Regulatory Reform (Fire Safety) Order 2005

Guide to Fire Safety Measures for Persons with Duties

Residential Care Premises

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ABOUT THIS GUIDE

This Guide has been published after extensive engagement with the Care Quality Commission and key stakeholders in the fire and residential care sectors.

Status

This Guide is intended to support the application of the Regulatory Reform (Fire Safety) Order 2005 (as amended). This Guide has been produced to satisfy the obligation of the Secretary of State to make available guidance to assist responsible persons to satisfy their duties under fire safety legislation.
Article 50(1A) of the Fire Safety Order makes it clear that in court proceedings for alleged breaches of the Fire Safety Order or regulations made under it, proof of compliance with or proof of deviation from guidance issued under Article 50 may be relied upon as tending to establish whether or not there was such a breach of the Fire Safety Order or regulations.

This does not though mean that the technical aspects of the guidance should be prescriptively applied in all premises. A vast array of different designs, construction techniques and manufacturing standards exist throughout the built environment, particularly when it comes to refurbished and/or modernised properties and heritage buildings. As such, even in a guide that is specific to a certain type of premises a spectrum will exist within that and differences between those premises will exist. The recommendations on best practice and practical examples of potential precautions that may be appropriate for your property are provided to assist in satisfying the requirements of the Fire Safety Order and regulations made under it. The mandatory requirement for the responsible person to undertake a suitable and sufficient risk assessment, which will inform the exact precautions that need to be taken in each specific premises, will be individual and case specific.

Some premises will have features that mean they require precautions which are not covered by this guide. It is your responsibility to ensure that you are compliant with the requirements set out in the legislation and to seek independent professional advice if necessary.

The Guide is part of a suite of guidance produced by government to assist those with duties under the Regulatory Reform (Fire Safety) Order 2005 (as amended) ("the Fire Safety Order"). In this Guide, people with such duties are described as "persons with duties."

How to use this guide

This Guide should be read in conjunction with *Principles of Fire Safety*[1], which provides detailed guidance on all relevant aspects of fire safety. This current Guide

[1] Regulatory Reform (Fire Safety) 2005 (as amended) Guide to Fire Safety Measures for Persons with Duties. Principles of Fire Safety. Home Office 2024

is concerned with the specific application of that guidance to premises providing residential care.

It is assumed, for the purpose of this Guide, that the reader is fully familiar with the guidance in *Principles of Fire Safety*, to which reference should be made where necessary. For ease of reference, the section in which any aspect of fire safety is discussed in this current Guide bears the same number as the section that provides detailed information on that aspect of fire safety in *Principles of Fire Safety*.

For example, Section 4 in *Principles of Fire Safety* provides information on causes of fire, while Section 5 provides guidance on measures to prevent fire. In this current Guide, Section 4 provides information on the most common causes of fire in residential care premises. Section 5 is restricted to guidance on measures to prevent fire that are relatively unique to various types of residential care premises, on the assumption that the reader is already familiar with more general measures to prevent fire in all types of premises, as set out in Section 5 of *Principles of Fire Safety*.

Similarly, Section 7 of *Principles of Fire Safety* provides detailed guidance on the design of fire detection and alarm systems, including, for example, the eight "categories" of system defined in BS 5839-1[2] and the five "categories" of system defined in BS 5839-6[3]. In this Guide, these definitions are not repeated; the Guide primarily advises on the appropriate category of system for different types of residential care premises.

Further guides in this suite of guidance documents are produced for each of the following types of premises:

- Animal premises and stables
- Educational premises
- Factories and warehouses
- Healthcare premises
- Offices and shops
- Open air events and venues
- Places of assembly
- Sleeping accommodation
- Theatres, cinemas and similar premises
- Transport premises and facilities

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2 BS 5839-1 Fire detection and fire alarm systems for buildings – Part 1: Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises

3 BS 5839-6 Fire detection and fire alarm systems for buildings – Part 6: Code of practice for design, installation, commissioning and maintenance of systems in domestic premises

Special stand-alone guides apply to purpose-built blocks of flats and specialised housing (i.e. sheltered housing, extra care housing and supported housing). In addition, a further guide provides advice on means of escape for disabled people: Fire safety risk assessment: means of escape for disabled people - GOV.UK (www.gov.uk)

Certain explanatory text within this Guide is included within a box, thus:

> These boxes are used to provide particular emphasis of fundamental matters, or terminology, that it is essential to understand in the use of this Guide, particularly where these matters are known to be subject to common misunderstanding.

In this Guide, reference is made to British Standards and standards produced by other bodies. The standards to which there is reference are intended for guidance only, and other standards could be used. Reference to any particular standard is not intended to confer a presumption of conformity with the requirements of the Fire Safety Order (or other fire safety legislation).

If the building has been recently constructed or significantly altered, in compliance with current building regulations, the principal fire safety measures should be satisfactory to assist in compliance with the Fire Safety Order, provided they are being properly maintained, the building is suitably managed and no significant increase in risk has been introduced.

> This Guide should not be used to design fire safety measures in new buildings. That is a matter for guidance that supports the Building Regulations.

There may be a need for careful application of this Guide in the case of some historic buildings, in which some of the recommendations in the Guide might not be reasonably practicable without destroying certain features of the building, which might, for example, fall within the scope of listing by Historic England. The heritage nature of the building must not override the requirement to protect relevant persons from fire, but certain mitigation measures may be adopted to ensure that this requirement is satisfied. This will require the advice of specialists.

The fire safety measures described in this Guide will be suitable for the vast majority of residential care homes. However, some flexibility in application of the recommendations in this Guide might be necessary in residential care homes that accommodate a specific resident group, such as children or people living with dementia.

This Guide applies only to England. Separate guidance is applicable in Wales. The Guide is not intended for use in Scotland or Northern Ireland, where different fire safety legislation applies.

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Language usage in Article 50 guidance

In Article 50 guidance, modal verbs such as “must”, “should” and “may” are used to convey notions of obligation, recommendation, or permission. The choice of modal verb will reflect the level of obligation needed to be compliant.

The following describes the implications and use of these modal verbs in Article 50 guidance (readers should note that these meanings may differ from those of industry standards and legal documents)

- “Must” is used when indicating compliance with the law.
- “Should” is used to indicate a recommendation (not mandatory/ obligatory), i.e. among several possibilities or methods, one is recommended as being particularly suitable – without excluding other possibilities or methods.
- “May” is used for permission, i.e. to indicate a course of action permissible within the limits of the guidance.

It is essential that, before use of this current Guide, readers ensure that they are fully familiar with the guidance in *Principles of Fire Safety*.

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INTRODUCTION

Scope of this Guide

0.1 This Guide is concerned with fire safety measures that support safety of life in permanently staffed premises providing residential care where some or all of the residents might require assistance in the event of a fire (e.g. where residents may not be able to make their way to a place of total safety unaided).

0.2 These premises will comprise those where the main use is the provision of residential care (where the primary purpose is to provide personal and/or nursing care, but not healthcare treatment).

0.3 Typical residential care premises include those where care is provided for:

- older or infirm people
- children and young persons
- people with special needs, such as those with learning difficulties or with mental or physical disabilities
- people with addictions

0.4 This Guide may also be suitable for individual residential care premises that are part of other multi-use complexes, although consultation with other people responsible will be necessary as part of integrated general fire precautions and an overall fire risk assessment for the complex.

0.5 The relevant parts of this Guide can also be used as a basis for determining the appropriate general fire precautions in premises where care is provided on a non-residential basis (e.g. day care centres).

0.6 This Guide is not intended for use in:

- sheltered and extra care premises
- premises where the primary use is healthcare treatment, such as hospitals and hospices (including independent hospitals and hospices) and other healthcare premises
- single private dwellings where out-posted nursing care is provided

Who should use this Guide

0.7 This Guide is intended for all persons upon whom the Fire Safety Order imposes duties. It advises persons with duties about how they might comply with fire safety law, assist them with carrying out a fire risk assessment (or, more commonly, with understanding a fire risk

assessment carried out by specialists) and assist in understanding the general fire precautions that must be in place for residential care premises.

0.8 The Guide may also be useful for:

- employees
- employee-elected representatives
- trade union-appointed health and safety representatives
- enforcing authorities
- persons appointed to carry out fire risk assessments
- all other people who have a role in ensuring fire safety in premises providing residential care

Fire risk in residential care premises

0.9 Residential care premises are amongst those premises with the highest risk from fire. Factors that contribute to the high risk include the physical and/or mental condition of residents, which can result in prolonged evacuation time, and low staff numbers during the night.

0.10 By way of example, in England, contrasting hotels, boarding houses, hostels and similar premises, which are premises in which people sleep and are much more prevalent than residential care homes, in the 10 years prior to publication of this Guide, there were only 10 deaths from fire, while there were 22 deaths in residential care homes. Only one of the latter deceased was under 65 years of age. Approximately one third of the deceased were over 80 years of age.

0.11 The number of fires in hotels, boarding houses, hostels and similar premises, over the 10-year period, was similar to the number of fires in residential care homes, demonstrating that a fire in a residential care home results in a greater likelihood of death than a fire in any other type of premises in which people sleep.

Case study

By way of a particular example, the largest loss of life in any single fire in the UK, between the fire at King's Cross underground station in 1987 and the fire at Grenfell Tower in 2017, occurred at Rosepark Care Home, a modern, purpose-built residential care home, of simple layout, in Lanarkshire in 2004. In this fire, 14 elderly and infirm residents died, when the fire occurred during the night. Lessons from this fire are discussed in later sections of this Guide.

0.12 Accordingly, more stringent fire safety measures and standards of management are necessary in the premises to which this Guide applies than in relatively low risk premises, such as offices and factories, in which occupants are generally familiar with the premises, are awake, are trained

and practised in evacuation procedures, and are mostly capable of evacuation without assistance.

0.13 For example, to provide early warning of fire, there is a need for extensive automatic fire detection. There is also a need for a high standard of staff training in fire safety, fire procedures and arrangements for evacuation of residents. This training is particularly important for staff who will be present during the night.

0.14 The division of fire safety into independent topics in this Guide is necessary for explanatory purposes but does not reflect the manner in which fire safety should be approached in any premises, in which it is necessary to view fire safety measures holistically.

0.15 For example, inadequate automatic fire detection in residential care premises would result in a poor standard of fire safety. The absence of effective fire-resisting doors to bedrooms and sub-dividing corridors (to create separate sub-compartments) in the same building would, in itself, be considered unacceptable, as would insufficient staff to effect an evacuation of residents from a sub-compartment in which a fire occurs during the night.

0.16 However, the overall effect of these three deficiencies is much greater than the simple sum of the individual deficiencies; a fire during the night might develop, undetected, and with inadequate warning, until the bedroom corridors become untenable for escape during the time required for evacuation of the relevant sub compartment by the staff on duty, while smoke could spread into an adjacent sub compartment because of the absence of effective cross corridor fire doors.

0.17 Many fire disasters (including the fire to which the case study above refers) have arisen from a combination of apparently independent deficiencies, at least some of which were almost always related to management shortcomings, and any one of which, if it had been rectified, would have mitigated, or even prevented, the situation in which those involved found themselves.

0.18 The corollary is that it is possible to design and engineer an integrated “package” of fire precautions, whereby a reduction in one measure can be mitigated by enhancement of another measure. However, this approach requires specialist expertise, and persons with duties are advised to seek expert opinion before departing from the recommendations of this Guide.

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1. FIRE SAFETY LAW

1.1 By virtue of the scope of this Guide, all premises to which this Guide refers fall within the scope of the Regulatory Reform (Fire Safety) Order 2005 (as amended) ("the Fire Safety Order").

1.2 However, private living accommodation that is the principal residence of, for example, the owner of a residential care home falls outside the scope of the Fire Safety Order.

1.3 Detailed guidance on the Fire Safety Order can be found in Section 1 of Principles of Fire Safety.

General fire precautions and fire risk assessment

1.4 Guidance on general fire precautions required by the Fire Safety Order (as defined in the Order), specific to residential care premises, is given in Sections 5-23 of this Guide. As in other premises within the scope of the Fire Safety Order, the appropriate general fire precautions for your premises must be determined by carrying out a fire risk assessment (see Section 2 of this Guide).

Dutyholders

Responsible Persons

In the case of most premises to which this Guide refers, the Responsible Person ("RP"), on whom the duty to provide general fire precautions is imposed, will be the employer of persons employed to work in the premises. In the case of residential care premises operated by a corporate service provider, this will commonly be a "legal person", such as the corporate body.

1.5 In some cases, the owner(s) of a care home may form a limited company to operate the care home and employ the staff, in which case it is the limited company that is the RP.

1.6 However, for example, in the case of a privately owned residential care home, where the owner themselves directly employs people to work in the home, the RP will be a "natural person", namely the owner (as an employer).

Other persons having control of premises

1.7 The duties imposed on the RP are also imposed on any person, **other than the RP**, who has to any extent control of the premises so far as the requirements of the Fire Safety Order relate to matters under the other person's control. This other person may be either a legal person or a natural person.

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1.8 For example, depending on their contract of employment, managers of residential care homes often fall within this category, as, of course, do contractors, fire risk assessors, etc.

Building Regulations 2010 and the Building Safety Act 2022

1.9 As in the case of virtually all premises that fall within the scope of the Fire Safety Order, material alterations to existing premises that fall within the scope of this Guide (e.g. in relation to means of escape, compartmentation, fire alarm systems, facilities for the fire and rescue service, external wall construction, etc.) require approval from a building control body.

1.10 High-rise residential care homes will be rare. However, if a new residential care home is 18 m or more in height, or comprises seven storeys or more, (whichever is lower), the Building Safety Act 2022 requires registration of the building with the Building Safety Regulator, which acts as the building control body for these buildings.

1.11 Guidance on the Building Safety Act can be found on the government website at www.gov.uk/guidance/the-building-safety-act.

Health and Social Care Act 2008

1.12 Under this Act, providers operating regulated activities, as defined by the scope of registration, are subject to registration by the Care Quality Commission (CQC). Most residential care homes are providing the regulated activity “Accommodation for persons who require nursing or personal care”.

1.13 The registered provider and/or registered manager is then subject to the requirements of the Health and Social Care Act 2008 (Regulated Activities) Regulations 2014, which are enforced by the CQC. Regulation 12 of these Regulations requires that care and treatment must be provided in a safe way for service users, that the risks to the health and safety of service users are assessed, and that the premises used by the service provider are safe to use and used in a safe way.

1.14 Under the Fire Safety Order, no term, condition or restriction can be imposed as a condition of registration of a registered care home in relation to any matter in which requirements or prohibitions are, or could be, imposed under the Fire Safety Order (so avoiding “double jeopardy” in relation to two different enforcing authorities).

1.15 However, the CQC do consider fire safety in their inspections of residential care homes. So, for example, failure to carry out, or act upon, a fire risk assessment or a notice from the fire and rescue authority, failure to provide staff fire training or to carry out fire drills, may be a breach of the Health and Social Care Act 2008 and may affect the quality rating of the service.

1.16 Under the Care Quality Commission (Registration) Regulations 2009, service providers are required to notify the CQC in relation to certain

incidents. These include death, or serious injury, of a service user as the result of a fire (or other incident), and events that stop a service from running safely, such as the failure, or malfunctioning, of fire alarm systems or other safety equipment for more than 24 hours.

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2. FIRE RISK ASSESSMENT

2.1 It is a requirement that a fire risk assessment ("FRA") is carried out for all premises that fall within the scope of the Fire Safety Order, the findings of which must be documented, even for the smallest of premises.

The risk of fire to occupants of residential care homes was emphasised in Section 1 of this Guide. Accordingly, dutyholders are advised against attempting to carry out their own FRAs, rather than engaging outside specialists, unless there are competent specialists within the dutyholder's organisation.

2.2 Other than for small, simple premises, preference should be given to fire risk assessors, or FRA companies, whose competence has been independently verified. Guidance on third party verification is given in Section 2 of *Principles of Fire Safety*.

Case study

In Section 1, there is reference to the serious, multiple-fatality fire in a residential care home in Lanarkshire. A Fatal Accident Inquiry into the 14 deaths concluded that the fire risk assessment for the premises, carried out by an external consultant, was not suitable and sufficient, but that, had it been so and been acted upon by the owners of the home, some, or even all, of the deaths might have been avoided.

2.3 Often, the premises will not conform to current standards for new buildings or the recommendations of this Guide. There may be nothing untoward about this. For example, the design of the premises might reflect standards that have changed since the time of their construction; this does not necessarily establish that occupants are at undue risk from fire or that the premises do not comply with the Fire Safety Order.

Accordingly, a person carrying out a fire risk assessment will, often, be required to make a judgement as to whether departures from current guidance result in sufficient risk to warrant upgrading of fire precautions. This judgement needs to balance cost and effort on the one hand with risk on the other hand.

2.4 A fire risk assessment should be as thorough as practicable in its examination of the premises. Inspection of roof voids is particularly important to ensure that lines of sub compartmentation- (see Section 8) are not breached. However, in the case of ceiling voids, roof voids and service risers, a sample inspection of these areas is normally appropriate. Where a sample inspection indicates common deficiencies, a more comprehensive investigation (such as a separate compartmentation survey) might be necessary.

2.5 Access to all residents' bedrooms will not normally be practicable, and it is reasonable for a sample to be inspected. This might comprise, say, 20% of all bedrooms or 20 bedrooms, whichever is less. The sample should be

representative of the entire premises and not, for example, simply be selected from one area.

All fire risk assessments need to take into account the level of staff available to assist in the evacuation of residents, particularly at night. Civil, and even criminal, liability might arise (for not only the RP, but an external fire risk assessor engaged by the RP) if it subsequently transpires (e.g. following a fire during the night) that it was patently obvious at the time of a fire risk assessment that the number of staff available was insufficient to assist residents with evacuation before escape routes would become untenable (see Section 6).

The fire risk assessment should confirm (or recommend within the Action Plan if necessary) that there is a process for establishing the likely longest time for evacuation of any sub-compartment by means of realistic evacuation drills (see Sections 8 and 20).

Where this time is considered too long, it may be necessary for the fire risk assessment to recommend the provision of additional staff. Alternatively, it may be appropriate to recommend other means to reduce the time for evacuation of relevant sub-compartments (e.g. by reducing their size) or increase the time for which escape routes remain tenable, such as by installation of a sprinkler system (see Sections 6 and 13).

2.6 It should be noted that a fire risk assessment does not comprise a compartmentation survey or a fire risk appraisal of external wall construction. However, a fire risk assessor might recommend these further surveys.

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3. BEHAVIOUR OF FIRE IN BUILDINGS

3.1 A detailed explanation of the behaviour of a fire in a building is given in Section 3 of *Principles of Fire Safety*.

