

Fire Safety Guidance Note: GN90 Waking Watch / Common Fire Alarm Guidance to support a temporary simultaneous evacuation strategy in a purpose-built block of flats

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This guidance note provides fire safety advice to building owners, their professional advisors and fire and rescue services on issues to consider where a decision is made, on the basis of a comprehensive risk assessment carried out by a competent person, to suspend temporarily a stay put policy and adopt a simultaneous evacuation strategy.

Although written for those responsible for the safety of residents in purpose-built blocks of flats, the principles of this guidance may, in certain circumstances, be applied to other premises.

This Note is one of a series produced by the Fire Authority to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at <http://www.london-fire.gov.uk>.

1 Introduction

- 1.1 LFB support the principle of a stay put strategy whenever possible, as it has been proved over many years to be safe for residents of purpose-built blocks of flats. This guidance provides fire safety advice in respect of purpose-built blocks of flats where a stay put strategy was part of the original design and is no longer considered appropriate owing to significant failings in the general fire precautions, and a temporary change to a simultaneous evacuation strategy is likely to be necessary until the failings have been rectified.
- 1.2 This guidance is produced to support building owners, responsible persons and associated fire safety specialists, including fire risk assessors, at buildings that have been fitted with aluminium composite material (ACM) cladding that has failed the large scale tests carried out at the Building Research Establishment (BRE) following the Grenfell Tower fire.
- 1.3 The guidance sets out the context and decision-making considerations in moving from a stay put to simultaneous evacuation strategy. It includes appendices that set out further guidance on the Waking Watch and Common Fire Alarm systems that are appropriate.
- 1.4 The fire safety strategy in purpose-built blocks of flats normally comprises an arrangement whereby only residents from flats directly affected by fire, heat or smoke need evacuate. Residents in other unaffected flats should be protected by general fire precautions provided in the building, such as the structure of the building, the front doors of individual flats, smoke ventilation provisions, etc. Those other residents should therefore be safe to 'stay put' during a fire in their building unless otherwise directed by the FRS, and, in many cases, may not even be aware of a fire elsewhere in the building.
- 1.5 The fire alarm arrangements in purpose-built blocks of flats typically include smoke (and sometimes heat) alarms within each flat to alert the residents of a fire in that flat only. There is generally no common fire alarm system.
- 1.6 Where fire detectors are installed in the common parts, they are likely to be provided only to operate active fire safety facilities such as a smoke control system. The detectors are not provided to give a warning to all residents in the building.
- 1.7 Where there is a significant failing in the general fire precautions, a competent fire safety specialist may consider that these failings could contribute to uncontrolled and, potentially, unrestricted fire spread in the building, and therefore the building can no longer support a stay put strategy. A temporary change to a simultaneous evacuation strategy may provide a level of confidence that, whilst there are clear risks that must be addressed, continued occupation of the

building is possible with the adoption of a change to an evacuation strategy and a clear definition of the management strategy of the building, which should be communicated to residents.

- 1.8 Whilst this guidance has been developed specifically for high rise residential premises that require a change to the evacuation strategy to be adopted until fire safety defects are rectified, some of this guidance may be applied to other building uses (e.g. an hotel or hospital) or for other outcomes (e.g. only for a guaranteed immediate call to the fire service but without a simultaneous evacuation). In those cases, some of this guidance may be of assistance if adapted to those particular needs.

2 Definitions

Assembly point

- 2.1 A designated place where people have been told to wait after evacuating a building in the event of a fire or other emergency.

Note: An alternative assembly point that has protection against inclement weather may be required.

Common Parts

- 2.2 Those areas of a building that are not for the exclusive use of individual residents (e.g. common corridors, stairways, plant rooms, other ancillary areas, etc).

Common fire alarm system

- 2.3 A fire alarm system that will give a warning of fire throughout the building, including within all flats and within the common parts.

Competent person

- 2.4 Please refer to section 3 for further detail.

Evacuation

- 2.5 A process whereby people leave premises in case of an incident.

