be at greatest risk being evacuated first.
- 1.3 The phased evacuation concept uses the arrangement of evacuating a building in a phased sequence and relies on satisfactory fire compartmentation and an acceptance that any fire occurring will be contained within a defined compartmented area (e.g. the floor of origin) prior to the arrival of the Brigade. The design of buildings incorporating phased evacuation is such that safety facilities have been provided so as to enable people to remain in the building for longer periods than would normally be encountered.
- 1.4 Although the purpose of the detection and warning system is to support the required evacuation procedures, there is a clear difference between an escape strategy and a detection and warning system. There are two types of detection and warning systems known as 'single stage fire alarms' and 'multi stage fire alarms'.
- (a) A single stage fire alarm is where on operation of any device (manual call point or automatic fire detector), actuates a common fire alarm signal within a building (all occupants evacuate simultaneously on actuation of the system).
- (b) A multi stage system (includes two stage systems) is an alarm in which two or more stages of the system can be initiated within a given area. Such a scheme is used to support a phased evacuation strategy. Note that simultaneous evacuation can be initiated by a multi stage detection and warning system.

Examples of common multi stage alarm systems are presented in the table below:

| Scenario | Stage 1  | Stage 2                                     | Stage ...  |
|----------|--|---|--|
| 1        | Evacuation of one area of the building.  | Followed by the evacuation of another area. | May be followed by the evacuation of another area depending on the subdivision of the building.                                      |
| 2        | Start of investigation period which allows a team of staff from the affected premises to confirm if the actuation has been triggered by a fire or if it is a false alarm | Evacuation of an area of the building       | May be followed by simultaneous evacuation or the evacuation of another area of the building if the signal was not sent throughout.  |
| 3        | Alert message sent to an area of the building during staff investigation   | Evacuation of an area of the building       | May be followed by a simultaneous evacuation or the evacuation of another area of the building if the signal was not sent throughout |

For further guidance or information, contact FSR policy.

## 2 Hazards

- 2.1 It is likely that when fire crews arrive ,ongoing evacuation may impact the setting up and implementation of firefighting operations. A safe and orderly phased evacuation depends upon there being a centralised control point, from where the evacuation can be managed and controlled and from where the IC can make direct communication with the firefighting crews and the occupants of the building using either hand held radio communications or fixed telephones as appropriate.

## 3 Pre-planning

- 3.1 Operational intelligence should be gathered and recorded in accordance with Policy number 800 - Management of operational risk information.

In line with this policy, watch officers should assess the hazards identified for a premises or location and determine the level of risk by reference to factors such as size, complexity and layout. The contents, any processes carried out and occupancy should also be considered and the premises must be included within the Operational Risk Database (ORD) as the Premises Risk Assessment score dictates.

## 4 En route

- 4.1 Information gathered prior to attending a potential hazardous material incident must be taken into account, to ensure a safe approach and positioning of vehicles.
- 4.2 The IC must take into account all the known risks, and the put into effect all the pre-planning arrangements and adjust these where considered necessary, to ensure a safe system of work is implemented.

## 5 On arrival

- 5.1 The IC will liaise with the SFM, and if it is necessary to alter the pre-determined evacuation plan will take over responsibility for the evacuation, and will work closely with the SFM, who will carry out the required manual operations of the control facilities as necessary.
- 5.2 The IC must go, or designate another officer to go, to the main lobby/reception or where provided, designated FCC and contact building management/SFM. The IC should consider requesting a senior fire safety officer to assist them with the fire safety measures within the premises.
- 5.3 The purpose designed Fire Control Centre (FCC), where included in the design, will normally be located on the ground floor, be separated from the remainder of the building by fire resistant construction and have direct access from the open air. A fire control point other than a dedicated fire control centre could be:
- (a) a reception area;
  - (b) a management/services office;
  - (c) a fire/security office;
  - (d) at the base of a firefighting shaft.
- 5.4 Within a dedicated FCC the following features would normally be found:
- (a) Main fire alarm control panel.

- (b) Facility to manually sound the evacuation signal on each floor zone by individual switches or where appropriate, a group of floors by means of a single switch.
- (c) Facility to manually sound the alert signal throughout the building.
- (d) An alarm mute facility (secured against accidental operation).
- (e) A clock to time phases of evacuation.
- (f) Visual indication of status of floors, i.e. those evacuated.
- (g) A comprehensive public address system, located at the control point which must be capable of communicating with all parts of the building simultaneously or with individual locations only, e.g. individual floors.
- (h) Internal communication - provided by way of fixed priority fire telephones, linking each lobby in every escape staircase and firefighting staircase with the central point.
- (i) Radio communications.
- (j) Exchange telephone lines.
- (k) Floor plans.
- (l) Heating ventilation and air conditioning plant (HVAC) controls for mechanical smoke extraction and building ventilation.

Indicators showing the status of:

- (i) Fire lifts,
- (ii) Automatic fire suppression systems (sprinklers etc),
- (iii) Smoke control systems,
- (iv) Hose reels,
- (v) Pressurisation systems.

## 6 Operational procedures

- 6.1 Phased evacuation will normally be carried out manually by the senior fire marshal (SFM) in conjunction with the IC, although the initial phase of the evacuation will occur automatically on the sounding of the fire alarm.
- 6.2 Some systems in low rise office buildings involving up to 3 phases of evacuations (i.e. up to a six storey premises evacuated two storeys at a time) may be programmed to occur fully automatically, but will have a manual override facility. The IC will need to decide the extent of the evacuation and this decision should take into account:
  - (a) Location, size and severity of the fire.
  - (b) The controlling effectiveness of any fixed installation on the fire.
  - (c) The time delay in mounting a positive attack on the fire.

**Note:** If the IC is in any doubt as to the safety of the remaining occupants then the evacuation procedure should be continued.