3.2 In residential care premises, linen, bedding, furnishings, medical gases, chemicals, clinical waste, aerosols and sanitary materials are potential fuel for a fire. Control over the fire performance of bedding and furnishings, and suitable storage of other combustible materials, is crucial in reducing the risk to residents, many of whom may be unable to escape unaided in the event of a fire.

3.3 Fire development of bedding and clothing can be assisted by emollient creams applied to the bodies of residents, causing sleepwear and sometimes bedding to become impregnated with the cream, which is normally paraffin-based. This has led to a number of deaths from fire in residential care homes, particularly as the result of ignition of impregnated material because of smoking by residents. Rapid development of fires caused by smoking can also result from use of oxygen by residents.

3.4 In the small confines of a bedroom, flashover can be reached within a few minutes, after which the fire-resisting construction (particularly the bedroom door) that separates the bedroom from an adjacent escape route is challenged.

In all residential care premises, it is important that escape routes are kept free of fire and smoke, necessitating protected escape routes enclosed in fire-resisting construction, within which all doors are fire-resisting and self-closing, (or are kept locked shut). Fire stopping of service penetrations in these fire-resisting barriers is also important.

3.5 If bedrooms and other areas are protected with a properly designed automatic sprinkler system, it would not be expected that flashover would be reached in the event of fire. This reinforces the need for fire safety measures to be considered holistically; sometimes, some reduction in fire resistance or other fire safety measures may be acceptable in sprinklered premises.

3.6 Based on these considerations, key fire protection measures in premises that fall within the scope of this Guide are means of escape, automatic fire detection systems and, critically, staff training in fire safety and fire procedures. Sprinkler systems in these premises make a major contribution to fire safety.

3.7 Guidance on automatic fire detection is given in Section 7 of this Guide, guidance on means of escape is given in Section 8, guidance on automatic fire suppression systems is given in Section 13, guidance on fire procedures is given in Section 18, while guidance on staff training is given in Section 19.

4. CAUSES OF FIRE

4.1 Detailed guidance on causes of fire in buildings is given in Section 4 of *Principles of Fire Safety*.

4.2 Figure 1 shows the causes of fire in residential care premises in England during the fiscal year 2022/23.

[Figure to be added prior to publication]

Figure 1: Causes of fire in residential care premises (2022/23)

It will be noted that, as in most types of premises, the most common identified specific causes of fire were:

- cooking activities;
- faults in electrical installations and appliances;
- arson;
- smoking, cigarette lighters and matches.

4.3 In a typical year, such as 2022/23, these four causes, alone, accounted for [to be added prior to publication] of all fires in residential care premises.

4.4 The Fire Protection Association ("FPA") maintain a database of large fire losses, defined as fires that meet one or more of the following criteria: [to be added prior to publication]

4.5 Data provided by the FPA records seven such fires in residential care premises between 2018 and 2022, in which the cause was identified. Of these fires: [to be added prior to publication]

4.6 The predominance of arson should be noted.

4.7 A knowledge of fire statistics provides the basis for measures to prevent fire, which are discussed in the following section of this Guide.

5. MEASURES TO PREVENT FIRE

5.1 Detailed generic guidance on measures to prevent fire in all types of premises is given in Section 5 of *Principles of Fire Safety*.

5.2 In this section, guidance is given on such measures that are more specific to residential care premises. This is based on the most common causes of fire in these premises, which were discussed in Section 4.

5.3 Prevention of fire is particularly important in residential care premises in which people may be vulnerable and dependent on staff, as, when residents are asleep and potentially staff numbers are reduced, **any** fire poses a potentially serious threat to their safety.

Arson

5.4 It should be noted, from Section 4, that, between 2018 and 2022, the most common single cause of large fires in residential care premises was arson.

Good housekeeping in individual rooms, escape routes and common areas is an important measure, so that fuel for deliberate ignition is minimised. An accumulation of combustible materials, such as refuse must never be permitted within escape routes, which should be kept free of all combustible materials.

5.5 It is essential that all internal storerooms and cupboards containing combustible materials, such as linen, bedding, chemicals, clinical waste, aerosols and sanitary materials are kept secure against unauthorised access.

5.6 Combustible materials, clean and dirty linen receptacles, etc. should never be left in escape routes and stairways, particularly overnight.

5.7 Refuse bins and clinical waste materials should be stored in secured areas, clear of the building or within purpose-built fire-resisting rooms (e.g. sluice rooms), which are adequately fire separated from the remainder of the premises.

5.8 There should be no storage containers, garden sheds or similar combustible units, in close proximity to the building. There should be a minimum distance of 6 m between a building and any combustible storage, but, if practicable, this should be increased to approximately 10 m in the case of larger quantities of combustible storage or storage compounds.

5.9 Effective external lighting and CCTV can be a useful deterrent against unauthorised access. Entrance doors should be secured against unauthorised access, and consideration should be given to window restrictors. Consideration should also be given to electronic locking, which enables access only for those in possession of an access code or a physical fob. It should be ensured that these measures do not impede means of escape from the building (see Section 8).

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5.10 In some residential care premises, the behaviour and actions of residents may present an enhanced risk of deliberate ignition in individual bedrooms and common areas. In such situations, there needs to be a high level of management and staff awareness to ensure risks are kept to a minimum.

Electrical Faults

As in any premises, key measures to prevent fires of electrical origin comprise:

5. regular in-service inspection of electrical appliances (previously known as portable appliance testing), including appliances used by residents in bedrooms;
6. periodic inspection and testing of the fixed electrical installation in accordance with BS 7671 (which is equivalent to the Institution of Engineering and Technology Regulations for Electrical Installations).

5.11 It was noted, in Section 4, that faults in electrical installations and appliances were the second most common cause of fires in residential care premises. Detailed guidance on prevention of fires of electrical origin is given in Section 5 of *Principles of Fire Safety*.

5.12 Electrical switchgear and distribution boards should be regarded as a potential source of ignition of a fire. It is essential that combustible materials should be kept clear of all such equipment. Small enclosures designed specifically to house electrical distribution equipment should not be used for storage, particularly of combustible materials, such as linen, sanitary products, aerosols, alcohol gels and cleaning materials.

5.13 In large spaces designed for storage, but housing electrical distribution equipment, a clear space of 1 m should be maintained between the equipment and any storage or other combustible materials. Cupboards containing electrical distribution equipment should not be used to store flammable liquids, flammable gases or aerosols.

Case study

In the Introduction to this Guide, there was reference to a fire at Rosepark Care Home in Lanarkshire, which resulted in the deaths of 14 residents. The fire started in a cupboard, in which there was an electrical distribution board, an assortment of combustible materials and a large number of aerosols.

The fire was caused by arcing between conductors of a cable; the sheath of the cable was stripped back too far and there was no rubber grommet where the cable passed through the earthed metalwork of the distribution board.

Over a number of years, chafing of the insulation of the conductors caused wearing of the insulation, permitting arcing to occur, sparks from which ignited combustible materials. Aerosols behaved like missiles, with enough energy to force open a cross-corridor fire door, which then failed to close correctly.

There had been no periodic inspection and testing of the electrical installation. Had this been carried out, the defective cable installation would have been identified and been treated as a "C1" defect, indicating a dangerous condition. Accordingly, inspection and testing could have prevented the fire and, hence, the deaths.

A smoke detector in the cupboard correctly raised the alarm, but the door of the cupboard was not fire-resisting or kept locked shut. Additionally, staff actions were not appropriate, but, fundamentally, the incident was the result of the electrical fault.

5.14 Where there is cause for concern as to the potential for fire within a cupboard, albeit of smaller dimensions than would normally necessitate the provision of a smoke detector (see Section 7), consideration should be given to such provision.

5.15 Staff should maintain vigilance for obvious damage to electrical appliances, electric sockets, etc, and for any fire hazards introduced by residents or their relatives.

5.16 The use of extension cables and adaptors should be closely monitored by staff as their inappropriate or excessive use in common areas or in residents' rooms can present a significant risk. Cube-type adaptors should not be used.

5.17 In some premises with short-term residents (e.g. in the case of respite care), residents may bring certain items of electrical equipment with them. Care should be taken to carry out visual checks of such equipment for damage or potential fire hazards.

5.18 Any specialist electrically powered equipment such as electric profiling beds (EPBs), hoists, etc should be subject to regular maintenance and test in accordance with manufacturers' instructions.

5.19 Fires have occurred in EPBs, so measures should be taken to reduce the likelihood and consequence of damage to the cables in line with manufacturer's instructions. This should include routine examination of cables. Staff should be educated in the hazards and instructed to report any issues. The underside of the bed must remain clear of storage at all times. The bed should be subjected to regular testing to medical equipment standards.

5.20 Fires involving electrical appliances, such as chargers for laptops and e-cigarettes, mobility scooters, e-bikes and e-scooters powered by lithium batteries, are steadily increasing and, in some cases, have resulted in fatalities.

5.21 Charging of e-bikes and e-scooters by staff should, normally, be prohibited within the building, or should, at least, be restricted to rooms enclosed in fire-resisting construction, in which there are smoke or multi-sensor fire detectors.

The fire risks associated with lithium battery-powered appliances should be made clear to all residents. The charging of appliances overnight in individual rooms should be discouraged. The charging of any lithium batteries on escape routes should be strictly prohibited.

5.22 Battery-powered electrical appliances should only be charged with chargers specifically designed and supplied by the manufacturer of the equipment. Generic chargers may be unsuitable and give rise to an increased risk of fire hazard.

Smokers' materials

5.23 Detailed guidance on prevention of fires ignited by smokers' materials is given in Section 5 of Principles of Fire Safety.

5.24 The Health Act 2006 introduced prohibition of smoking in all enclosed and substantially enclosed workplaces and premises open to the public. Exceptions do apply for residents (but not staff) in residential care homes, where smoking may be permitted in individual residents' rooms and/or designated communal smoking rooms.

5.25 However, ideally, residents should be taken outside to smoke, and may, according to their Individual Smoking Risk Assessment ("ISRA"), need to be accompanied by a member of staff for the entire duration of their smoking activity. A smoking shelter is often provided for this purpose, and a fire blanket can be provided within the shelter. Often, it will be inappropriate for residents to be left within the shelter, unsupervised by staff.

Case study

In 2016, a resident of a care home in London was taken outside to smoke in a smoking shelter but was left unsupervised. The resident was a wheelchair user and was paralysed on one side of his body. Sometime later, a member of staff looked out of a window and could see that the clothing of the resident was on fire, resulting in his death.

The care home operator was fined £937,500, with £104,000 costs, after admitting a breach of Article 11 of the Fire Safety Order, in that there was not an adequate ISRA, it was not ensured that staff understood the hazards of use of emollient creams, precautions such as a smoking apron were not available, and staff had not been instructed that residents using paraffin-based products, such as emollient cream, should not smoke unsupervised.

At the time of writing this Guide, the fine remains the highest ever imposed under the Fire Safety Order, and it was upheld by the Court of Appeal.

In all premises, there should be a documented safe smoking policy for the management of smoking and the safe disposal of smokers' materials. This should always include an ISRA for every resident who smokes. The ISRA should be incorporated within the individual care plan for the resident, and all staff should be aware of the assessment and the fire safety measures required as a result of it. The ISRA should be reviewed regularly and when physical and cognitive capabilities of residents are considered to change.

5.26 The carrying out of ISRAs is part of the care assessment for the residents, so it is not the role of the person carrying out the fire risk assessment to undertake ISRAs. However, every fire risk assessment for a care home should verify that there is a process in place for carrying out ISRAs. For higher-risk residents, their stock of cigarettes, and any matches or lighters, should be kept by staff, so that cigarettes are only made available to residents when necessary and under supervision.

5.27 As part of staff training, staff should be made aware of the importance of remaining vigilant for any evidence of cigarette burns on residents' clothing, bedding, furnishings and carpets (e.g. as a result of surreptitious smoking in their bedroom).

All staff must be made aware of the fire hazards associated with emollient creams, particularly for residents who smoke, as this has been associated with a number of fire deaths in residential care homes.

5.28 Any rooms in which smoking is permitted should be provided with an adequate number of suitable ashtrays for the safe disposal of smokers' materials. Discarded smokers' materials should be disposed of safely in non-combustible containers and not placed in plastic bins with other combustible waste that can be left inside for disposal later. Vacuum cleaners should not be used to clean up discarded smokers' materials.

Cooking

5.29 Detailed guidance on preventing fires during cooking is given in Section 5 of Principles of Fire Safety.

5.30 As noted in Section 4, cooking activities are the most common cause of fires in residential care premises.

5.31 Cooking appliances should never be left unsupervised, and staff should be properly trained in the use of the appliances and action in the event of fire. The kitchen should be kept clean, and build-up of grease deposits should not be permitted.

5.32 In main kitchens, there should be clearly labelled facilities to shut off power, fuel and extraction in an emergency.

5.33 Deep fat fryers should be regarded as a particular hazard, as these are a common cause of cooking fires. As well as thermostats with a maximum setting of 205 ºC, there should be a high temperature cut out in case of thermostat failure. There should be a facility to shut down the lids of fryers in the event of a fat fire.

An important fire safety measure is to arrange for regular cleaning of grease filters, extract ductwork and grease traps. Often, though filters might be changed regularly, there is insufficient attention to "deep cleaning" of ductwork. A fire, for example, in a deep fat fryer, can then spread throughout the ductwork, where there are thick layers of grease deposits.

5.34 Guidance produced on behalf of the insurance industry [4] provides recommendations on the frequency at which deep cleaning should be carried out, according to the number of hours of use of cooking equipment

each day. Alternatively, contractors who provide deep cleaning services might stipulate the recommended frequency, based on the condition of the ductwork found in their inspection.

5.35 Detailed guidance on fire safety of catering kitchen extract systems (including compliance with the Fire Safety Order) is produced by London Fire Brigade [5].

5.36 All kitchens should be provided with appropriate fire-fighting equipment including fire blankets. Guidance on fire extinguishers is given in Section 12 of this Guide.

It should be noted that fires involving cooking oil or fat burn at a very high temperature, making them difficult to extinguish with most types of fire extinguisher, other than those containing extinguishing agents specifically intended for this type of fire (which is known as a Class F fire). In residential care homes, Class F fire extinguishers should always be provided in main kitchens in which there are cooking appliances, deep fat fryers, etc.

5.37 The risk of a fire associated with commercial scale cooking equipment, is such that consideration should be given to the possible need for a fixed manual/automatic fire extinguishing system. Systems specifically designed for this purpose are very simple, and relatively inexpensive, to install. These systems should ideally be installed in all main kitchens in residential care premises.

Heating

5.38 Detailed guidance on prevention of fires started by heating appliances is given in Section 5 of Principles of Fire Safety.

5.39 Fixed heating installations are safer than portable heaters, which should, wherever possible, be avoided in residential care premises.

5.40 If portable heaters must be introduced for short term heating problems (e.g. boiler breakdown), extreme caution should be taken in relation to the use of portable heating appliances. Oil-filled radiators, and convector heaters, with in-built safety cut offs, should be strongly preferred.

The use of other types of heaters, such as fan heaters, radiant bar heaters or any heaters involving naked flame should not be permitted in residential care premises.

5.41 Any portable heaters used should be sited where they cannot be overturned, be positioned well clear of any combustible materials, and ideally be fixed in place. They should not be placed on escape routes or in locations in which, if involved in a fire, they could obstruct access to an escape route.

5.42 A clear space should be kept around all portable heaters, so that combustible materials, such as curtains, bedding and furniture, cannot be ignited and there is free circulation of air. The use of extension cables to power portable heaters should be avoided wherever possible.

5.43 There should be strict management controls on residents bringing their

own portable heaters into the premises. Any heating appliances brought onto the site by residents, for use in their own rooms, should be subject to in-service testing and maintenance prior to their use and periodically thereafter. Any heaters brought into the premises by residents should not be permitted in common areas.

5.44 If portable heaters are used, suitable management procedures should be introduced. These should include adequate controls and checks by staff to ensure the safe use of portable heaters in both common areas and residents' rooms, and the procedures should ensure that portable heaters are turned off at night.

Contractors' operations

5.45 Detailed guidance on prevention of fires during contractors' operations is given in Section 5 of Principles *of Fire Safety*.

It should be ensured that, before any significant building work starts, the fire risk assessment has been reviewed, and that consideration has been given to potential introduction of additional hazards. The additional risk to people needs to be considered, particularly in those buildings that continue to be occupied by residents.

5.46 The impact of the building work on the general fire precautions should be continuously monitored. Consideration should be given the increased fire hazard arising from quantities of combustible materials and accumulated waste. It is essential to maintain safe means of escape for members of the public and residents. For example, the facility for progressive horizontal evacuation (see Section 8) must not be undermined. Fire alarm systems should be kept operational.

Housekeeping

5.47 In residential care premises, good housekeeping is essential to reduce the risk of fire.

5.48 Striking a balance between making the common areas of care premises more homely and less institutional, and minimising combustible materials in escape routes, can be difficult. Ideally, there should be no combustible materials, such as tables or soft furnishings in escape routes.

However, where, for example, an upholstered chair might aid residents who need to take a rest when traversing corridors, this might be considered, subject to avoidance of any obstruction of escape routes or narrowing of their width. Where a fire risk assessment considers that this is acceptable, any soft furnishings must meet the requirements for ignition resistance to Source 5 in BS 5852. Any table should be largely of non-combustible construction or be difficult to ignite (e.g. solid timber).

5.49 In all premises, the nature and vulnerability of residents and their care will require development of adequate systems to manage the accumulation of waste, laundry, furniture, medical equipment, sanitary materials, flammable liquids, etc.

5.50 Providing adequate facilities for storage in care premises often presents a significant challenge, particularly in older premises. If premises have inadequate or poorly managed storage areas, the risk of fire is likely to be increased. The more combustible materials stored, the greater the source of fuel for a fire.

5.51 Roof voids, plant and boiler rooms, and service risers should not be used for the storage of combustible materials, residents' possessions, medical equipment, gases and supplies etc.

5.52 Larger items, such as mattresses, beds, furniture, medical equipment, etc, should be kept in dedicated storerooms that are fire-resisting. Other items in daily use, such as linen, cleaning materials, aerosols, etc, should be stored in cupboards and stores that are fire resisting.

Residents' lounges

5.53 Many residential care premises will have lounges for use by the residents. These will vary in size and complexity from a simple lounge to much larger, multi-use community rooms, sometimes used by external groups who provide activities for residents. Larger premises may have dedicated libraries, computer rooms, games rooms, etc.

5.54 In general, the fire hazards contained within these rooms can be controlled through measures discussed in this section.