External envelope

- 2.6 External construction of a building including external walls, cladding, insulation, filler materials, etc.

General fire precautions

- 2.7 This term is used to describe precautions that are provided to reduce the risk of fire and spread of fire, in conjunction with other measures, to keep people safe from fire in a building (see Article 4 of the Regulatory Reform (Fire Safety) Order 2005).

Interim mitigation measures

- 2.8 Urgent temporary measures which are to be put in place where there is an unacceptable risk to occupants of a building.

Personal emergency evacuation plan (PEEP)

- 2.9 A documented plan for the evacuation of people who may not be able to self-evacuate, are slower to evacuate or require some assistance to do so.

Responsible person

- 2.10 The person, group, company or other entity on whom duties are imposed by the Regulatory Reform (Fire Safety) Order 2005 to ensure the safety of occupants of a building from fire (see Article 3 of Regulatory Reform (Fire Safety) Order 2005).

Simultaneous evacuation

- 2.11 Procedure in which all parts of a building are evacuated in the event of fire.

Smoke ventilation system

- 2.12 A system to control and/or prevent the spread of smoke in protected routes in the event of fire. The primary objective of a smoke ventilation system is to protect the common parts. These areas may exist on the floor level where the fire has originated and also in stairwells, enabling those occupants who feel threatened or who are at greatest risk to escape. Such systems will further assist firefighters to gain access.

Sounder

- 2.13 A device that will give an audible warning in the event of fire.

Stay put strategy

- 2.14 A strategy based on the principle that only the residents of the flat of fire origin need to escape initially, while other residents may remain in their own flats unless their flat is affected by fire or smoke, they feel threatened, or they are instructed to leave by the FRS. A stay put strategy does not preclude residents, who are aware of a fire within the building but not affected directly by it, from making a decision to evacuate.

Waking watch (also referred to as a fire watch)

- 2.15 A system whereby staff continually patrol all floors and the exterior perimeter of the building to maintain safety of occupants of the building from fire.

3 Competence

- 3.1 The complexity of the interactions between people, buildings and fire is such that no single set of criteria can be applied to all types of buildings in all circumstances. Therefore, an assessment, specific to the building in question, will need to be conducted that considers any potential fire spread in conjunction with the evacuation strategy and any modifications to that strategy (i.e. a change from a stay put to a simultaneous evacuation strategy).
- 3.2 The advice used to inform this assessment must be provided by a competent person, as this is critical for ensuring that an appropriate level of safety is achieved. Where there is not a suitable competent person within the organisation, this advice may be obtained from a qualified engineer with relevant experience in fire safety, including the fire testing of building products and systems, such as a Chartered Engineer registered with the UK Engineering Council by the Institution of Fire Engineers.
- 3.3 If advice is required, there remains a need for an holistic overview which considers the general fire precautions as a whole, even if advice may be needed from several different sources depending on what aspect of the fire precautions is being considered.
- 3.4 Where the assessment is more straightforward, then a fire risk assessor may be a more appropriate individual. Guidance on selecting a fire risk assessor is provided within the Local Government Association guidance 'Fire safety in purpose built-blocks of flats' in Appendix 3 and

the Fire Risk Assessment Competency Council document 'Guide to choosing a competent fire risk assessor', which details two methods of demonstrating competence.

- 3.5 The Responsible Person and/or the competent person will need to ensure that the individuals who will be implementing the interim mitigation measures will also need to have a level of knowledge and understanding of the proposals so that they can operate effectively.