- 6.3 If required a full simultaneous evacuation of a phased evacuation building can still be achieved despite the narrower staircases. However, this will take longer than in a 'standard' single stage

evacuation building and the level of supervision of occupants by floor marshals is critical in bringing about an orderly and safe movement of occupants.

- 6.4 The IC should ascertain the current status in respect of:
- (a) the evacuation,
  - (b) the number of occupants within the building (which may be many thousands)
  - (c) the exact location of any disabled persons in the building
  - (d) The fixed installations, and;
  - (e) the fire lifts
- 6.5 The IC, after consultation with building management and after receiving a situation report, will decide on the actuation of and/or the closing down of any ventilation system, fixed installations etc., and no one else should instigate such actions until the IC has been contacted.
- Note** - It must be remembered that untimely or incorrect operations of any of the incorporated fire safety features could have serious effects upon firefighters/occupants and upon the structure of the building.
- 6.6 Implement appropriate firefighting procedures.
- 6.7 The IC must obtain an early situation report from reconnaissance/ firefighting crews using hand held radios or where necessary internal communication.
- 6.8 Dependent upon the information received the IC must make a decision whether to continue with the pre determined evacuation plan or alternatively alter it and assume responsibility for it.
- 6.9 The IC should ensure that the SFM makes full use of any public address system provided to calm and reassure occupants and keep them informed as to the situation if required.
- 6.10 The normal sequence of evacuation should, if phased evacuation is necessary, be:
- (a) Floor of origin of fire (High-rise premises built prior to 2006 may be managed to the design category of the fire floor and the floor above as the initial evacuation).
  - (b) People with reduced mobility, wherever they are in the building, will be evacuated with those on the fire floor.
  - (c) The two floors above.
  - (d) Remaining floors in groups of two working up the building.
  - (e) Beginning with the floor immediately below the fire, floors in groups of two working down the building.
  - (f) All floors below ground level, or firefighter access level, (which should be treated as one stage for evacuation purposes) (simultaneous evacuation).
- Note** - When a fire occurs below ground floor or firefighter access level, all floors below ground level and the ground floor plus those with reduced mobility should be the first to be evacuated.
- 6.11 The evacuation of all disabled persons within the building should commence **immediately** on the sounding of the fire alarm and first alert signals, in accordance with the pre-arranged management plans. The IC should bear in mind that firefighting lifts can be used by building management to assist in evacuating disabled persons before the arrival of the Brigade.

## **7 Post incident procedure**

- 7.1 It will be of considerable benefit for future planning to establish from experience the effectiveness or otherwise of phased evacuation procedures.
- 7.2 Following any incident where it is necessary to carry out the full or partial evacuation of a phased evacuation building the incident is to be reported to the local Fire Safety Regulation office.
- 7.3 The report should summarise:
- (a) The degree of evacuation carried out;
  - (b) how the evacuation was carried out; and
  - (c) any deficiencies or areas in which difficulties were experienced.

## **8 Related policies**

- 8.1 To be used in conjunction with:
- Policy number 633 – High rise firefighting.
  - Policy number 800 – Management of operational risk information.

## Document history

### Assessments

An equality, sustainability or health, safety and welfare impact assessment and/or a risk assessment was last completed on:

|     |  |      |  |       |            |    |  |
|-----|--|------|--|-------|------------|----|--|
| EIA |  | SDIA |  | HSWIA | 12/06/2019 | RA |  |
|-----|--|------|--|-------|------------|----|--|

### Audit trail

Listed below is a brief audit trail, detailing amendments made to this policy/procedure.

| Page/para nos.   | Brief description of change   | Date       |
|--|---|------------|
| Page 4   | See WARNING at the beginning of policy.   | 18/06/2009 |
| Throughout   | Policy reviewed as current. Minor changes made throughout. Please read the policy to familiarise yourself with the content. Warning removed as the policy is now current.                                 | 21/04/2011 |
| Throughout   | Policy reviewed as current with minor wording changes made throughout, major changes detailed below.  | 24/08/2011 |
| Page 2   | Key point summary reworded in line with current procedures and Flowchart removed as this has become obsolete due to the review of this policy.  | 24/08/2011 |
| Page 4, para 2.3 (l) (iii)<br>Page 5, para 7.2<br>Page 6, para 9.7 | Changed from "Halon/CO2 suppression systems" to "Other fixed suppression systems e.g. CO2".<br>Liaison with SFM added.<br>Re-worded   | 24/04/2012 |
| Throughout   | Reviewed as current. Changes made throughout, please read policy to familiarise yourself with the content.  | 07/10/2014 |
| Page 7   | Subject list and FOIA exemptions tables.  | 28/10/2014 |
| Throughout   | Top management review changes made, Fire Safety Regulation Department replaced with Fire Safety (Statutory and Community).  | 24/08/2015 |
| Page 3, section 1  | Content added and changes made to Section 1 – Introduction, please re-read to familiarise yourself with the content.  | 24/11/2015 |
| Throughout   | This policy has been reviewed as current with changes made. Policy title and content regarding regulatory fire safety details have been amended. Please re-read to familiarise yourself with the content. | 17/05/2019 |
| Title, 1.1, 2.1, 6.6   | Clarify references to remove reference to 'high rise'. Also change of 'Owner' to AC Ops policy.   | 18/07/2019 |
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## Subject list

You can find this policy under the following subjects.

|                          |            |
|--------------------------|------------|
| Buildings and structures | Evacuation |
|                          |            |
|                          |            |
|                          |            |

## Freedom of Information Act exemptions

This policy/procedure has been securely marked due to:

| Considered by:<br>(responsible work team) | FOIA exemption | Security marking<br>classification |
|---|----------------|------------------------------------|
|   |                |                                    |
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