Laundries and Linen

5.55 Laundries are high-hazard areas. The laundry area should not be used for storing flammable or unnecessary combustible material.

5.56 Linen storage should be strictly controlled, with storage limited to rooms that are separated from the remainder of the premises by fire-resisting construction and are fitted with automatic smoke detection.

5.57 Tumble dryers are a known source of fire. Regular removal of lint is essential.

5.58 Spontaneous combustion of laundered materials can occur from hot linen that is tightly packed into a trolley or stored in a cupboard. The hazard increases if the linen has residues of oils, in which case self-heating can occur even if the laundered items are relatively cool. Such fires can occur several hours after the washing and drying process, when the laundry might be unoccupied.

5.59 The hazard can be reduced by ensuring that all textiles are washed correctly, with the correct amount of detergent and temperatures that are sufficient to remove traces of oils. Tumble dried laundry items should not be tightly packed into a trolley, especially when hot.

Furniture and Furnishings

Upholstered furniture, furnishings and textiles that can be easily ignited or contribute to rapid fire spread should be avoided wherever possible in all premises to which this Guide applies.

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5.60 Specifications for the fire performance and testing of furniture and furnishings in residential care premises can be found in the following standards:

- ignitability of upholstered furniture and loose covers: BS 5852 [6]
- resistance to ignition of mattresses, divans and bed bases: BS 7177 [7]
- resistance to ignition of upholstered furniture for non-domestic use: BS 7176 [8]
- flammability of fabrics for curtains and drapes: BS 5867-2 [9]
- burning behaviour (ignitability and flame spread) of curtains and drapes: BS EN 1101 [10] (ignitability) and BS EN 1102 [11] (flame spread)

5.61 Note: For all the above standards, equivalent European classification standards, where available, may also be used.

5.62 Residents should only be allowed to provide items of their own furniture, furnishings, and textiles, etc. for their own bedrooms if the items meet a fire performance standard similar to those described above.

5.63 Where doubt exists about the fire performance of a product or material, consideration should be given to requesting a copy of the test certificate that can show compliance with the appropriate standard required by the Regulations or relevant guidance.

5.64 Note: Soft furnishings treated with flame-retardant treatments may have a limited ‘wash life’ before the effectiveness of the -flame-retardant- is diminished. To maintain the performance, the manufacturer’s/supplier’s instructions should be followed. If there is any doubt about the flame-retardant treatment of any product, confirmation should be sought from the supplier that the items have been tested for flammability by a laboratory that is accredited by the United Kingdom Accreditation Service (UKAS).

<u>Bedding and sleepwear</u>

5.65 Bedding and sleepwear should also meet recognised standards of fire performance. Information on fire performance specifications for bedding and sleepwear can be found in the following standards:

- Flammability of blankets for use in the public sector: BS 5866-4 [12] or for ignitability of a representative fabric sample: BS 7175 [13]
- Flammability of counterpanes for use in the public sector: BS 5815-3 [14]
    - Note: Counterpanes covering the bed at all times will help to protect the other textile bedding items from involvement in a fire.

- Ignitability of continental quilts and duvets: BS 7175 [13]
- Flammability of quilt covers: BS 5815-3 [14]
- Ignitability of bed covers and pillows: BS 7175 Section 4 [13]
- Flammability of sleepwear (including dressing gowns and bed jackets): BS 5722 [15]
    - Note: This standard gives three different levels of flammability performance. Level 3 is suitable for normal situations, but higher performance levels can be specified for high-risk situations (level 1 being the highest).
    - Note: For all the above standards equivalent European classifications and standards, where available, may also be used.

5.66 Bedding and sleepwear provided by residents or their families should, as far as is practicable, meet equivalent standards of fire performance.

5.67 Many products such as mattress overlays, fleeces and under pads are used in the care of residents with, or with a potential for, pressure sores. They are usually placed within the bed assembly, or on easy chairs or wheelchairs. Where possible, these products should be resistant to ignition. BS 7175 [13], Section 3 gives further guidance. However, nursing or medical advice should be sought if there is likely to be a conflict between a resident's needs and fire safety.

5.68 As with soft furnishings, it is important to note that retaining the flame-retardant effectiveness of all chemically treated flame-retardant fabrics, such as treated cotton, is dependent on the correct laundry procedures being followed. Careful note should be taken of all wash and care instructions provided. Advice should be sought from the supplier if no such instructions are provided.

5.69 Electric blankets should be periodically tested and only used in accordance with the manufacturer's instructions.

Medical gases

5.70 It can be anticipated that, in most residential care premises, there will be some medical gases, including oxygen, stored or used in either residents' accommodation or the common areas under the control of management.

5.71 Although, in most instances, these gases are not inherently flammable, cylinders will present an explosion risk if exposed to extremes of heat and fire.

5.72 Medical oxygen can also present an additional risk; if leaks occur, it can create an oxygen rich atmosphere that will increase the intensity of a fire.

In confined, unventilated rooms, such as residents' bedrooms, it also has the potential to increase the combustibility of materials close to ignition sources such as cigarettes, e-cigarettes- and heaters.

5.73 Cylinders should, preferably, be stored outside in a well-ventilated, secure location. Where cylinders need to be stored inside premises, the numbers should be kept to the minimum required for normal day-to-day use. Any rooms/cupboards used for storage should be well ventilated, kept secure and be adequately signed.

5.74 Cylinders should not be stored in combination with readily combustible materials or flammable materials, such as alcohol hand gels, or materials containing, or contaminated with, oils or grease. Empty cylinders should be stored separately from full cylinders.

5.75 Although it can be anticipated, by the fire and rescue service, that medical gases might be in use in one form or another in residential care premises, in the event of fire, they should be made aware of the location of stored cylinders and rooms where medical gases are used or located.

5.76 Where medical oxygen is being used, you should consider the following:

- the room where the oxygen is used should be designated as a 'No smoking area'
- adequate signage should be provided to rooms and stores to indicate the use or storage of oxygen cylinders (signs on doors to residents' bedrooms may be necessary if oxygen is used on a permanent basis)
- the room should be adequately ventilated to ensure any leaks of oxygen cannot accumulate
- all staff involved in operating the oxygen equipment should be properly trained, including the provision of written procedures
- the equipment should be designed and constructed for use with oxygen [further advice on this may be obtained from the Medical and Healthcare Products Regulatory Agency (MHRA) or from the supplier]

<u>Mobility Scooters</u>

5.77 Mobility scooters are now commonly used by some residents in residential care premises. With the increased use of mobility scooters comes the corresponding fire safety concerns associated with their storage and charging. The design of many premises, particularly smaller and older premises, does not always lend itself easily to the safe storage and charging of mobility scooters.

5.78 The facilities, or lack of facilities, for the safe charging of mobility scooters

is a particular concern and poses a significant fire hazard if carried out in common areas, lounges or in residents' bedrooms.

5.79 Mobility scooters involved in a fire can release large volumes of smoke and generate significant heat outputs in a very short period of time. If mobility scooters stored in the common escape routes are involved in a fire, there is significant potential that escape routes will become impassable and residents could be placed at significant risk in the event of a fire.

5.80 Therefore, appropriate measures must be considered within the fire risk assessment to address the risks posed by the storage and charging of mobility scooters.

5.81 The provision of purpose-designed external storage or specifically adapted rooms inside premises for the safe storage and charging of one or more mobility scooters might be an option. Ideally, these should not be rooms located directly off a corridor that serves bedrooms.

5.82 Internal rooms used for the storage and charging of mobility scooters would, as a minimum, need to be enclosed in fire-resisting construction, and be fitted with fire-resisting-, self-closing- doors and automatic fire detection.

The charging of mobility scooters in individual residents' rooms should not be permitted, other than in exceptional cases, owing to the additional risks to residents.

5.83 Further advice and information on the safe use, storage and charging of mobility scooters can be found in the NFCC document Fire Safety in Specialised Housing [2].

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6. DETERMINING THE APPROPRIATE MEASURES TO PROTECT PEOPLE FROM A FIRE

6.1 Detailed guidance on determining the appropriate measures to protect people from a fire is given in Section 6 of *Principles of Fire Safety*.

6.2 After a fire starts, there is a critical window of time, during which it is safe for people to evacuate, or be supported to evacuate, to a place of safety or relative safety such as an adjacent sub-compartment corridor (see section 8).

6.3 In premises to which this Guide applies, the safe evacuation time is therefore supported by the provision of protected escape routes, sub-compartmentation and compartmentation, other than in very small premises in which some of these measures may not always be required.

6.4 Similarly, the safe evacuation time is also supported by the provision of an automatic fire detection and alarm system to provide early warning of a fire, and also by the relevant number of staff to assist with evacuation of residents who cannot self-evacuate.

6.5 However, it is known that people in care environments, including older people and young children, many of whom will rely on staff assistance to evacuate, may still require longer evacuation times. The time required for evacuation is particularly increased if occupants have reduced mobility, cognitive issues, sensory impairments or are affected by certain medication. If the building has an automatic water fire suppression system (sprinklers) this will further increase the available safe evacuation time as a fire will normally be controlled by the sprinklers and less likely to develop. As noted in Section 3, in residential care homes, this significant increase in the safe evacuation time makes a major contribution to the safety of residents and staff in event of a fire.

The fundamental objective of fire protection measures, required for compliance with the Fire Safety Order, is to ensure that, when a fire occurs, everyone can safely reach (with assistance where necessary) a place of relative safety, or evacuate the building, before escape routes are compromised by smoke and fire.

6.6 In a fire risk assessment, consideration therefore needs to be given to whether the evacuation times have been determined accurately given the protection to escape routes, number of staff, number of residents and their dependency levels (See Section 8 and the annex). It also needs to assess if the evacuation times have been demonstrated to be effective and sufficient to enable the safe evacuation of residents by reference to the benchmarks in Section 8 and the annex, and during practical drills or trials.

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6.7 This also underlines the importance of formulating and disseminating fire procedures (see Sections 8 and 18), even for the smallest premises, and ensuring a high standard of training of staff (see Section 19), as well as carrying out periodic, realistic fire drills (see Section 20).

6.8 Further guidance on automatic fire detection is provided in Section 7. Guidance on automatic fire suppression is provided in Section 13. Guidance on smoke control is given in Section 14.

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7. FIRE ALARM SYSTEMS

Introduction

7.1 Detailed guidance on fire alarm systems can be found in Section 7 of *Principles of Fire Safety*.

7.2 All premises within the scope of this Guide require an electrically operated fire alarm system that will automatically detect a fire, warn occupants, and, other than in very small premises, indicate the location of the fire. The type and extent of the fire alarm system that is required in a particular building will be subject to the findings of your fire risk assessment.

7.3 In residential care premises, comprehensive coverage of fire detection will be needed because of the vulnerability of occupants, particularly when they are asleep. Guidance on this is included below by reference to the system Categories in BS 5839-1 and BS 5839-6, as appropriate.

Categories (and grade) of fire alarm system

7.4 Table 1 below gives guidance on the Categories (and, where appropriate, the Grade) of system for typical premises. However, this is only provided as a benchmark to assess the suitability of the fire alarm system in any premises.

Type of Premises	Category/Grade of System
Small homes of no more than ground and first floor, with up to four residents, who do not require assistance to escape in the event of a fire.	Grade D1 Category LD1[1] (as defined in BS 5839-6)
All other homes	L1[2] (as defined in BS 5839-1)

Table 1: Categories (and grades) of fire alarm system

Footnotes:

1 Fire detectors may normally be omitted from roof voids unless there are specific significant fire hazards in the voids, such as gas boilers or electrical equipment for photovoltaic systems, or large quantities of combustible storage.

2 In residential care homes in which residents are likely to need assistance from staff to evacuate in the event of fire, any new fire alarm systems should be of the addressable type if there are facilities for more than 10 people to sleep. Existing non-addressable systems may remain in place until there is a need for their replacement.

Manual call points

7.5 Other than in small premises, for which domestic smoke alarms are permitted by Table 1, manual call points should be sited at every exit from a storey and at final exits from the building, including those that are not fire exits. However, where two exits are close together, it may not be necessary in every case to provide call points at both exits.

Automatic fire detection

7.6 In all areas in which the system category necessitates the provision of automatic fire detectors, smoke, or multi-sensor, detectors should be used, other than in rooms in which these cannot be used because they would cause an undue number of false alarms (e.g. kitchens); in these areas, heat detectors should be used.

Other than in small premises for which Table 1 would permit the use of domestic smoke alarms, the areas in which smoke, or multi-sensor, detectors are installed should include all roof voids. Where there are multiple zones on the uppermost storey of the premises, zoning of fire detection within the roof voids should mirror the zoning on the uppermost storey, following lines of sub-compartmentation.

7.7 In a Category L1 system, BS 5839-1 permits omission of fire detectors in small cupboards of less than approximately 1 m^2 in area, provided that these are areas of low fire risk. For the purpose of this current Guide, cupboards designed to contain combustible materials, or electrical equipment should not be regarded as an area of low fire risk.

7.8 Similarly, for compliance with the recommendations of BS 5839-1 in respect of a Category L1 system, fire detectors can be omitted from bathrooms, shower rooms and toilets, again provided that these are rooms of low fire risk.

7.9 However, in many residential care homes, electric bath hoists are provided in bathrooms and are a potential source of a fire. Ideally, automatic fire detection should be provided in these bathrooms. Where the environment of the bathroom is considered unsuitable for fire detection, the door of the bathroom should be fire-resisting- and self-closing.

Staff alarms

7.10 A staff alarm arrangement is one whereby, in the event of operation of a single smoke detector, methods are adopted to alert staff, without alerting residents and visitors, pending an investigation by staff (i.e. fire alarm sounders do not immediately operate throughout the premises).

In the majority of residential care homes, a staff alarm arrangement is inappropriate; operation of the fire alarm system should result in an immediate audible alarm throughout the premises to ensure that all staff and visitors are alerted.

In homes in which the majority of residents can self-evacuate independently and are expected to do so when the fire alarm system operates, a staff alarm arrangement should never be adopted.

7.11 If, to avoid disruption from false alarms triggered by smoke detectors, a staff alarm arrangement is considered necessary, the arrangement should incorporate various safeguards. Normally, these should comprise:

- the immediate summoning of the fire and rescue service by staff, with an immediate back up call to the fire and rescue service, from an alarm receiving centre (see below), without a delay pending investigation of the alarm signal (see also Section 18)
- sufficient staff at all times to manage an investigation
- an immediate general alarm if the fire alarm system is triggered by a manual call point, a heat detector or a sprinkler system
- a general alarm if a second smoke detector operates during the investigation period
- a limit to the time for investigation, after which, if the fire alarm system is not silenced or reset, a general alarm signal is automatically given. A typical maximum time for investigation is around three minutes
- any method of alerting staff should be highly reliable. For example, if a paging system is used, it should be suitably designed as a fire warning system, such as by compliance with the recommendations of BS 5839-1 for paging systems that alert people who are deaf or have a hearing impairment

Fire alarm sounders

7.12 If the fire alarm system is intended to rouse residents from sleep (e.g. because they are expected to evacuate without the assistance of staff), the sound pressure level at every bedhead should be at least 75 dB(A). In general, it is very unlikely that this can be achieved in a bedroom unless there is a fire alarm sounder within the bedroom itself.

7.13 If the fire alarm system is not intended to rouse residents from sleep (because residents are dependent on staff to provide assistance in evacuation), the sound pressure level need only be sufficient to alert staff, so should be at least 60 dB(A) in most normal-sized bedrooms, or 65 dB(A) in larger bedrooms (e.g. of more than 60 m^2 in area).

7.14 In all other areas, the sound pressure level should be at least 65 dB(A), or 5 dB above any background noise likely to persist for longer than 30 seconds, whichever is the greater. (Noise of running water in bathrooms and shower rooms can be ignored.) This minimum level is reduced to

60 dB(A) in small rooms of less than 60 m^2 and stairways.

7.15 Other than in premises with simultaneous evacuation, if it is certain that all staff have been made aware of a fire (e.g. because all staff in the premises have assembled at the fire alarm system control and indicating equipment), the fire alarm system can be silenced (see also Section 18).

Interfaces with other systems

7.16 It is common, in residential care premises, for the fire alarm system to be interfaced with other fire safety systems and equipment to satisfy the fire safety strategy for the building.

7.17 For example, when the fire alarm system operates, there is often a need for lifts to return to ground level, fire doors to close, electronic locking to release and air handling systems to close down.

7.18 For guidance on automatic closing of held-open fire doors and release of electronic locks, see Section 8 of this Guide. It should be noted that electronic locks fitted to doors on escape routes should normally release in the event of the fire alarm signal or any fault on the fire alarm system. However, consideration should be given to whether this arrangement is inappropriate where it could result in risk to residents (e.g. those living with dementia, who might be at risk if they pass through the doors without supervision).

Connection to an alarm receiving centre ("ARC")

7.19 For compliance with Article 15 of the Fire Safety Order, in any building, there must be suitable arrangements for staff to summon the fire and rescue service in the event of fire. In the case of a residential care home, this action should be taken immediately on operation of the fire alarm system (see Section 18). Staff training should be sufficient to ensure that this action is taken by staff (see Section 19).

7.20 However, it is known that there might be a tendency for staff (incorrectly) to delay this action, pending investigation of the alarm signal.

Case study

There has been previous reference in this Guide to the multiple fatality fire at Rosepark Care Home in 2004. After the fire alarm system operated at the time of the fire, there was a delay of nine minutes before staff summoned the fire and rescue service.

The Fatal Accident Inquiry into the 14 deaths concluded that the delay in arrival of the fire and rescue service might have resulted in four of the deaths.

Consequently, BS 5839-1 recommends that, in all residential care homes, there is a facility for automatic transmission of fire alarm signals to an ARC.

While, strictly, BS 5839-1 applies to the installation of new fire alarm systems, the above recommendation has been incorporated within BS 5839-1 since 2013,

so, as good practice, the facility should already be present in many residential care homes. It is also expected that any replacement or new fire alarm systems installed in existing or new residential care homes are provided with this facility.

However, it is strongly recommended that this facility be provided in **all** existing residential care homes, unless, on the basis of a fire risk assessment, there is a high certainty that staff will summon the fire and rescue service immediately on operation of the fire alarm system (e.g. on the basis of staff numbers, fire procedures and staff training).

7.21 Even where a facility is provided for transmission of alarm signals to an ARC, the primary method of summoning the fire and rescue service still comprises a call from staff on the premises; there should be no suggestion that the transmission facility precludes the need for an immediate call from staff.