4 Changing to an evacuation strategy

Reasons for changing to an evacuation strategy

- 4.1 As detailed in the introduction above, the strategy in a residential building typically comprises a stay put strategy. However, in exceptional circumstances, it may be necessary temporarily to change the evacuation strategy from stay put to simultaneous evacuation.
- 4.2 A stay put strategy relies on the fire separation between each flat to ensure that the fire does not spread throughout the building unrestricted and uncontrolled. This fire separation is achieved through different means such as fire-resisting doors, fire-resisting walls separating flats, and ensuring that the external walls of the building adequately resist the spread of fire over the walls.
- 4.3 Buildings that have, for example, been identified as having an external envelope that does not adequately resist the spread of fire over the walls (e.g. ACM identified as hazardous by DCLG as a result of large scale fire tests carried out on their behalf) is one example of circumstances where a simultaneous evacuation strategy may be needed.
- 4.4 In these circumstances, the change to a simultaneous evacuation strategy must not be permanent. It should always be considered as an interim mitigation measure, adopted for the safety of residents while works to rectify the identified fire safety failings are carried out.
- 4.5 In addition, it must be acknowledged that the move to a simultaneous evacuation may not address all the risks identified and be considered to mitigate all general fire precaution failings (e.g. deficiencies in means of escape). The responsible person must always discuss the change of evacuation strategy with a competent person, who can further advise on the proposal, including any limitations of such a change, and evaluate the overall fire safety provisions of a building.

General requirements of a temporary simultaneous evacuation

- 4.6 Where a temporary simultaneous evacuation strategy is adopted, the responsible person must notify the FRS, as it may need to amend its operational procedures.
- 4.7 The common alarm/on site staff should only be removed when the required remedial works have been completed, a competent fire safety specialist has been consulted and the FRS have been notified that the evacuation strategy has ceased and the building has returned to the stay put strategy.
- 4.8 A change to a simultaneous evacuation strategy relies on two key essential principles:
- Early detection of a fire and warning of occupants.
 - Management of the evacuation.
- 4.9 It is the duty of the responsible person to ensure that both are appropriately considered and addressed as part of the simultaneous evacuation.

- 4.10 A change in evacuation strategy will require careful consideration of how people are warned of a fire. This means that, at the earliest opportunity, a fire should be detected and warning given throughout the building.
- 4.11 Flats that do not have their own smoke alarms should be fitted with them, regardless of the other fire safety provisions in the building.
- 4.12 The early detection of a fire may be through either:
- A Waking Watch using trained staff to assist with detecting a fire, and raising the alarm (see Appendix 1 for further guidance on this topic);
 - A Common Fire Alarm system throughout the building with detectors and sounders in all areas (see Appendix 2 for further guidance on this topic);
 - Or, ideally, a combination of the above.
- 4.13 The management of the evacuation is another key part of this significant change as it will allow a rapid, effective and co-ordinated evacuation, as well as provide an essential link with the fire and rescue service. It will most likely rely on the use of on-site staff who will be able to facilitate the evacuation (see paragraph 5 for further information with regard to the management considerations).
- 4.14 Due consideration should be given to the capacity of the staircase and whether it is able to accommodate the expected population in the building. This is not expected to be an issue in most cases.

Information to residents

- 4.15 It is essential that residents are informed of the reasons for the change of the evacuation strategy, the purpose of it, and what actions will be taken in the event of a fire. It is unlikely that relying on a simple mail drop or information on communal notice boards will be sufficient. Resident meetings supported with written advice are more appropriate and should be supplemented by staff (for example, representatives of the responsible person) proactively engaging with residents to ensure that they understand the situation and any subsequent changes/ works that might be happening. In engagement with residents, priority should be given to vulnerable people.
- 4.16 It is important that, as part of this process, occupants understand the evacuation strategy as well as the evacuation procedures and what action they should take upon leaving the building. Instructions should also be given to prepare residents for any simultaneous evacuation by advising they pre-pack a 'grab-pack' of relevant (warm) clothing and personal possessions, in case they are asked to remain outside of their flat or building for some time.