Zone plan

7.22 In all buildings with fire alarm control and indicating equipment ("CIE") (i.e. all buildings, other than those in which, by virtue of Table 1, the use of domestic smoke alarms is acceptable), an accurate and readily understandable zone plan must be provided adjacent to the CIE, unless, in the case of small premises, the entire premises comprise a single zone. This is necessary even in the case of addressable fire alarm systems.

It should be noted that a "zone chart", comprising a list of zones and a description of the associated areas is not adequate for this purpose.

Case studies

It is known that, in more than one fatal fire in care premises, some or all of the deaths might have been avoided if a zone plan had been available to staff, who were confused as to the location of the fire.

False alarms

7.23 Excessive false alarms are a particular concern in residential care premises, given the increased risk if there is failure by staff to respond to genuine alarms appropriately.

7.24 For example, a common source of false alarms in bedrooms is steam from the en suite bathroom activating a smoke detector. Certain multi-sensor fire detectors can be less prone to this, but, equally, careful siting of detectors can also help.

7.25 Possible measures to minimise false alarms, or their consequences, include:

- Use of multi-sensor fire detectors in bedrooms; certain multi-sensor fire detectors are less prone to false alarms from steam issuing from en-suite bathrooms than smoke detectors

- Careful siting of smoke (and multi-sensor) detectors, away from cooking facilities

- Consideration of improved ventilation of en-suite bathrooms

- Retrofitting transparent covers to manual call points (if these are not already provided) to minimise casual malicious operation

- Fitting a guard around call points where they are prone to damage (e.g. by medicine trolleys)

7.26 Guidance on reducing false alarms can be downloaded from the website of the Fire Industry Association at www.fia.uk.com.

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8. MEANS OF ESCAPE FROM FIRE

8.1 Detailed generic guidance on means of escape in all types of premises is given in Section 8 of *Principles of Fire Safety*. In the current section of this Guide, guidance is given on such measures that are specific to residential care premises.

Means of escape for disabled people are subject to separate guidance in this suite of guidance documents. However, many residents in care homes may require the assistance of staff to evacuate. Accordingly, guidance on means of escape for these residents is provided in this section.

Dependency levels

8.2 The number and dependency of residents will influence the assessment of means of escape. Residents' capability, awareness, cognitive capability, mobility and their reliance on staff to evacuate will be a major factor in determining the adequacy of escape routes and any supporting fire protection measures.

8.3 In general, the level of dependency of residents in most care homes will fall into one of three categories:

8.4 **Independent:** Residents are able to evacuate without the assistance of staff or others.

8.5 **Dependent:** Residents may have mobility difficulties, cognitive difficulties or medical issues, such that they are unable to evacuate without the assistance of staff. This category will apply to the majority of residents in residential care homes.

8.6 **High dependency**: Residents who are totally dependent on staff to evacuate, and, to do so, may require the assistance of two or more staff members.

8.7 Note: In care homes with a mix of dependency levels, your assessment should consider the worst-case scenario for evacuation from each sub-compartment (see below), which should be based on the highest appropriate dependency level.

The dependency levels of residents may well vary over time. Residents who may initially have been classed as independent may, if their health deteriorates, over time, become increasingly dependent on staff for assistance. It is, therefore, essential that management and staff constantly monitor and assess dependency levels and take these into account in planning.

8.8 Each individual resident should be considered in respect of their location to minimise, if practicable, the effects of their dependency on evacuation in the event of a fire. For example, steps may be taken to locate high dependency residents in rooms that make evacuation easier, such as on the ground floor or in smaller sub-compartments.

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Evacuation strategy

8.9 The dependency level of residents in a residential care home will determine the most appropriate strategy for their evacuation.

8.10 In general, evacuation strategies for residents will comprise one of the following two arrangements:

8.11 **Simultaneous evacuation (of all occupants, including staff, visitors and residents)**: This strategy will be appropriate where all residents in a residential care home fall into the independent category.

8.12 **Progressive horizontal evacuation (of residents)**: This strategy will be appropriate for all other care homes, in which residents fall into the dependent and high dependency categories; this will apply to most residential care homes. Normally, in this case, simultaneous evacuation will apply to all other occupants (e.g. domestic and ancillary staff, visitors, contractors, etc.), except staff involved in evacuation.

8.13 The previous version of this Guide defined a further evacuation strategy, described as delayed evacuation. That Guide advised that this was applicable in exceptional cases, in which, by virtue of enhanced levels of structural fire protection to individual bedrooms, certain very high dependency residents could remain in these rooms (e.g. if, because of medical conditions or treatments, immediate evacuation was not practicable).

8.14 In such circumstances, one member of staff was to remain with each such resident, enabling the residents to remain in their rooms until the fire was extinguished, or they could be prepared for evacuation.

8.15 This is not now regarded as a viable strategy, so delayed evacuation is not considered in this current Guide. For residents to whom this would, previously, have applied, every effort should be made adopt progressive horizontal evacuation, if necessary, seeking further specialist advice.

<u>Simultaneous evacuation</u>

8.16 In the case of simultaneous evacuation, all occupants of the premises evacuate to a place of ultimate safety outside the premises as soon as the fire alarm system operates.

<u>Progressive horizontal evacuation ("PHE")</u>

8.17 Figure 2 shows the design principles of a residential care home in which the intended evacuation strategy is PHE.

8.18 As shown in Figure 2, each storey of the premises is divided into "*sub-compartments*". Each sub-compartment is separated from the adjacent sub-compartment by construction, including cross-corridor doors, that will afford a fire resistance of at least 30 minutes; on the top storey, the line of

fire resistance between each sub compartment must extend through any roof void above.

8.19 Each sub-compartment should have at least two alternative exits, either to an adjoining sub-compartment, a door to a protected stairway or a final exit from the building. Where a sub-compartment does not have either a final exit or direct access to a protected stairway (e.g. Sub-compartment B in Figure 2), each adjoining sub compartment should then have a final exit or direct access to a protected stairway (see Sub-compartments A and C).

8.20 Sub-compartments should be designed to provide sufficient capacity to accommodate the number of occupants who will need to use them. For this purpose, a sub-compartment should have sufficient capacity to accommodate its normal occupants and the occupants of the largest adjoining sub-compartment.

8.21 Any ventilation system serving more than one sub-compartment should be fitted with fire/smoke dampers, actuated by smoke detection, to maintain the integrity of the sub compartments. Similarly, doors between sub-compartments should be fitted with smoke seals.

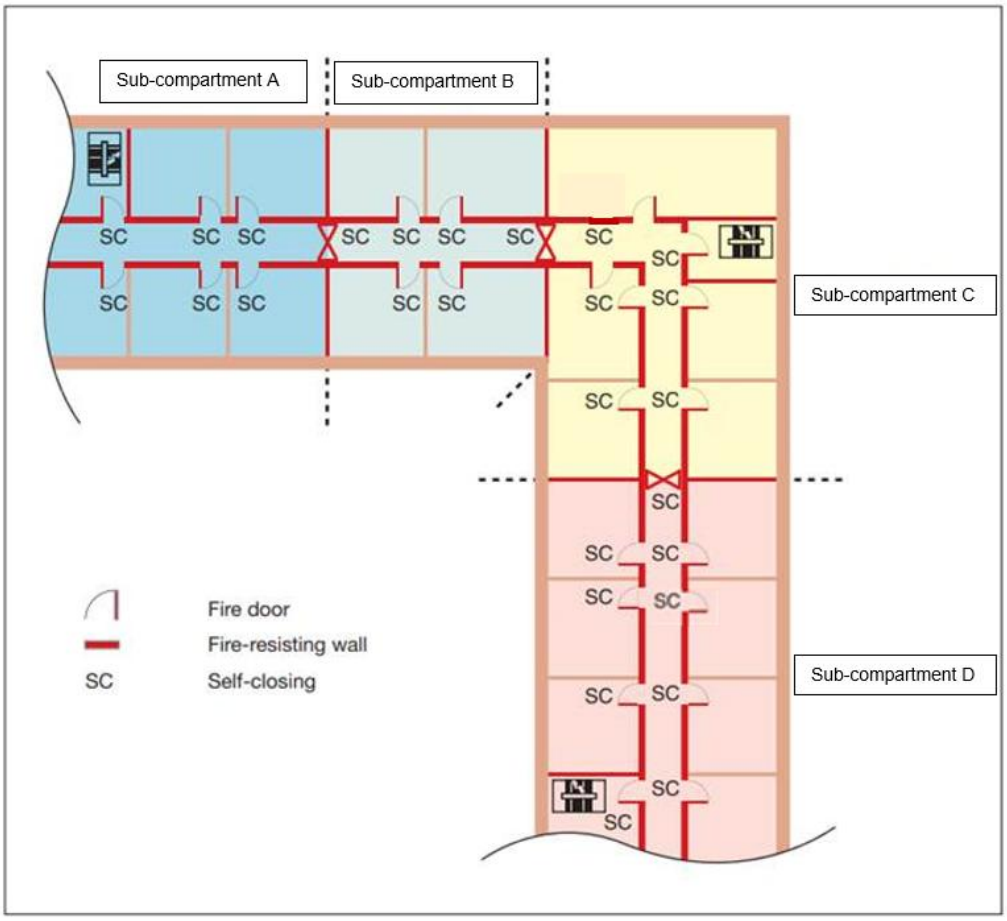


Figure 2: Sub-compartmentation of a storey

8.22 If a fire occurs in one sub-compartment, residents can be moved from that sub compartment- into the adjoining sub-compartment, where they can wait in temporary safety, within the building, for staff to continue their progressive evacuation to a place of ultimate safety, should this be necessary. In a large building, there may be several sub-compartments within a single storey.

8.23 The intention is to avoid moving occupants vertically, if possible, though this may, ultimately, become necessary (e.g. if the fire continues to grow and/or there is spread of smoke between sub-compartments).

8.24 Upon discovering a fire and a warning being given, progressive evacuation will involve the following procedures (see also Section 18):

- determine the fire location and who is at immediate risk
- assess the need to evacuate the sub-compartment involved
- assess the need to evacuate other persons at risk
- undertake progressive horizontal movement of residents to an adjoining sub compartment
- assess the need to carry out further progressive horizontal movement and, if required, on upper floors, vertical movement to a further place of relative safety or a place of ultimate safety outside the building

8.25 Note: Residents must not be left in sub-compartments for evacuation by the fire and rescue service. The responsibility for the safe evacuation of residents ultimately rests with the staff.

Number and size of sub-compartments

8.26 The appropriate number and size of the sub-compartments need to be determined by taking several key factors into account:

- The dependency level of residents
- The travel distance to the adjoining sub-compartment
- The minimum number of staff available at any time (e.g. during the night)
- The presence or absence of automatic fire suppression
- The location and number of stairways
- The number of persons in any bedroom, which should not normally exceed two, unless sprinkler protection is provided

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There are three sequential steps in ensuring that the number and sizes of sub compartments- are adequate, namely:

Step 1: Limit the number of residents within a single sub-compartment, unless the premises are sprinklered.

Step 2: Limit the maximum travel distance in any sub-compartment.

Step 3: Ensure that every sub-compartment can be evacuated quickly enough.

It should be noted that these three steps are not alternatives. All three should be applied sequentially to ensure that each one is satisfied.

8.27 Each of these steps is discussed below and are shown in the flow chart in Figure 3, along with possible remedial measures if the outcome of any step is unsatisfactory.

Number of residents within any sub-compartment

8.28 Responsible Persons must demonstrate they have enough staff awake at all times to evacuate based on the number of dependent or high dependency residents accommodated within any sub-compartment.

Case study

By way of further reference to the 14 deaths that occurred at Rosepark Care Home in 2004, the Fatal Accident Inquiry determined that the number of residents in the largest sub-compartment, which was 14 residents, was too many for an effective evacuation.

It was determined that the sub-compartment should have been subdivided and that an analysis of evacuation arrangements, with four staff on duty, would have revealed that it would have taken too long to have evacuated that sub compartment. The view of the Fatal Accident Inquiry was that this issue was so important that it should have been obvious to a fire safety professional, identified in the fire risk assessment for the premises and given a high priority in the Action Plan.

It was considered by the Fatal Accident Inquiry that other reasonable precautions open to management were to take fewer residents, move highly dependent residents to other locations, install a sprinkler system or employ additional staff on the night shift.

It was also considered that, had there been effective sub-compartmentation, seven of the deaths might have been avoided.

It should be noted that the above figures represent the **maximum** number of residents. However, after limiting the number of residents within any sub compartment, further overriding governing factors are the maximum travel distance within any sub compartment and, ultimately, the foreseeable time for evacuation of a sub compartment of fire origin (see below). In some cases, this will necessitate further restriction on the number of residents accommodated within a single sub compartment.

Travel distance

8.29 Detailed guidance on travel distance, and its measurement, is given in Section 8 of *Principles of Fire Safety*.

8.30 In a residential care home, travel distance should be measured from any point in a storey (e.g., the furthest corner of a bedroom) to a place of relative safety, comprising the nearest of any of the following:

- a door to an adjacent sub-compartment, from which there is a storey exit or a final exit
- a door to a protected stairway
- a final exit from the building

8.31 Table 3 sets out recommended travel distances for the premises to which this Guide applies. It should be noted that the recommended travel distance depends on two factors, namely the (highest) dependency of any residents within a sub-compartment and whether there is an appropriate automatic fire suppression system.

It should be understood, however, that these distances are flexible and may be increased or decreased depending upon the level of risk and other general fire precautions identified in your fire risk assessment.

8.32 It should also be noted that compliance with these travel distances does not preclude the need for the evacuation time of a sub-compartment to be evaluated and to be reasonable, as described below.

Dependency of resident	Suppression system	Single direction distance (m)	Maximum distance* (m)
High dependency	No	9	18
	Yes	12	25
Dependent	No	12	25
	Yes	15	32
Independent		15	32

*This includes any single direction distance, including within bedrooms

Table 3: Recommended travel distances

8.33 In addition to the above recommended limitations, it is recommended that the overall travel distance from any point on a storey to the nearest door to a protected stairway or final exit from the building should not exceed 64 m.

8.34 In non-sleeping areas, such as day rooms, function rooms, offices or service areas, that are separate from the sleeping accommodation, the travel distances in the relevant sector-specific guides can be used.

Time for evacuation of a sub-compartment

The overriding factor in ensuring the safety of residents is the time needed to move the residents from a sub compartment- of fire origin into the temporary safety of an adjoining sub compartment.

Determining the foreseeable time for evacuation

You should conduct a simulated evacuation of each sub-compartment and assess whether the evacuation time of each sub-compartment is reasonable. A 'worst case scenario' should always be simulated to give an accurate reflection of the longest time it would take to evacuate any sub-compartment. This is usually when the lowest number of staff is available (e.g. at night when staff levels are usually at their lowest and residents are asleep).

8.35 According to circumstances, residents may, or may not, be involved in simulated evacuations. Rather than residents, other members of staff, who are not involved in the trial, can role play residents of characteristics that are similar to those who are accommodated in the sub-compartment; some realism is needed in this respect, so that estimated evacuation times are not unduly optimistic.

Acceptable evacuation time

8.36 In the previous version of this Guide, it was recommended that, at least as a starting point, the objective should be that every sub-compartment could be evacuated in 2.5 minutes. For sub-compartments in which high dependency, or even some dependent, residents are accommodated, this time is now regarded as wholly unrealistic.

8.37 The acceptable evacuation time is related solely to the likely time for escape routes within a sub-compartment of fire origin to become untenable. Your fire risk assessment should address this issue, considering the foreseeable evacuation time, based on realistic trials, as described above.

8.38 It is acknowledged that, even for many specialists in fire safety, the time for an escape route to become untenable can be very difficult to estimate, and RPs need some form of guidance as to whether the evacuation time determined in their trials is, or is not, acceptable.

8.39 It is also acknowledged that, from experience of fire risk assessments for residential care homes, the matter of foreseeable evacuation time of sub-compartments is commonly given inadequate consideration; there is also a known reluctance for fire risk assessors to advise RPs of the need for additional staff at night (or, often more cost effectively, the need for installation of automatic fire suppression).

8.40 There is a range of benchmark safe evacuation times contained within the annex. Here, there is also guidance on how to conduct planning and how to determine benchmark safe evacuation times.

The above times are not intended to be hard and fast, nor is it implied that they have spurious accuracy. Efforts should be made to ensure that the evacuation time of any sub compartment is as short as reasonably practicable. It should also be borne in mind that there is a need to ensure that the sub-compartment of fire origin is evacuated before firefighters are ready to carry out firefighting in the room of fire origin.

8.41 The guidance on evacuation times is intended to apply to bedrooms, beyond any bedroom of fire origin, within a sub compartment in which the escape route comprises a protected corridor. Clearly, evacuation of a resident from a bedroom of fire origin, if it is safely to be achieved, would need to be carried out in a much shorter time. **The suggested evacuation times relate to all other residents within the sub compartment on the assumption that the fire will be contained within the bedroom of fire origin.** For more information on evacuation times, please see the annex.

8.42 It should be noted that the use of FD 60S doors, rather than FD 30S doors is unlikely to constitute material mitigation for unacceptably long evacuation times, as the significant issue is the passage of smoke into the escape routes, rather than resistance to the passage of fire.

It cannot be stressed strongly enough that there must be sufficient staff available to ensure that a reasonable evacuation time can be achieved in every sub compartment-. It should be noted that staff numbers agreed by the Care Quality Commission (CQC) for the purpose of general care may not be sufficient for this purpose.

8.43 If you conclude that the worst-case evacuation time from any sub-compartment to an adjoining sub-compartment is excessive, the following options should be considered:

- reducing the size of the sub-compartment(s)
- providing additional staff to assist with the horizontal evacuation
- accommodating fewer residents in the sub-compartment
- providing an appropriately designed automatic fire suppression system

8.44 We have carried out a simulation and have attached an annex to this guide which outlines a range of scenarios.

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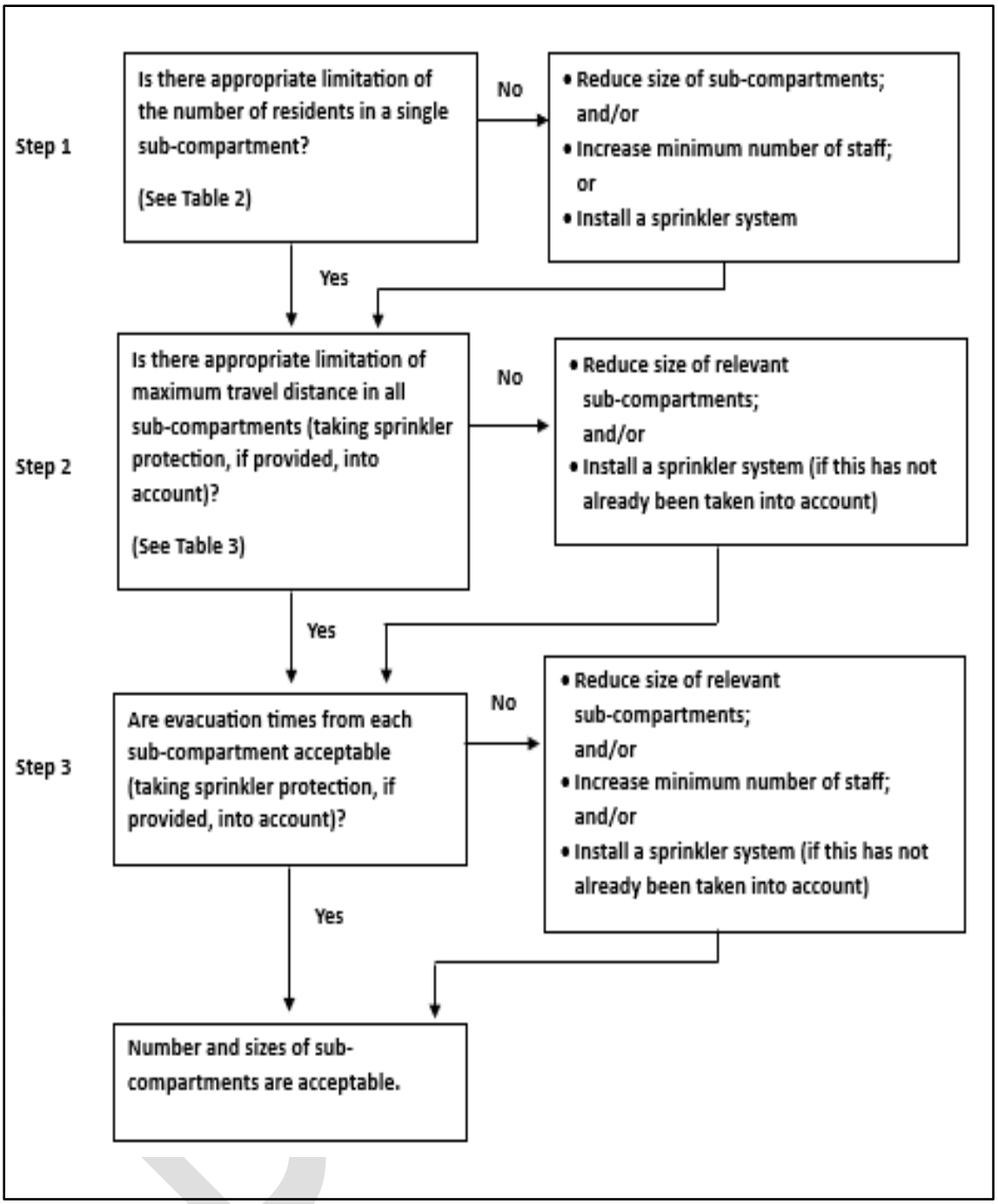


Figure 3: Assessment of number and sizes of sub-compartments

Number and size of sub-compartments: Worked example

8.45 A residential care home, with dependent residents, has three members of staff on duty at night. There are 10 persons in each sub-compartment. The maximum travel distance in the sub-compartments is 30 m. A trial evacuation shows that the evacuation time in a number of sub compartments is 12 minutes.

Step 1

8.46 The number of persons in each sub compartment is too great for the number of staff on duty at night.

8.47 This can be addressed by:

- Reducing the maximum number of persons in each sub-compartment to seven, by reducing the size of the sub-compartment. This is now acceptable with three members of staff on duty; or
- Increasing the minimum number of staff on duty to four; or
- Installing a sprinkler system.

Step 2

8.48 The original travel distance of 30 m within the sub-compartments was too great. If the compartment size has been reduced in Step 1, the travel distance may now have been reduced, so that it does not exceed 25 m, which would be acceptable.

8.49 Alternatively, a sprinkler system may have been installed to permit 10 or more persons within any sub-compartment. In this case, as the maximum suggested travel distance is now 32 m, a travel distance of 30 m is acceptable.

8.50 Otherwise, the sub-compartment size needs to be further reduced or, alternatively, a sprinkler system could be installed.

Step 3

8.51 The original evacuation time of 12 minutes was too long.

8.52 It may have been adequately reduced in Step 1 by the addition of a single member of staff. Alternatively, it may have been reduced by a reduction in the size of the sub compartments in Steps 1 or 2.

8.53 If a sprinkler system had been installed in Steps 1 or 2, an evacuation time of 12 minutes would be acceptable.

8.54 Otherwise, the time needs to be reduced by a further reduction in the size of the sub compartments or additional staff or installation of a sprinkler system.

8.55 Figure 4 shows this example as a flowchart, taking the case of sprinkler protection as a means of making the number of sizes of sub-compartments acceptable.

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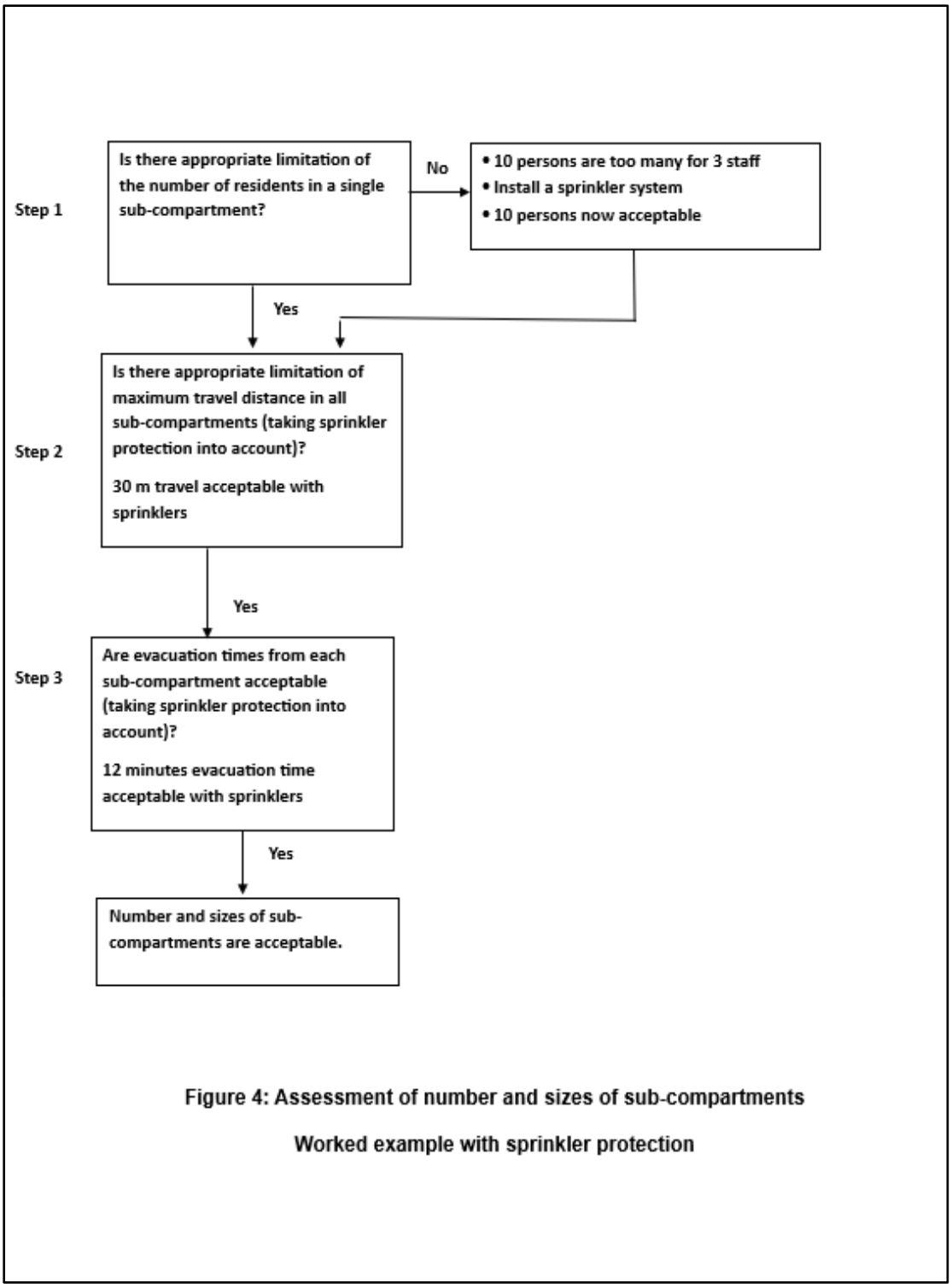


Figure 4: Assessment of number and sizes of sub-compartments

Worked example with sprinkler protection

8.56 While it will not always be the case, it should be noted that, in this particular example, by selecting a sprinkler system in step 1, no further work will be required to satisfy steps 2 and 3.

What is, and is not, acceptable as means of escape from residential care homes?

8.58 Attention is drawn to guidance in *Principles of Fire Safety* as to what does and does not constitute adequate means of escape from fire. Some specific examples are set out in the paragraphs below.

Escape stairways and corridors in residential care homes should be constructed as protected routes enclosed in fire-resisting construction, within which all doors are fire-resisting and self-closing, **including doors to bedrooms**, or kept locked shut. It is inappropriate to rely on a procedure whereby staff will attend and close doors (e.g. bedroom doors) as an alternative to fitting self-closing devices.

Case studies

***There has been previous reference in this Guide to the multiple fatality fire at Rosepark Care Home in 2004**.*

At the time of the fire, a number of self-closing devices on bedroom doors had been removed or disconnected (supposedly at the request of residents). While these had not been required for compliance with the then building regulations, the fire and rescue authority had insisted that overhead door closing devices be fitted before the authority would issue advice to the care registration authority to the effect that fire precautions were adequate for registration of the home.

The absence of effective self-closing devices had been accepted by the fire risk assessor. The determination of the Fatal Accident Inquiry was that a suitable and sufficient fire risk assessment would have considered how bedroom doors would be closed in the event of fire.

It was determined that a competent fire risk assessor, experienced in fire safety, would have recommended that doors be self-closing and would have recommended a suitable device that would permit doors to stand open but close automatically in the event of fire. It was also determined that it would have been a reasonable precaution for the management of Rosepark to have fitted devices to ensure that bedroom doors were closed automatically in the event that the fire alarm sounded.

It was determined that, based on a full scale reconstruction of the fire by the Building Research Establishment, if all bedroom doors (none of which were fire-resisting) had simply been closed at the time of the fire, the doors would have withstood the fire in the corridor for sufficient time for the fire to die back from lack of air, so that fire penetration into the bedrooms would not, in the absence of some exceptional circumstances, have occurred. This might have prevented the deaths of a number of residents.

***In 2011, an RP appealed to the Secretary of State for determination of a dispute between the RP and the fire and rescue authority**. There was a disagreement between the two parties as to whether there was a need to fit self-closing devices to bedroom doors in a nursing home, or whether a management*

solution, involving staff responding to a fire alarm signal and closing the bedroom doors could deliver an equivalent level of safety.

The RP supported their case with computer modelling that purported to show that the time for staff intervention to close doors would be such that there would, at that time, be an adequate height of corridor clear of smoke. This was not accepted by the fire and rescue authority.

The RP also noted that the absence of these self-closing devices had been approved by a building control body at the time of construction of the premises. However, advice from the Chief Fire and Rescue Adviser to the Secretary of State noted that this did not preclude subsequent enforcement action under the Fire Safety Order.

It was determined by the Secretary of State that the self-closing devices were necessary for compliance with Article 14(2)(b) of the Fire Safety Order.

The full text of the determination can be found here.

Determinations are specific to the case in question, but this case is of value in relation to the matter of self-closing devices on bedroom doors.

8.59 The performance of fire resisting construction and fire doors to protect escape routes in residential care homes is vital to the safety of residents. Risk assessors should satisfy themselves that any fire resisting construction and doors appear to afford a minimum of 30 minutes' fire resistance. In most situations, fire doors opening onto protected stairways and corridors, doors forming sub-compartments and doors to bedrooms will require to be fitted with smoke seals.

8.60 It is important that the walls or partitions enclosing a protected stairway, a protected corridor, or dividing sub-compartments, extend to the soffit of the floor slab above. Within any ceiling void, it should be ensured that any penetrations for services between the void and adjacent accommodation are fire stopped.

8.61 Lowering lines, self-rescue devices, folding ladders and chutes are never suitable as means of escape.

8.62 Fixed vertical and raking ladders, or floor and wall hatches, are only suitable for use by a limited number of able-bodied staff for escape from plant rooms or similar areas.

8.63 The use of window exits should not form part of the means of escape for residents from premises covered by this Guide. However, in exceptional cases, if it is not reasonably practicable to provide other means of escape, window exits may be acceptable as an escape route from staff rooms, plant rooms or similar ancillary areas on the ground floor.

8.64 Lifts should not be used as means of escape, other than in the case of specially designed evacuation lifts (or certain modern lifts designed for use

by the fire and rescue service), which are only suitable, under the control of staff, to facilitate escape for disabled people.

8.65 External stairways, spiral and helical stairways are not normally considered as suitable means of escape for residents or visitors. However, in some existing premises, these may have been provided as the only practicable alternative means of escape (e.g. from a sub-compartment). The use of these for evacuation for dependent and high dependency residents is particularly undesirable and should be avoided, if possible.

8.66 Where external stairways are accepted, they should be protected from a fire in the building, and, ideally, be protected from the weather, as the treads may become slippery (e.g. due to algae, moss, ice or bird droppings). If there is no enclosure to protect the stairway, it must be ensured that the stairway is regularly maintained (see Section 21).

Escape routes

8.67 Escape routes should be kept free of any obstructions and trip hazards and should not contain any significant fire hazards.

8.68 Where there is a change of level within an escape route, particularly involving steps, it is important that this is made clear to those using the route and that there is adequate illumination at the change of level.

8.69 Ramps may be necessary at changes of floor level for the emergency evacuation of residents in wheelchairs. However, they are not necessarily safe and convenient for ambulant disabled people. For example, some people who can walk, but have restricted mobility, find it more difficult to negotiate a ramp than a stair. Unless, therefore, a ramp is short, has a shallow gradient and the rise is no more than the minimum that can be provided by two risers, steps should normally be provided as well as a ramp.

<u>Exit capacity</u>

8.70 Detailed guidance on calculation of an exit capacity is given in Section 8 of *Principles of Fire Safety*.

8.71 In most premises to which this Guide applies, the capacity of fire exits and stairways is unlikely to impose a constraint on the number of occupants for whom accommodation is provided.

8.72 Where the effective width of protected stairways is less than 1200 mm, it should be ensured that the width of any stairway used as an escape route is suitable for the number of people who need to use it, together with any evacuation aids, (such as evacuation chairs) that staff may need to use for the safe evacuation of dependent residents.

<u>Number of protected stairways</u>

8.73 Small residential care homes of ground and first floor, with no more than four bedrooms, may be provided with a single protected stairway, and a single compartment on the first floor, subject to acceptable travel distance and simultaneous evacuation.

8.74 In all other residential care homes, at least two stairways should be available for escape from upper floors. Additional stairways may be required to provide adequate means of escape from upper floors to satisfy travel distances.

Protection of protected stairways

8.75 All protected stairways that form part of means of escape should be approached from either a protected corridor or a protected lobby, so that there are always two fire-resisting doors between any room and the stairway (i.e. the door of a room and the door to the stairway).

8.76 However, in small care homes with a single stairway, doors of bedrooms (and other rooms that are not of high fire hazard) may lead directly onto the stairway at first floor level. Room doors then need to be fire-resisting and effectively self-closing to a good standard, because there is only one fire-resisting door between a room and the stairway.

Need for stairway bypasses

8.77 Where more than one stairway is required in a building, no one should need to pass through a protected stairway to reach another stairway; otherwise, the two stairways are not true alternative escape routes.

8.78 To avoid this situation, some premises have bypass routes around a stairway, comprising, for example:

- interconnecting doors between rooms adjacent to the stairway; the doors must then be available at all times
- where space permits, a bypass corridor around the stairway enclosure
- any other features that bypass the stairway, but are suitable as part of the escape route

8.79 However, bypass routes around stairways should not be provided through bedrooms. Nevertheless, in some (normally older) residential care homes, bypass routes through bedrooms may exist and have previously been accepted under relevant legislation.

8.80 These may, in exceptional circumstances, subject to the findings of the fire risk assessment, continue to be used if no alternative arrangements are reasonably practicable without considerable alterations to the premises. However, in refurbishments or alterations, if practicable, bypass routes through bedrooms should be discontinued.

8.81 Where existing bypass arrangements through bedrooms exist, great care needs to be taken to ensure that the route is always available and is suitable for those residents who may need to use it. In this connection, consideration needs to be given to any potential for interconnecting doors to be locked or obstructed.

Door hold-open devices for self-closing fire doors

8.82 Many older and disabled residents find it difficult to negotiate self-closing fire doors (e.g. bedroom doors and cross-corridor doors that separate sub compartments) during everyday use of the premises. This commonly leads to the doors being wedged or otherwise held open.

8.83 There may also be a legitimate need for bedroom doors to stand open, to some degree, to enable staff to check on the welfare of residents during the night.

8.84 These problems can be addressed by fitting suitable door hold-open devices that will release the doors automatically on operation of the fire alarm system, allowing the self-closing mechanism to close the doors.

8.85 Detailed guidance on door hold-open devices is given in Section 8 of *Principles of Fire Safety*.

8.86 The various forms of hold-open devices discussed in that section of the *Principles of Fire Safety* are generally suitable for use in residential care homes. These include electromagnetic hold-open devices, acoustically actuated hold-open devices, radio actuated- hold-open devices and free swing door closing devices, all of which are commonly used in residential care homes.

8.87 Free swing door closing devices are particularly suitable for use on bedroom doors in residential care homes, as they permit the door to stand open at any angle and provide no resistance to opening the door, but close the door automatically when the fire alarm system operates. Free swing door closing devices may be linked to the fire alarm system by wiring, acoustically or by radio.

If doors to protected stairways are held open, they must automatically self-close not only in the event of fire, but in the event of any fault on the fire alarm system. This means, for example, that acoustically actuated door release devices (and some radio-actuated devices) cannot be used for these doors.

8.88 In some residential care homes, it is normal practice for held-open fire doors to be closed at night by disabling the hold-open devices. This can be arranged to occur automatically at a pre-determined time, or by the use of a manual control.

8.89 Caution is required to ensure that, if a manual control is operated, the closing of the doors cannot injure any persons passing through the doorway. A warning sign to this effect should be erected close to any

central control provided for the purpose, as a reminder of the potential hazard.