5 Management considerations to support the adoption of an evacuation strategy

- 5.1 As detailed above, any evacuation strategy must be supported by appropriate managerial arrangements. The following paragraphs give further guidance with regard to the management considerations that should be put in place to support this change.
- 5.2 It is recommended that every building should be provided with 24/7 on-site staff whose role will be to:
- Call the FRS as soon as possible and provide key information with regard to the building;
 - Manage the evacuation as necessary, including directing residents to a dedicated assembly point;

- Liaise with the attending fire crews to provide information as necessary.
- 5.3 The number of staff required in individual buildings will vary. Advice should be sought from a competent person to advise accordingly.
- 5.4 Following the identification of a confirmed fire, the on-site 24/7 staff should:
- Instigate a simultaneous evacuation of all occupants of the building without compromising the personal safety of staff;
 - Ensure that the fire service is called immediately; such is the importance of this action that one member of staff should be tasked with ensuring that this action has been taken, whether by that person or one of the other members of staff;
 - Reduce as far as reasonably practicable the evacuation time;
 - Facilitate the evacuation of vulnerable people through PEEPs.

Calling the Fire Service

- 5.5 In the event of fire, the on-site staff will make an immediate call to the FRS by dialling 999, stating:
- The address of the premises;
 - The total number of floors of the building;
 - Where the fire has started i.e. flat number and floor or externally;
 - That a simultaneous evacuation is under way;
 - Where known, the number and location of any vulnerable people who may not be able to self evacuate
 - Any other information as relevant.
- 5.6 It will normally be appropriate for one member of staff to meet the FRS on arrival to pass on relevant information.

Vulnerable residents

- 5.7 All residents should be surveyed in respect of their ability to evacuate the building without assistance. In each case where a resident is identified as being unable to respond to the evacuation signal and/or unable to self-evacuate, the Responsible Person should, subject to the co-operation of the residents, seek to agree a PEEP with each of these residents. The level of on-site staff, training, equipment and evacuation protocols must fully reflect a simultaneous commitment to all of the PEEPs as well as the general evacuation in the building.
- 5.8 The staff member designated to meet the FRS on their arrival must be able to report to the attending crews information on each resident for which a PEEP has been agreed but is not yet accounted for, namely:
- The flat number and floor of the resident;
 - The assistance required by the resident.
- 5.9 Vulnerable residents who cannot be assisted to safety may need to be relocated while this simultaneous evacuation strategy is in place. However, this would require the co-operation of the residents in question.
- 5.10 Information on residents who may need assistance to evacuate could be kept in a premises information box that is readily available to a fire and rescue service.

General housekeeping

- 5.11 Whilst undertaking their patrols, the on-site management staff should:

- Remove any combustible items stored inappropriately;
- Ensure that all fire-resisting doors are kept shut, and locked shut, where required (e.g. riser cupboard doors);
- Provide reassurance to residents of the building;
- Report any concerns to the Responsible Person for the building.

Staff facilities

- 5.12 Welfare facilities should be considered for the well-being of the staff such as washing, toilet, rest and changing facilities, and somewhere clean to eat and drink during breaks.
- 5.13 Staff should be clearly identified in high visibility clothing. The different roles (i.e. staff, team leaders) should be identified by the clothing or markings. Staff may also need other equipment such as a torch to ensure they can perform their role.

Staff training & communications

- 5.14 Training should be given to staff to ensure they fully understand the purpose of their role and what individual tasks they are responsible for both during normal hours and in the event of a fire. They should also be given general health and safety training, and specific fire training to support safe systems of work.
- 5.15 Specific instruction should be provided on the communication processes amongst the waking watch team, and how to ensure that they do not place themselves or others at risk.
- 5.16 It is not advisable to expect staff to actively engage in first aid fire-fighting.
- 5.17 Training will need to be repeated if any of the staff members change and further training if any arrangement changes. All staff should receive regular refresher training.
- 5.18 It is important that staff are able to instantly and constantly communicate with each other. The method of communications must be available throughout the building. Radios are often the most appropriate way of achieving this and must be supported by an appropriate radio protocol – this may include a set words for checking in, raising the alarm etc. Radio traffic should be kept to a minimum to ensure that the system is available for appropriate communications. The adequacy and effectiveness of radio communication throughout the building should be tested and confirmed.
- 5.19 It is unlikely that mobile phones will provide an appropriate method of communications between staff. These require more than just a single button actuation, and will not be available for the instant relay of messages to multiple staff simultaneously. Mobile phones also rely on being connected to a network and this may not be possible at all times, or in all parts of the building.