Case study

In a residential care home in the Northeast of England, cross-corridor fire doors were normally held open, but were closed by use of a central manual control at 11pm.
On the evening in question, the control was operated at 10pm. At the time, an elderly and infirm lady was passing through the doorway. She was struck by the closing door, fell over and broke her hip. She died after surgery on the next day.

The local authority, which operated the care home, were fined for breach of the Health & Safety at Work, etc. Act 1974, and they paid undisclosed damages to the lady's family.

It is for this reason that BS 7273-4 [16] stresses the need for caution in the use of such controls and recommends the provision of the warning sign discussed above, which is described in BS 7273-4 as a "knockdown cautionary" (or "KC") sign.

8.90 Where it is considered that the sudden closure of cross-corridor doors (whether initiated by a remote manual control or automatic fire detection) presents a hazard to residents, a facility can be provided whereby there is a delay in closure of the doors. During the delay period, a local warning sounder operates in the vicinity of the doors, to warn of the impending closure. The delay period should not exceed 20 seconds.

Securing fire exits

8.91 Advice on acceptable means for securing fire exits can be found in Section 8 of the *Principles of Fire Safety Guide*.

8.92 In general, it will always be unacceptable for fire exits to require the use of a key or code to unlock the exits in most residential care homes.

8.93 Acceptable devices for securing fire exits include single action lever handles, push pads and panic bars, the latter of which should normally be fitted to exits that are to be used by more than 60 people. When considering the type of devices fitted to exit doors, the age and frailty of elderly residents, and their ability to operate devices, such as thumb turns or handles, should also be considered.

8.94 Whatever device is used, there should, where appropriate, be suitable signage to indicate the method of operation of the lock release device.

8.95 However, in some residential care homes, an overriding priority, in relation to the safety of residents, might comprise the need to prevent residents (such as children and those living with dementia) from exiting premises unsupervised.

Case study

A number of deaths have occurred as a result of people living with dementia passing through a doorway, secured only by a panic bar, and subsequently falling down a stairway.

8.96 In these circumstances the use of electronic locking devices, time delays and the use of key and/or codes by staff to unlock certain exits may be necessary. Any such arrangements should be carefully considered and form part of the overall emergency plan that will incorporate a sufficient number of adequately trained staff.

8.97 Doors on exit routes and final exit doors fitted with electronically controlled locking devices should release automatically on operation of the fire alarm system. The doors should also normally release on the occurrence of any fault on the fire alarm system, unless it is considered that safety of residents would override the need for this.

8.98 If, in the case of final exits, electronic locks are installed to prevent unauthorised access to the premises, should have a suitable door release control, such as a lever handle or "mushroom head" push button immediately adjacent to the door to enable means of escape.

Where electronic push buttons are provided, an emergency door release, comprising a green break glass unit, must also be provided. Appropriate signage must also be sited adjacent to the break glass unit to indicate its use in the event of an emergency.

8.99 Where electronic locks are also provided to prevent egress from the premises by residents living with dementia, the green break glass unit may be installed at high level, where it will not be obvious to residents, provided it is within reach of staff.

8.100 Electronic locks should fail to the unlocked state in the event of failure of the power supply to the lock. However, this is not essential if the lock is released on the inside (so enabling escape) by means of a mechanical device, such as a lever handle.

<u>Locking of bedroom doors</u>

8.101 In residential care homes that allow residents to lock their bedroom doors, the following measures should apply:

- doors should be easily openable from the inside by residents without the use of a key
- any locks fitted to doors should be capable of being overridden from the outside by staff to gain entry in an emergency
- If master keys are used, a suitably robust management procedure should be in place to ensure that all staff on duty carry keys with

them at all times and that arrangements are established for handover of keys at shift changes.

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9. STRUCTURAL FIRE SAFETY MEASURES AND LININGS

9.1 Detailed guidance on structural fire safety measures and linings can be found in Section 9 of *Principles of Fire Safety*.

9.2 These matters are subject to control under the Building Regulations at the time of design and construction of a building. It is generally reasonable to assume that, if the building has been constructed in accordance with modern building regulations, there will be no need for fundamental re-evaluation of building design.

9.3 However, while there will rarely, if ever, be a need to consider the response of the structure to fire (i.e. its structural stability in the event of fire), it cannot be assumed that compartmentation, linings, cavity barriers in roof spaces and ceiling voids, and external wall construction have not been subject to alterations that are detrimental to fire safety.

Given that approval under the Building Regulations generally occurs before occupation, it cannot be assumed that the number, arrangement and size of sub compartments is adequate for the nature and capability of the residents.

9.4 In multi-storey residential care homes constructed in accordance with modern building regulations, each upper floor should have been designed as a compartment floor, so that any fire is limited to, at most, the floor of fire origin. This means that, under the Fire Safety Order, consideration must be given to the effect of penetrations in these floors.

9.5 Vigilance must be maintained to ensure that service penetrations remain properly fire stopped and that the construction of service risers is not undermined (e.g. by unstopped service penetrations in fire-resisting floors within the risers or lack of fire stopping where services enter, or leave, risers that are designed as protected shafts).

Compartment floors may also be penetrated by lift shafts. While these will normally be protected shafts, enclosed in fire-resisting construction, the lift doors, while fire-resisting, may not offer a high standard in protection against smoke spread via the shaft.

The evacuation strategy could be undermined if smoke spreads from the sub compartment of fire origin to the sub-compartment(s) above, or from a corridor off which there is a high hazard area, such as a kitchen.

To avoid this, lifts may have been located within protected lobbies, but where this is not the case, additional fire doors might be necessary. Alternatively, smoke curtains might be installed to prevent smoke spread from the lift shaft into protected corridors.

9.6 It must also be ensured that cavity barriers are not undermined by new services running through the barriers or are not removed entirely when new services are installed or refurbishment occurs.

9.7 Some old residential care homes would not have been designed in accordance with current building regulations. Some (mostly old) homes were constructed by joining two or more domestic dwellings. In some cases (particularly in the case of old conversions), the premises might comprise an historic building and might even be subject to listing by Historic England.

9.8 In such cases, the fire resistance of floors might be less than that necessary for the compartment floors required under modern building regulations.[4] An example would be original ceilings of lath and plaster and floors of timber (unless the fire resistance of this construction has been upgraded).

9.9 Normally, reliable and effective upgrading of the fire resistance will not be reasonably practicable. In this case, the fire risk assessment for the premises should then consider the need for mitigation measures, because there might be potential for spread of fire from one floor to another.

9.10 Such mitigation measures could comprise:

- the installation of an automatic fire suppression system; or
- consistent vertical sub-division of every floor into sub-compartments, and a fire procedure in which, in the first stage of evacuation, the sub compartment of fire origin is evacuated and, immediately after, the sub-compartment on any storey containing bedrooms immediately above that sub-compartment is also evacuated

9.11 Changes to linings of walls and ceilings are not material alterations for the purpose of the Building Regulations, so no approval is necessary for this work. If changes to linings are carried out, it must be ensured that, for example, any new linings are of adequate fire performance to prevent undue spread of flame over the linings or contribution of the linings to fire development.

9.12 Great care needs to be taken in carrying out changes to external wall construction. Specialist advice might be necessary to ensure that the external walls continue to restrict the spread of fire over the walls, and to ensure that external walls do not create undue exposure of adjacent buildings to fire spread from a building of fire origin.

[4] For compliance with the Building Regulations 2010 (as amended), Approved Document B recommends a fire resistance of 30 minutes for compartment floors in residential care homes in which the highest floor is no greater than 5 m above ground level (a typical two-storey building), and 60 minutes where the highest floor is no greater than 18 m above ground level (a typical seven-storey building). Residential care homes of greater height need a greater period of fire resistance, but are unlikely to be found in practice.

Ensuring continuing adequacy of the matters described above rests with the Responsible Person and, potentially, other persons with control over the premises. While, by sampling, or visual inspection, the matters should be given consideration in a suitable and sufficient fire risk assessment, as noted in Section 2, a fire risk assessment does not constitute a compartmentation survey or a fire risk appraisal of external wall construction and cladding.

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10. EMERGENCY LIGHTING

10.1 Detailed guidance on emergency lighting can be found in Section 10 of *Principles of Fire Safety*.

10.2 The size and type of the premises will determine the necessity for, and extent of, any emergency lighting.

10.3 However, in all premises to which this Guide applies, there will be a need for an emergency lighting system. This may comprise self-contained units or a central battery system. A standby generator will not normally be suitable to provide emergency lighting, as it will not cater for local failure of normal lighting resulting from fire damage to a single lighting circuit (e.g. on one storey).

10.4 The emergency lighting should adequately illuminate all escape routes, including external escape routes (if street lighting is inadequate or unreliable). In addition, the emergency lighting should also enable people to see relevant safety equipment, such as exit signage, manual call points and fire extinguishers. Emergency lighting should also be provided in rooms within which a number of persons may congregate (e.g. day rooms).

10.5 Additional emergency lighting may be appropriate to enable normal activities to continue in the event of failure of the electricity supply to the building. However, such additional emergency lighting is outside the scope of the Fire Safety Order.

10.6 It is not normally necessary for individual bedrooms (or their en suite toilets or bathrooms) to be provided with emergency lighting. However, consideration might be given to the installation of emergency lighting in bedrooms where high dependency residents are accommodated.

10.7 Non-maintained emergency lighting is acceptable throughout most of the premises. However, where illuminated exit signs are provided, these should be of the maintained type, so that the exits are highlighted at all times.

Emergency lighting should be capable of operating for three hours in the event of failure of the normal lighting.

Design of emergency lighting requires specialist expertise to ensure coverage and lighting levels are adequate. Any new emergency lighting installation should comply with BS 5266-1 [17], BS EN 1838 [18] and BS EN 50172 [19].

10.8 Photoluminescent way guidance signage can be used to supplement emergency escape lighting but is not intended to replace emergency lighting or fire exit signage and should not be used on its own in premises as a substitute for emergency lighting.

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11. SIGNS AND NOTICES

11.1 Detailed guidance on signs and notices can be found in Section 11 of *Principles of Fire Safety*.

11.2 Care should be taken to avoid a surfeit of signs that unnecessarily creates the ambience of an institution as for most residents, the premises are their long-term home.

Escape signs

11.3 In small care homes with alternative escape routes and a simple layout, a few signs indicating the alternative exit(s) might be all that is needed; in these cases, it is usually unnecessary to signpost the normal route by which people enter the premises.

11.4 In all other larger and more complex residential care homes, a series of signs directing people along the escape routes towards the final exits is likely to be needed.

11.5 In bedroom corridors, with alternative exits, it should be ensured that exit signs are visible, from bedroom doors, in both directions when cross-corridor doors or doors to sub-compartments are closed.

Fire equipment signs

11.6 Often, signage adjacent to fire extinguishers is not essential if the extinguishers are clearly visible. Where extinguishers are hidden from view (e.g. in cupboards), signs should be provided. Similarly, it is usually unnecessary to provide a sign for fire alarm call points, provided these are obvious.

Fire procedure notices

11.7 Fire procedure notices are normally necessary in all residential care premises to provide information to staff, residents, and visitors. A suitable location for these is adjacent to manual call points. In larger, more complex premises, as well as positioning the notices adjacent to call points, they may be put on staff notice boards and in common areas.

11.8 Fire procedure notices should be specific to the premises in question and not simply of a generic nature (e.g. as can be purchased on the internet). In particular, arrangements for progressive horizontal evacuation should be clearly set out. In larger, more complex premises, the notices should incorporate a simple drawing to assist occupants to orientate themselves in relation to escape routes and fire exits.

11.9 In some cases, consideration might be given to the possible need for additional signs at low level, so that wheelchair users are capable of reading them. Where there is a significant number of staff with limited

knowledge of English, there may be a need for additional signs in another language within staff areas.

Fire door notices

11.10 All fire doors, except those to bedrooms, should bear signs with the words "Fire door keep shut", "Fire door keep locked shut" or "Automatic fire door keep clear", as appropriate.

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12. FIRE EXTINGUISHING APPLIANCES

12.1 Detailed guidance on fire extinguishing appliances, including the different types of fire extinguisher, their application and siting, can be found in Section 12 of *Principles of Fire Safety*.

12.2 All premises within the scope of this Guide need fire extinguishing appliances.

Case study

A study published by the Fire Industry Association shows that, in 2021, in 93% of fires in which portable fire extinguishers were used, the fires were successfully extinguished by use of the extinguishers.

Although the fire and rescue service should always be called to any fire, in 27% of the above fires, the fire and rescue service were not called or required.

12.3 There should be a sufficient number of appropriately sited extinguishers that are suitable for use on Class A fires. These should be sited within means of escape and at storey exits. Water extinguishers should not be sited in kitchens.

12.4 Class A fire extinguishers should be supplemented with carbon dioxide extinguishers close to, or within, rooms in which there is an identified electrical fire hazard (but not within small cupboard-like enclosures, such as electrical distribution cupboards.)

12.5 In main kitchens, where cooking oils or fats may be involved in a fire, Class F fire extinguishers should be provided in addition to fire blankets.

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13. AUTOMATIC FIRE SUPPRESSION AND EXTINGUISHING SYSTEMS

13.1 Detailed guidance on automatic fire suppression and extinguishing systems can be found in Section 13 of Principles of Fire Safety.

Sprinkler systems

13.2 Sprinkler systems have proved, over many years, to be both very effective and reliable in control of fires. They are particularly suitable for residential care premises, because they can significantly increase the time available for evacuation of a sub compartment by normally limiting a fire to the room of origin (e.g. a bedroom).

13.3 Currently, sprinkler systems are uncommon in residential care homes, particularly older premises, and there is currently no requirement to install these in new residential care premises for compliance with the Building Regulations (unless a sprinkler system has been incorporated within a fire engineering solution or to cool smoke in a basement provided with a mechanical smoke control system).

13.4 Approved Document B has been updated to require that all **new** care homes install automatic fire sprinkler systems.

13.5 However, there is no requirement to install sprinkler systems in existing residential care premises for compliance with the Fire Safety Order.

However, it is strongly recommended that, in all residential care homes with dependent and high dependency residents, consideration should now be given to planning and budgeting for the installation of sprinkler systems. This is particularly the case where a residential care home accommodates, (or is likely to accommodate) a significant number of high dependency residents and/or there is potential for unacceptably long times for evacuation of sub-compartments.

13.6 In this current Guide, a number of significant relaxations in fire safety measures are suggested if the premises are protected by a suitable fire suppression system, such as a sprinkler system. These relaxations include:

- An unlimited number of residents within a single sub-compartment (subject to the overriding limitation in evacuation time and travel distance)
- An extension in the maximum time within which it is reasonable for evacuation of any sub-compartment
- An extension in the maximum travel distance within a sub-compartment

13.7 Sprinkler systems in care homes should be designed in accordance with the recommendations of BS 9251 [20], other than in large commercial and communal rooms beyond the scope of BS 9251, for which BS EN 12845 [21] is appropriate.

13.8 In residential care homes that accommodate more than 10 residents or are more than 18 m in height to the floor of the topmost storey (typically a building of more than seven storeys), if the sprinkler system relies on a pump, there should also be a second back-up pump to cater for failure of the duty pump. If the pumps are electric, there should also be a standby power supply to operate the pumps in the event of mains power failure.

13.9 Even in small care homes, it is recommended that consideration be given to the above enhancements in system reliability. The enhancements are always essential if the sprinkler protection is intended to permit the relaxations in sub-compartment size, evacuation time or travel distance discussed above.

Watermist systems

13.10 While this section of this Guide refers specifically to a sprinkler system, the use of an appropriate watermist system, verified by appropriate test data, is not precluded, but would require specialist advice to verify that the system would provide an equivalent degree of protection to a sprinkler system.

Kitchen fire extinguishing systems

13.11 Consideration should be given to the installation of a special cooking equipment fire extinguishing system in the case of commercial kitchens with cooking appliances of significant extent, particularly where the appliances include fat frying equipment.

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14. SMOKE CONTROL

14.1 Detailed guidance on smoke control can be found in Section 14 of *Principles of Fire Safety*.

14.2 There will be no smoke control systems within most of the premises to which this Guide applies. However, such systems may have been installed in some larger and more complex premises, such as atrium buildings and buildings designed on the basis of a fire engineering solution, or in buildings with an extensive basement, in which a mechanical smoke control system has been installed to assist the fire and rescue service.

It is important for the RP to understand any smoke control system in the building, so that it is properly tested and maintained and that it is not undermined when alterations to the building take place.

14.3 The design of smoke control systems requires specialists, who should be consulted if there is any lack of clarity as to existing smoke control arrangements and their adequacy.

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15. FIRE AND RESCUE SERVICE FACILITIES

15.1 Detailed guidance on fire and rescue service facilities can be found in Section 15 of *Principles of Fire Safety*.

15.2 To the extent necessary, special facilities for use by the fire and rescue service will generally be found only in high-rise buildings, in which fire mains, lifts for use by the fire and rescue service, etc. will have been required for compliance with the Building Regulations at the time of construction of the building.

15.3 However, basement smoke vents may have been provided to assist in smoke ventilation from any basements by the fire and rescue service.

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16. ARRANGEMENTS FOR MANAGEMENT OF FIRE SAFETY

16.1 In residential care premises, regardless of how small, fire safety has to be considered as an important component of management of the premises. The fire risk assessment for the premises must always consider all relevant aspects of fire safety management, albeit that the complexity of management arrangements needs to be commensurate with the size of the undertaking and the complexity of the premises.

16.2 In a small privately owned care home, management of fire safety will be the responsibility of the owners (as RPs). In larger, more complex premises, fire safety management should not be restricted to higher level managers. Everyone, from the care home manager to housekeeping staff, should understand that they have a role to play in managing fire safety. The fire safety policy for the premises should identify the roles of different staff in this respect.

Case study

Throughout this Guide there has been reference to the fire at Rosepark Care Home in 2004, in which 14 residents died. In earlier sections, there was focus on the failures of the fire risk assessment and shortcomings in general physical fire precautions.

However, the Fatal Accident Inquiry into the 14 deaths determined that the management of fire safety at Rosepark was systemically and seriously defective, and that certain specific deficiencies that were identified fell to be seen in the context of management of Rosepark as a whole.

Specifically:

There was a failure to set clear policies and objectives

There was a failure in organisation, in that roles and responsibilities were not clearly allocated between management and staff, and in particular between management and matron

The responsibilities of the nurse in charge on night shift had not been identified and communicated

There was no training in fire fighting

There was a fundamental failure to have a suitable and sufficient risk assessment

There was a failure to set performance standards in relation to key matters, such as training and drills and whether bedroom doors could be left open and, if so, in what circumstances

There was a failure of active monitoring to check that standards of performance which management had set were in fact being achieved in respect of, inter alia, the frequency of drills, which staff had the benefit of fire drills, whether night staff were attending fire drills, the practice in relation to bedroom doors, whether all staff had completed induction training which included an element of fire safety, whether staff were receiving refresher training in fire safety and the incidents and frequency of false alarms

Failure to have an effective progressive review to identify any deficiencies disclosed by the process of monitoring

The Fatal Accident Inquiry held that the deficiencies in the management of fire safety contributed to the deaths, in that a number of key circumstances would have been quite different if there had been an adequate system of fire safety management. It was concluded that had the system of fire safety management not been defective, some or all of the deaths would have been avoided.

16.3 It is recommended that fire safety management at your residential care premises should be reviewed, and that you have a high level of confidence that none of the above deficiencies that existed at Rosepark in 2004 might apply to fire safety management at your premises.

16.4 Article 11 of the Fire Safety Order requires that the RP must “make, and give effect to, appropriate arrangements for the effective planning, organisation, control, monitoring and review of the preventive and protective measures”. These arrangements must be recorded.

16.5 Accordingly, the fire safety policy and the fire safety arrangements should be properly documented in a formal fire safety manual for compliance with the Fire Safety Order.

16.6 Documents used to support staff training and instruction must be in a form that is understandable and fit for purpose.

16.7 Further sections of this Guide discuss specific aspects of fire safety management, as they apply to residential care premises.

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17. COMPETENT PERSONS TO ASSIST THE RESPONSIBLE PERSON

17.1 Article 18 of the Fire Safety Order requires that the RP must appoint one or more competent persons to assist the RP in compliance with the Fire Safety Order.

This requirement is commonly misunderstood. It is often thought that any party who assists the RP with relatively routine matters, such as maintenance of fire protection equipment, is a competent person to which Article 18 refers.

This is totally incorrect. In fact, as discussed in Section 17 of *Principles of Fire Safety*, the intention is that the competent person in question provides the RP with "high-level" strategic policy and guidance on compliance with the Fire Safety Order.

17.2 The requirement for competent assistance to the RP applies to even the smallest residential care homes, except that no appointment of a competent assistant is required:

- in the case of a self-employed employer, who is not in partnership with any other person, where the employer has sufficient training and experience or knowledge and other qualities to enable them to undertake the preventive and protective measures (i.e. the general fire precautions identified in a fire risk assessment)

- in the case of individuals who are employers and who are together carrying on business in partnership, where at least one of the individuals concerned has sufficient training and experience or knowledge and other qualities properly to undertake the preventive and protective measures, and properly to assist fellow partners in undertaking these measures

17.3 Where there is a competent person in the employment of the RP, that person **must** be appointed to assist the RP in preference to a competent person not in the employment of the RP.

17.4 In the case of large care organisations, operating many residential care homes, the competent assistance may, subject to competence in fire safety, be given by in-house fire safety advisors, health and safety professionals (or even an entire health and safety department) or professionals in premises management.

17.5 However, in small residential care homes, it is unlikely that there will be in-house expertise. Then (and only then), it is permissible to appoint a third party as the source of competent advice. The person appointed might be a fire risk assessor, but, often, this will not be the case; the fire risk assessor is commonly appointed purely to carry out fire risk assessments,

rather than develop policies and provide ongoing ad hoc advice, which would be the role of the competent assistant.

17.6 As the appointment of competent assistance is a requirement of the Fire Safety Order, the identity of those providing this assistance should be recorded in the fire risk assessment.

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18. FIRE PROCEDURES

18.1 Detailed guidance on fire procedures can be found in Section 18 of *Principles of Fire Safety*.

18.2 Where the procedures involve progressive horizontal evacuation, the written procedures need to set out the progressive horizontal evacuation process. This process was described in Section 8, and is also contained within the annex, as it impacts on the design of means of escape (e.g. sub-compartment sizes).

In all premises, as well as outlining procedures for evacuation, there should be information on means for summoning the fire and rescue service (FRS), and the responsibility for doing so should **always** be clear. This action should be taken immediately on operation of the fire alarm system; it should not be delayed pending investigation of the fire alarm signal.

18.3 For this purpose, at least one landline telephone, in reasonably close proximity to the fire alarm CIE, must be available at all times (e.g. it must not be located in a locked room to which there is no immediate access by relevant staff).

18.4 At the location of this telephone, the number to be dialled to contact the FRS (i.e. 999 or 112), and the information to be passed to the FRS in the event of fire, should be prominently displayed. This information should include:

- the address of the premises, including the postcode
- where there are multiple points of access to the premises, the appropriate point of access, if relevant, considering the location of the fire. If there is uncertainty as to the normal point of access for the FRS, advice on this can be obtained from the FRS as part of your planning for fire
- the brief circumstances of the fire (e.g. fire in ground floor laundry room, fire in first floor bedroom)
- confirmation that the evacuation procedures are in progress

18.5 The information should include an instruction that the call should not be terminated until the FRS control operator has correctly repeated the address of the premises.

18.6 In planning for actions in the event of fire, key roles for staff, and the staff who are to perform these roles, should be defined. Roles should not specify named persons, who might not be present at the time of a fire, but postholders, such as the nurse in charge.

18.7 In this connection, key roles include those for staff who will:

- take charge of the incident
- summon the fire and rescue service
- investigate the fire alarm signal
- assist in the evacuation of dependent and high dependency residents
- meet the fire and rescue service on arrival, provide relevant information on the nature and location of a fire, the status on the evacuation, the dependency of residents, the location of any dangerous substances and any further information that might be required by the FRS officer in charge, such as locations of gas and electricity shut off controls
    - Whoever meets the FRS should also show the officer the fire alarm CIE and the associated zone plan
- undertake other safety critical roles within the emergency plan or associated contingency plans for actions to be taken post-incident for the safety and care of residents

18.8 When the fire alarm system operates, all staff with roles in the implementation of fire procedures (e.g. summoning of the fire and rescue service, investigation of the fire alarm signal, assistance to residents in evacuation and reception of the fire and rescue service) should assemble at the fire alarm CIE (or, in some large premises, repeat CIE in their part of the premises).

18.9 This may include any maintenance personnel, who could be of assistance to the FRS with information on services, such as electricity, gas and HVAC systems, and relevant managers.

18.10 The person in charge of the incident should ensure that pre-nominated tasks are being carried out, and should delegate additional tasks, as appropriate, such as summoning of the FRS and investigation of the alarm signal. One member of staff should be nominated to meet the FRS on arrival. This may be the person in charge of the incident or the person who summons the fire and rescue service (if a different person from the person in charge).

18.11 Other occupants, such as domestic staff, visitors and, in premises with simultaneous evacuation, all residents who can independently evacuate, should evacuate immediately on operation of the fire alarm system.

18.12 Where staff numbers permit, investigation of the fire alarm signal should always be carried out by at least two members of staff. Where, at the CIE, staff assembled include additional staff who are competent in evacuation of residents, it is advantageous for more than two members of staff to proceed to the location indicated at the CIE, so that, if necessary, effective

evacuation of a sub-compartment of fire origin can be implemented as early as possible.

18.13 It is important that there is an effective means of communication between those investigating a fire alarm signal and the person in charge of the incident, the latter of whom should normally remain at the fire alarm CIE. Other than in small care homes, the most suitable means of communication comprises two-way radios.

18.14 If the radios in question are not used during the normal operation of the premises, they can be kept close to the CIE (e.g. within the “grab bag”), but there must be means for ensuring that they remain adequately charged and that they are subject to routine testing (see Section 21). A prior check should be made from all areas of the building to ensure effective transmission and receipt of radio communications.

18.15 In small residential care homes, the recording and dissemination of fire procedures may comprise simply suitable fire procedure notices located at strategic points where they will be obvious to staff, visitors and residents.

18.16 In other premises, more detailed procedures, which outline actions to be taken by staff and others, are necessary. These written procedures should be disseminated to all staff.

18.17 Some of the information detailed above, together with plans of the building and other relevant information, can be held in an emergency folder or “grab bag”, located near to the main entrance to the premises and the fire alarm CIE. Information held on site needs to be reviewed regularly to keep it up to date.

18.18 Information on the dependency of all residents should be reviewed regularly, as their condition may change over time.

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19. INFORMATION TO EMPLOYEES AND STAFF TRAINING

19.1 Detailed guidance on information to employees and staff training can be found in Section 19 of *Principles of Fire Safety*.

19.2 The Fire Safety Order requires that all employees be provided with comprehensible and relevant information on fire hazards, the fire safety measures in the building, the procedures in the event of fire, the identities of persons appointed to assist with evacuation and use of fire extinguishers, etc. This information should always be provided both verbally and in writing.

In residential care premises, the importance of staff training cannot be over-stressed. The actions of staff are crucial to the safety of residents in care homes, particularly those with dependent and high dependency residents.

19.3 Accordingly, as well as the training that should be given to employees in all types of premises (e.g. in basic fire prevention, action in the event of fire, location of escape routes and fire exits, use of fire extinguishers, etc.), in a residential care home, fire safety training must include issues that are specific to this type of premises.

19.4 For example, all employees must be fully conversant with:

- the significant risk that any fire presents to older and vulnerable people, such that prevention of any fire is particularly important
- the importance of identifying, and reporting, any “near miss” incidents, such as burn marks on residents’ clothing, bedding, furnishings or carpets (e.g. as a result of surreptitious smoking)
- specific fire hazards within the premises in question, such as use of emollient creams, smoking by residents with poor manual dexterity, use of oxygen and the potential for wilful fire raising by certain residents
- Individual Smoking Risk Assessments (ISRAs)
- progressive horizontal evacuation for dependent and high dependency residents
- the likely behaviour of certain residents, particularly those with cognitive issues, in the event of fire (e.g. those living with dementia and children may seek to hide, rather than evacuate)
- the importance of reporting defects in fire safety measures, such as self-closing fire doors (particularly doors between sub-compartments, bedroom doors and doors of high hazard rooms, such as plant rooms)

19.5 In many other types of premises, only a basic understanding of the use of fire extinguishers is necessary. While, in residential care homes, priority must be given to evacuation of residents to the extent required, the time

often required for evacuation is such that the safety of residents can be enhanced if staff can extinguish any small fire. This underlines the importance of training in the use of fire extinguishing appliances in the case of residential care homes.

19.6 Training must be given on induction of new employees, including domestic and other ancillary staff, as soon as possible after they begin to work in the premises. Any temporary agency staff must also be made aware of the fire safety measures and the fire procedures when they come to work in the premises, prior to starting their duties.

19.7 Temporary staff must, in particular, be aware of all means of escape, any high dependency residents, their own responsibilities and role in the event of fire and any special measures for evacuation of residents.

19.8 Training should be repeated at regular intervals. This should be at least annually but should be repeated every three months in the case of permanent night shift staff. All training should be delivered by persons with a good understanding of fire safety in residential care homes.

19.9 Where necessary, further specific training should be provided for managers with responsibilities for the co-ordination of the emergency plan and those staff with additional responsibilities.

19.10 Where staff may be required physically to move or assist residents during an evacuation, they should receive training on the method of achieving this and should be familiar with the use of any evacuation aids or equipment provided for this purpose, which may also require the need to provide manual handling training.

19.11 Information should be given to staff whenever there is a change in the risk from fire, dependency levels of residents, where changes have been made to the emergency fire action plan or other fire safety measures (e.g. installation of new fire alarm CIE), or where working practices or people's responsibilities have changed.

19.12 A useful management tool might include the preparation of a simple fire safety manual for staff in which fire safety measures and evacuation plans are detailed and responsibilities of staff are set out.

19.13 Records of training should be kept (e.g. in personnel files), as a means of verifying that suitable training has been given to all staff.

19.14 In residential care premises, English is often not the first language of many of the staff employed. For employees who are not fully conversant with English, training and written instructions may need to be provided in their native language.

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20. FIRE DRILLS

20.1 Detailed guidance on fire drills, and good practice in conducting them, can be found in Section 20 of *Principles of Fire Safety*.

20.2 In all residential care premises to which this Guide applies, a high level of staff training is required to ensure correct reaction of staff in the event of fire. Fire drills are necessary to reinforce, and test, that training.

20.3 Staff may not perform correctly in the event of fire if they have never practised the fire procedures in a fire drill. Accordingly, fire drills will check whether staff understand the fire procedures and enable any weaknesses in the procedures to be identified.

20.4 Fire drills should be carried out at least twice a year, and every member of staff should participate in at least one fire drill per annum. It is also important that, in one drill each year, nighttime staffing levels are simulated. If there is a high turnover of staff, more frequent fire drills might be warranted.

20.5 The use of drills to obtain a reasonable estimate as to evacuation times of sub compartments was discussed in Section 8 of this guide and can also be found in the annex. This is extremely important as a means of determining whether sub-compartment sizes are, and remain, appropriate.

20.6 When carrying out the drill you might find it helpful to inform residents, circulate details concerning the drill and inform all staff of their duty to participate; unannounced fire drills are not appropriate.

20.7 The level of resident participation in a fire drill will depend on the dependency level of residents and their capability, both mentally and physically.

20.8 Ideally, fire drills will include residents, or a significant number of residents if safe to do so and residents are willing to participate. Drills should, wherever possible, include all ambulant residents in the common areas, such as day rooms and any visitors etc.

20.9 In premises with a high number of dependent residents, it may not be practicable or safe to involve residents. In these situations, management should undertake simulated exercises with staff to practise the fire procedures.

20.10 Normally, a fire drill begins with operation of the fire alarm system. If the system is connected to an ARC, it should be ensured that the ARC is informed of the drill prior to operation of the fire alarm system.

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21. INSPECTION, TESTING AND MAINTENANCE OF FIRE SAFETY MEASURES

21.1 Detailed guidance on inspection, testing and maintenance of fire safety measures can be found in Section 21 of *Principles of Fire Safety*.

21.2 For ease of reference, a typical testing and maintenance schedule for all premises comprises the following:

Daily

- check fire alarm control and indicating equipment for any fault indications
- check the control panels of any emergency escape lighting central batteries or generators for any fault indications
- ensure that escape routes are unobstructed

Weekly

- check of escape routes, final exit doors and general housekeeping
- test fire alarm systems
- check correct operation of all door release mechanisms
- visual check of any sprinkler systems (e.g. of pressure gauges)
- test any smoke control systems provided to support means of escape
- test switches for any evacuation and firefighting lifts
- test any radios that are only provided for use in the event of fire

Monthly

- test emergency escape lighting
- check that fire safety signs are in place and visible
- check that all fire extinguishers are in position, undamaged, accessible, etc.
- check any hose reels
- test of emergency generators, and inspect vented batteries, which provide standby power for fire safety measures (e.g. firefighting lifts), by simulating a failure of the primary power supply and confirming that the standby supply operates correctly

Quarterly

- maintain any sprinkler systems (only if recommended by the installer)
- test all smoke control systems (including those provided to enable smoke clearance by the fire and rescue service)

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Six-monthly

- maintenance of fire alarm systems
- check of all fire-resisting doors
- maintenance of all door release arrangements
- maintenance of any kitchen fire extinguishing systems or any gaseous extinguishing installations
- inspection of any fire mains
- maintenance of any emergency voice communication system (unlikely to be found in a residential care home)
- maintenance of any fire or smoke curtains

Annually

- maintenance of fire extinguishing appliances
- inspection and test of lightning protection systems
- maintenance and full discharge test of emergency escape lighting installations
- test spring-operated fire dampers (other fire dampers should be tested at least every two years)
- maintenance of private fire hydrants
- carry out a “wet test” of dry rising mains
- maintenance of any lifts designed for use by the fire and rescue service or evacuation of residents
- maintenance of any smoke control systems

Periodically

- arrange for inspection and test of the fixed electrical installation, portable electrical appliances, gas installations, boiler plant, etc. by a suitably qualified person

21.3 In addition to these well-recognised testing and maintenance schedules, it is recommended in this Guide that any external metal escape stairways and walkways should be inspected periodically (typically, every three years) for corrosion and structural integrity.

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22. RECORD KEEPING

22.1 Detailed guidance on record keeping can be found in Section 22 of *Principles of Fire Safety*.

22.2 For ease of reference, the Fire Safety Order explicitly requires certain records to be kept, namely:

- the findings of the fire risk assessment (see Section 2)
- the fire safety arrangements (see Section 16)

22.3 As a matter of best practice (albeit not a legal requirement under the Fire Safety Order), the further records outlined below should be kept:

- formal checks of means of escape, fire exit doors, etc.
- inspection, testing and maintenance of fire safety measures
- general fire safety training of staff
- training of staff with special responsibilities
- fire drills
- certificates of inspection and test of electrical installations, portable appliances, etc.

22.4 In audits by the fire and rescue service, it will be helpful for inspecting officers to see such records.

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23. CO-OPERATION AND CO-ORDINATION BETWEEN DUTYHOLDERS

23.1 Detailed guidance on co-operation and co-ordination between dutyholders can be found in Section 23 of *Principles of Fire Safety*.

23.2 This co-operation and co-ordination will be required where two or more RPs share, or have duties in respect of, any premises.

23.3 For example, this might apply where large residential care premises have facilities, such as shops, leisure facilities, hairdressing or catering provided by third party companies, in the same building.

23.4 Where there is more than one dutyholder in a care home, it should be ensured that there are documented agreements regarding responsibilities for fire safety, and that third party organisations fully understand the fire safety measures in the building and the fire procedures.