Test of the process

- 5.20 The process should be tested in the form of regular staff training exercises to ensure that all staff understand their roles and that the system is appropriate for the specific building. However, if this is required, it will not be useful to sound the evacuation signal (air horns etc) every time as this may lead to complacency of the residents. Residents should not be involved in these staff training exercises, but should have been made aware of the action if the evacuation signal is given.
- 5.21 Staff training exercises should be recorded and immediately available on site to the FRS, at the building, for inspection.

- 5.22 The Responsible Person needs to ensure that there are arrangements for adequate monitoring of the waking watch team.
- 5.23 In every building where an evacuation strategy is adopted, the FRS will make regular visits to ensure that the arrangements in place are being robustly implemented and managed.

Fire risk assessment

- 5.24 The fire risk assessment for the premises and its associated evacuation plan must be updated to reflect the issues identified, the role of the waking watch and, where possible, the duration of the temporary mitigation measures in place.

Health and safety

- 5.25 It is vital that any processes and procedures put in place allow compliance with other applicable legislation such as Health and Safety at Work Act 1974, and the Management of Health and Safety at Work Regulations 1999. The procedures developed must never jeopardise the safety of staff

6 Responsible person duties

- 6.1 The responsible person duties are laid out in Part 2 of the Regulatory Reform (Fire Safety) Order 2005.
- 6.2 The Responsible Person must ensure that the adoption of an evacuation strategy relies on the assessment of a competent person and addresses the risks identified.
- 6.3 The responsible person must ensure that the mitigation measures put in place remain appropriate at all times.
- 6.4 The responsible person must ensure that appropriate resources are allocated to address the specific risk identified in the building.
- 6.5 The evacuation strategy must be re-evaluated periodically as the remedial works are being carried out to ensure that it remains current and addresses the general fire precaution failings.
- 6.6 For further general fire safety advice, please contact your local FRS fire safety team.

It may be that, even if all the above guidance were to be implemented, the risk is not reduced enough to enable all the persons to remain in the property, and certain uppermost floors might need to be temporarily evacuated. There should be liaison with the FRS in respect of this matter.

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Appendix 1 - Waking Watch guidance

Purpose of the waking watch

- 1 The purpose of a waking watch as described by this guidance is to:
 - detect a fire in the building;
 - detect external fire spread if combustible cladding/insulation materials have been identified as part of the external envelope;
 - summon the FRS;
 - ensure all residents are alerted to begin simultaneous evacuation;
 - take appropriate action as required by the management strategy, including meeting the FRS on arrival.
- 2 Once it has been decided that a waking watch is appropriate, the details of what staff will be required to do, their numbers and their training should be determined.
- 3 It is very difficult scientifically to determine the appropriate number of staff within the waking watch for every building, such as to provide generic advice. However, as a form of benchmark, the objective should be that, when a confirmed fire within a flat necessitates simultaneous evacuation, the time from detection of the fire, alerting all residents (whether by the waking watch or by a common fire alarm system) and confirming that all residents are leaving, should not exceed a time of typically 10-15 minutes in the case of cladding that represents a significant fire hazard (e.g. polyethylene core ACM, defined as Category 3 in the Government cladding screening programme).

The 10-15 minutes estimate is not appropriate for major breaches in compartmentation, in which case the time from detection of the fire and alerting all residents should be significantly less than this figure.

- 4 There are three possible approaches:
 - (a) Installation of a common fire alarm system of the type described in Appendix 2. In this case, the objective of the waking watch no longer comprises detection of fire or alerting residents. The role of the waking watch is purely to summon the FRS and manage the evacuation process. For this purpose, only a small number of staff is likely to be required in any building; there would not be any need for sufficient staff to patrol the building such that each floor were inspected within any given time period. This is the preferable approach where cladding that represents a significant hazard on buildings over 18m in height cannot be replaced or removed in the short term.
 - (b) Reliance on the waking watch to detect the presence of a fire, and manually to initiate fire alarm sounders that would alert all residents of the need to evacuate. This will initially involve provision of sounders throughout the common parts, but, ultimately, is likely to need a sounder in every flat to ensure that the fire alarm signal is loud enough to rouse residents from sleep. The manual initiation of sounders would comprise, at least, one manual control on the ground floor that triggers operation of all sounders, but could comprise manual controls on additional floor levels. The method of operation of the manual controls should be such that they can only be operated by staff or FRS. In this case, the number of staff on the waking watch should be such that they become aware of a fire (e.g. by hearing a smoke alarm operate and immediately investigating) and operate a manual control within 10-15 minutes of operation of a smoke alarm within a flat.