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REFERENCES

1	Fire safety in purpose-built blocks of flats. Home Office. 2024 Fire safety in purpose-built blocks of flats - GOV.UK (www.gov.uk)
2	Fire safety in specialised housing. National Fire Chiefs Council. 2024 Protection Guidance - NFCC
3	Means of escape for disabled people. Home Office. Fire safety risk assessment: means of escape for disabled people - GOV.UK (www.gov.uk)
4	RISC Authority (in conjunction with the Fire Protection Association) RC68: Recommendations for fire safety in catering establishments. Sept 2020
5	Fire Safety Guidance Note: Catering Kitchen Extract Systems London Fire Brigade 2022
6	**BS 5852** Methods of test for the assessment of the ignitability of upholstered seating by smouldering and flaming ignition sources
7	**BS 7177** Specification for resistance to ignition of mattresses, mattress pads, divans and bed bases
8	**BS 7176** Specification for resistance to ignition of upholstered furniture for non-domestic seating by testing composites
9	**BS 5867-2** Fabrics for curtains, drapes and window blinds – Flammability requirements. Specification
10	**BS EN 1101** Textile and textile products. Burning behaviour. Curtains and drapes. Detailed procedure to determine the ignitability of vertically oriented specimens (small flame)
11	**BS EN 1102** Textile and textile products. Burning behaviour. Curtains and drapes. Detailed procedure to determine the flame spread of vertically oriented specimens
12	**BS 5866-4** Blankets suitable for use in the public sector – Specification for flammability performance
13	**BS 7175** Methods of test for the ignitability of bed covers and pillows by smouldering and flaming ignition sources
14	**BS 5815-3** Sheets, sheeting, pillowslips, towels, napkins, counterpanes and continental quilt secondary covers suitable for use in the public sector

	– Specification for counterpanes and continental quilts secondary covers including flammability performance
15	**BS 5722** Specification for flammability performance of fabrics and fabric assemblies used in sleepwear and dressing gowns
16	**BS 7273-4** Code of practice for the operation of fire protection measures. Part 4: Actuation of release mechanisms for doors
17	**BS 5266-1** Emergency lighting - Code of practice for the emergency lighting of premises
18	**BS EN 1838** Lighting applications. Emergency lighting
19	**BS EN 50172** Emergency escape lighting systems
20	**BS 9251** Fire sprinkler systems for domestic and residential occupancies. Code of practice
21	**BS EN 12845** Fixed firefighting systems. Automatic sprinkler systems. Design, installation and maintenance

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ANNEX A: Progressive Horizontal Evacuation and Emergency Evacuation Planning

Guidance for Residential Care Home Operators on determining safe compartment evacuation times and appropriate staffing levels

Under current fire safety legislation, it is the responsibility of the person(s) having responsibility for any building to provide a fire safety risk assessment that includes an emergency evacuation plan for all people likely to be in the premises and how that plan will be implemented. Such an evacuation plan should not rely upon the intervention of the Fire and Rescue Service to make it work.

The formulation, testing, and regular practice of emergency evacuation plans are particularly essential in residential care homes. This reflects both the vulnerability of residents and the complexity of implementing Progressive Horizontal Evacuation (PHE) during a fire incident.

Emergency evacuation plans should be based on a clear understanding of resident dependency, staffing arrangements, and building passive and active fire protection measures. Plans must identify and record the maximum benchmark time within which any fire compartment can be safely evacuated **(see Appendices A and B)** and demonstrate that this time can be consistently achieved in practice.

When developing, recording, and reviewing an emergency evacuation plan, the following steps should be undertaken.

1. Number of residents, dependency levels, and evacuation methods

Care home operators should identify and record, for each fire compartment:

1.1. Resident numbers and evacuation routes:
- The number of residents normally accommodated within the compartment.
- The primary and secondary evacuation routes to adjacent protected compartments if a fire originates within that compartment.

1.2. Resident dependency and evacuation support needs:
- The dependency level of each resident, informed by care plans and confirmed through practical drills and trials, where appropriate.
- The level of staff support required to safely evacuate each resident. For example:
    - Residents who are independent and able to self-evacuate following an initial prompt.
    - Residents who require guidance or limited physical support from one member of staff.
    - Residents who are non-ambulant and require assistance from more than one member of staff, using wheelchairs, evacuation chairs or rescue mats.
    - Residents who rely on medical equipment or whose health conditions or behaviours under stress, require assistance from

more than one member of staff during evacuation and continued support following evacuation.

2. Staffing levels, equipment requirements, and evacuation times

2.1 Care home operators should identify and record, for each fire compartment:

- The total number of staff required to carry out all evacuation tasks.
- The evacuation equipment required and its location.
- The total time required to evacuate the compartment, demonstrated through drills and trials, and assessed against benchmark safe evacuation times **(see Appendices A and B)**.

When determining overall staffing levels, the following factors should be considered and documented:

2.2 Command and coordination - a trained and competent supervisor/manager/most senior member of staff should:

- Attend the fire alarm control panel and interpret information using the zone plan.
- Coordinate and monitor staff actions.
- Ensure the Fire and Rescue Service has been called.
- Liaise with the Fire and Rescue Service Incident Commander on arrival, including directing crews to the fire location while avoiding, where practicable, compartments used to accommodate evacuated residents.

2.3 Staff capability, resilience and suitability for evacuation duties, including:

- Physical capability to move high dependency residents, training and competence.
- Likely performance under stress, particularly for night staff, part time / bank staff or agency staff.

2.4 Resident movement and evacuation handling methods should be identified, taking account of:

- Resident dependency levels.
- The distance and configuration of escape routes between compartments.

2.5 Evacuation equipment

The type, quantity, and location of evacuation equipment should be identified and recorded, ensuring it is readily accessible and appropriate for resident needs and evacuation methods.

2.6 Evacuation tasks and staff allocation

All evacuation tasks should be identified, together with the number of staff required to carry them out. These tasks are likely to include:

- Immediate investigation of a detector or call point activation.
- If necessary, a rapid rescue of any resident at direct risk (e.g. within a room of fire/smoke origin). It is recognised that this may be a very dynamic

situation and should be completed without delays which may place staff at unnecessary risk in a room with smoke/fire. It may therefore need to be completed using emergency manual handling methods (without the use of an evacuation aid) to avoid delays inherent in preparation for these. High dependency residents may require two or more staff for manual handling and, possibly, additional staff to hold doors open very briefly during this rapid rescue. Staff need to be made aware that this dynamic approach may be necessary during a real fire situation. It should not be practiced as part of normal fire drills due to risk of manual handling injuries.

- Tackling a very small fire only where it is safe to do so and does not place staff at risk. For example - a smouldering electrical item may be unplugged, moved away from other combustibles or tackled with a suitable extinguisher, a small waste bin sized item with limited smoke/flames may also be dealt with by extinguisher. The fire exit must always be behind the staff member so that the exit route remains clear.
- If staff are completely certain that a very small item has been extinguished and the fire is not going to develop further – it may be appropriate for the evacuation to be paused and await the arrival of the fire service.
- If not completely extinguished, or if in any doubt, or if the source of smoke is unknown - staff should progressively evacuate other residents from the affected compartment to an adjacent protected compartment, taking account of dependency levels, use of evacuation aids, and the need for additional staff to assist or hold doors open.
- Communicating a situational update to the manager, supervisor, fire warden or incident controller regarding the fire/smoke situation, and progress with evacuation.
- Extending evacuation to further adjacent compartments, and vertically downstairs to a lower floor or the exterior of the building if fire or smoke spread necessitates this, or if directed by the Fire and Rescue Service.

Examples of methods for planning and documenting evacuation tasks are provided in **Appendix C.**

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Appendix A – Establishing benchmark safe evacuation times

1. Previous national guidance has suggested 2.5 minutes as a starting point for evacuating a fire compartment. This may be achievable only in very small compartments with a limited number of fully independent residents (e.g.: up to four) and sufficient staff availability.
2. In practice, most residential care homes contain larger compartments (e.g.: five to ten) residents with varying levels of dependency, and variable staffing arrangements. Experience across the care sector indicates that a universal 2.5-minute evacuation time is not realistic in the majority of such settings. Instead, a range of benchmark safe evacuation times should be established that provide a reasonable and proportionate margin of safety.
3. These benchmark safe evacuation times should be determined through collaboration between a competent Fire Risk Assessor and the Care Home Manager, supported by practical evacuation trials and drills.
4. The critical factors in Appendix B must also be assessed and assured to support these benchmark safe evacuation times. These factors include:
    - Effective fire detection, alarm and fire protection measures, including a minimum of 30 minutes fire resisting protection to escape routes, confirmed by the Fire Risk Assessor.
    - Robust, effective and practised evacuation plans, as described in this guidance, evidenced through documentation and trialling, and evaluated by the Fire Risk Assessor.

Note: While FD30S fire doors are designed to provide 30 minutes fire resistance, smoke and products of combustion may compromise escape routes significantly earlier, particularly if doors to the room of fire origin are opened during evacuation or firefighting. Similarly, the average national attendance times for Fire and Rescue Services are approximately eight minutes and unless crews are clearly briefed on the evacuation progress on arrival, early firefighting actions may unintentionally compromise smoke control and compartments before the evacuation is complete.

5. Where all the critical protection factors are satisfactorily addressed, but taking account of the residual risks above, a reasonable margin for safety may be approximately 23 minutes, leaving a ‘benchmark safe evacuation time’ of approximately 7 minutes to be achieved for any compartment, irrespective of size.
6. However, it is also recognised that evacuation trial timings can only be estimates and subject to variable and dynamic factors at the time of an actual emergency, including:
    - Changes in resident health, dependency, behaviour, and location.
    - Visitor numbers and activities.
    - Staffing levels, experience, physical capability and decision making under stress.
    - Competing critical care duties at the time of alarm activation.
    - The need for some staff to manage residents after evacuation.

7. To reflect these variables, it may be appropriate to adopt a range of benchmark evacuation times linked to the dependency levels of the majority of residents within a compartment, for example:

Residents in compartment - predominant dependency levels:	Benchmark safe evacuation times:
Independent, fully mobile and compliant	Four to five minutes
Dependent, limited mobility or mild cognitive impairment	Five to seven minutes
High dependency, non-ambulant	Seven to nine minutes

8. Achieving this range of times will be dependent upon staffing levels and other factors but are broadly informed by research and trialling completed by the BRE Trust – and published in **Evacuating Vulnerable and Dependent People from Buildings in an Emergency** (BRE FB52 - Crowder/Charters ISBN 978-1-84806-264-1) 2013. The research involved two controlled evacuation drills and analysing information on a further six exercises and two real fire incidents over the course of a three-year period. Although based on healthcare buildings this publication includes estimated times for preparation and movement of people with varying needs in varying circumstances.
9. This range of times is also informed by six fire evacuation exercises carried out by NASHICs in January 2026. The six scenarios all simulated a compartment with ten residents with varying degrees of dependency, and typical staffing levels of either five staff (daytime) or three staff (night-time). The scenarios demonstrated that this range of times was generally achievable in all but one of the scenarios due to predominantly very dependent residents and only three staff.

Importance of trials, drills and training

10. Only practical trialling and drills will determine whether staff are able to evacuate all residents from any compartment within the appropriate benchmark time.
11. Where evacuation trials exceed these benchmark safe evacuation times further risk reduction/control measures must be considered. These may include changes to compartment size, resident numbers or their locations based on dependency levels, staffing levels, evacuation procedures, fire suppression systems or additional building fire protection measures.

Examples of methods for planning and documenting evacuation tasks are provided in **Appendix C.**

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Appendix B

Factors critical to assurance of the 'benchmark safe evacuation times'

1. Satisfactory Fire detection and alarm systems

The standard for fire detection and alarm activation within care homes is compliance with BS 5839:2025 L1. The very earliest detection of smoke/products of combustion is essential to ensure the longest possible period is available for safe evacuation before escape routes become compromised and staff or residents placed at risk. Similarly, accurate zone plans adjacent to the fire alarm panel are critical to effective emergency management.

2. Satisfactory compartmentation, separation and protection of escape routes

A comprehensive visual survey and risk assessment, completed by a competent Fire Risk Assessor, of the fire-resisting structure of the building to ensure proper compartmentation, which will limit the spread of fire and allow time for evacuation. Bedrooms and other rooms should be separated from the escape routes by a minimum of 30mins fire resistance – which should be maintained by regular checks and maintenance. (It is recognised that older buildings, and those that have been converted for use as care homes, may have unknown standards of compartmentation and require more comprehensive surveys by qualified specialists to assure that the correct levels are in place.)

Fire doors play a critical role in containing fire and smoke, protecting escape routes, and providing staff/residents with safe evacuation time. They must provide 30 minutes fire resistance (FD30S) and be self-closing. They must be **regularly checked** to ensure they meet all relevant compliance standards. Any signs of damage/perforations, faulty self-closing mechanisms, or excessive gaps around the doors must be addressed immediately.

3. Satisfactory water suppression and/or smoke control systems (where provided as part of compensatory or fire engineered measures, or to satisfy building regulations)

Water suppression and/or smoke control systems may play a critical role in containing fire and smoke and providing staff/residents with safe evacuation time. If installed they must be checked to ensure correct design, installation and operation, and regularly maintained to ensure effective operation.

4. Satisfactory emergency evacuation planning and staff levels

The planning and arrangements for emergency evacuation should be established and maintained as outlined in this guidance.

5. Satisfactory and documented staff training

Each location should have the appropriate numbers of supervisor/manager/senior members of staff who have been trained to the appropriate level to effectively manage and coordinate any evacuation.

All staff must be trained appropriately, with building specific information about the building fire strategy and any evacuation equipment provided, to ensure all staff are very familiar with their evacuation responsibilities and able to react appropriately in an emergency situation, including:

- How to respond to the fire alarm activation and Progressive Horizontal Evacuation strategies and actions,

- The evacuation requirements and techniques for each resident, including any short-term changes to these requirements.

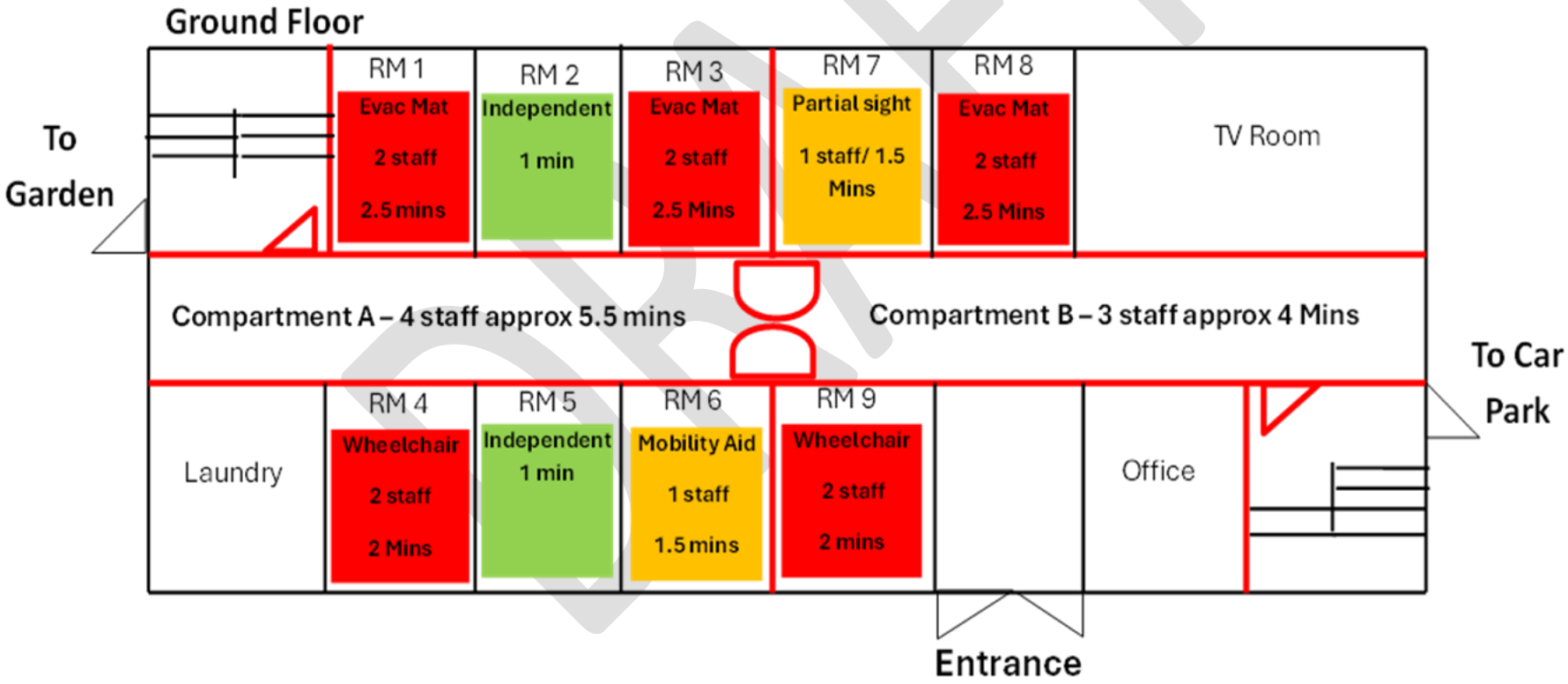
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Appendix C

Examples of methods for planning and documenting compartment evacuation tasks and timings.

As mentioned above

Example 1 – Schematic approach showing resident dependency, staff numbers required and approximate time for evacuation of compartment.



Example 2 – List approach showing resident dependency, staff numbers required and approximate time for evacuation of each compartment evidenced by a trial/drill.

Date of trial/drill:									
Compartment No	**No of residents in compartment when fully occupied**	**No of residents requiring EvacMat**	**Approx. evac time residents requiring mat (2 x staff & 3 mins per resident)**	**No of residents requiring wheelchair**	**Approx. evac time residents requiring wheelchair (1 x staff & 2 mins per resident)**	**No of mobile residents**	**Approx. evac time mobile residents (1 x staff & 1.5 mins per resident)**	**Approx. total time to evacuate compartment during the trial/drill**	**Minimum number of staff required to achieve the evacuation time with current resident levels**
1	7	2	**3 mins**	0	**0.00**	5	**3 mins**	**6 mins**	**4**
2	5	1	**3 mins**	1	**2 mins**	3	**3 mins**	**4.5 mins**	**3**
3	3	1	**3 mins**	1	**2 mins**	1	**1.5 mins**	**4.5 mins**	**3**
4	6	3	**6 mins**	1	**2 mins**	2	**3 mins**	**7.5 Mins**	**4**

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Example 3 – List approach showing resident dependency/needs, staff numbers required and approximate time for evacuation of compartment.

Compartment A – 4 Bedrooms/4 Residents							
Room no	**Resident Name**	**Needs**	**Support/Staff Required for evacuation**	**Eqpt Required**	**Approx time to evacuate to next compartment**	**Approx total time for evacuation of compartment**	**Vertical evacuation requirements**
12	Jack	Jack has dementia & limited mobility but able to transfer into wheelchair with support.	2 staff to transfer from bed/chair to wheelchair.	Wheelchair	2.5 Mins	3 staff = 7.5 mins. 4 staff = 5 mins	Rescue Mat 2 x staff
13	Jill	Jill has dementia but fully mobile.	Encouragement.	Nil	1.5 mins		Nil
14	John	John has dementia and no mobility.	2 staff to transfer from bed/chair to wheelchair	Wheelchair	3.0 mins		Rescue Mat 2 x staff
15	Jim	Jim has dementia & limited mobility but able to walk with Zimmer Frame.	1 staff to lift into standing position so able to use Zimmer.	Zimmer Frame	2.0 mins		Rescue Mat 2 x staff
Date of trial/drill achieved				**Actual evacuation time**			