- (c) Reliance on the waking watch to detect the presence of a fire and to take manual action to alert residents of the need to evacuate (e.g. knocking on each flat front door and/or using an air horns to alert residents). In this case, there will, again, need to be sufficient staff on the waking watch, such that they become aware of a fire (e.g. by hearing a smoke alarm operate and immediately investigating) and then alerting all residents within 10-15 minutes of operation of a smoke alarm within a flat. This alternative is likely to be the least reliable, most resource intensive, and may not be suitable for the highest risk situations.

NOTE: Care should be taken (e.g. in the training of the Waking Watch staff) to ensure that they do not initiate a simultaneous evacuation in the event of a false alarm from a domestic smoke alarm, or a small fire that has been extinguished.

5 While the above information is offered as a benchmark, the solution adopted by a competent person should take into account a number of factors, including (but not necessarily limited to) the following:

- The presence of any automatic fire suppression system;
- The general fire precautions in the building;
- The fire and rescue service attendance time;
- The height of the building;
- The number of flats;
- The type of cladding (i.e. Category 2 or Category 3);
- The extent of the cladding;
- The number of stairways;
- The proximity of the cladding to the stairway(s);
- Risk of external ignition of cladding (e.g. taking into account the height at which the cladding starts, proximity of cars etc. to the cladding);
- The collective effect of the measures considered holistically, as opposed to each measure in isolation.

Appendix 2 - Common Alarm System: Automatic fire detection and alarm system supporting simultaneous evacuation

Purpose

- 1 The purpose of the provision of a common fire alarm to support the change of the evacuation strategy from stay put to simultaneous evacuation is to ensure early detection of a fire throughout the building (including any accommodation e.g. individual flats).
- 2 As described above, the common fire alarm system cannot be implemented in isolation and must be provided as part of a package of fire safety measures. The aim of the guidance below is to provide and highlight some of the key considerations with regard to the selection and implementation of a common alarm system.

System design and considerations

Location and coverage of the detection system

- 3 Considering the specific purpose of this guidance, the common fire alarm system should generally be designed in accordance with the recommendations of BS 5839-1 for a Category L5 system, except that the sound pressure level of the fire alarm signal within flats need only be 85dB(A) at the open doorways of every bedroom in each flat.
- 4 The system should incorporate heat detectors within each room in every flat that has a window that overlooks an area of external wall that is clad with a material that results in a significant or notable fire hazard (except possibly toilets and bathrooms). Heat detectors should also be included in any other rooms, such as plant rooms and other ancillary facilities with windows or vents through which a fire could spread and ignite cladding. Consideration might also need to be given to the provision of smoke detectors within common parts, but these detectors should not initiate the general evacuation of the building; they may give a warning only to the waking watch team.
- 5 An immediate evacuation signal should be triggered by the operation of any single heat detector. In particular, it should be noted that the evacuation signal should not rely on the coincident operation of two heat detectors (sometimes described as "double knock"), as such an arrangement would not result in early enough operation of the evacuation signal in the event of a serious fire that might affect cladding.
- 6 In line with the individual PEEP process, specific measures such as a vibrating pager or beacon may be required if people with hearing impairments have been identified.
- 7 It is critical that the system installed in the premises for the purpose of a common alarm must not have any adverse effect on the other fire safety provisions in the building. For example, the installation of a wired system must not create a route for fire and smoke to spread in fire rated walls which were previously imperforate.