Practical Fire Safety Guidance for existing Specialised Housing

and other supported domestic accommodation

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Contents

Acknowledgments

This Guidance applies to existing specialised housing and other supported domestic accommodation in Scotland. It draws on the content of the guidance issued for England and Wales entitled, “Fire Safety in Specialised Housing” (NFCC, 2017) and “Mobility Scooter Guidance for Residential Buildings” (NFCC, 2018). We wish to thank the National Fire Chiefs Council for permitting the use of text, diagrams and photographs from their guides.

Appendix 4 contains a range of assisted care technologies kindly reproduced with permission from London Fire Brigade.

Preface

Introduction

1. This Guidance provides practical fire safety advice designed to protect those who are vulnerable to the risk of fire and live at home in supported domestic accommodation.
2. In Scotland, there has been a significant fall (approx. 50%) in the number of fires and related deaths and injuries in domestic premises over the last 20 years. Nevertheless, a disproportionate number involve older people and others with recognisable “contributory factors”, including physical, cognitive and mental health issues.
3. Building homes which comply with Building Regulations ensures a basic level of fire safety. To best protect vulnerable people from fire, this should be supplemented by an assessment of fire risk and the implementation of fire safety measures, supported by appropriate guidance.
4. The importance of guidance was also highlighted by the Review of the Scottish Fire Safety Regime and agreed by the Ministerial Working Group, established by the Scottish Government immediately after the Grenfell Tower tragedy in 2017. The Review noted a lack of guidance for specialised housing in Scotland and concluded that person-centred guidance should be produced to meet the needs of all individuals that may need additional help in terms of fire safety.

Scope

5. For this Guidance, “specialised housing” includes the following domestic premises for people who live there on a permanent basis (See Glossary for definitions):
    - Sheltered housing
    - “Very sheltered” or “extra-care” housing
    - Supported housing, including small domestic care homes
6. Most specialised housing is provided for older people, who may require a degree of care and support. This ranges from sheltered housing complexes with little on-site management to very sheltered or extra care premises where people live in their own flats with significant on-site care services that may be provided 24 hours a day.
7. There are other forms of specialised housing provided for people with specific needs. These include supported housing facilities for adults with physical, sensory, mental health or cognitive impairments, who live, to varying degrees, independently in the community in a group home setting. In some cases, people may require significant care and support, sometimes on a 24-hour basis. These people are more at risk from fire and so require a high level of fire protection measures.
8. This Guidance may also be of value to vulnerable people receiving home care services in privately owned or rented accommodation which is not specialised housing (known as “general needs” housing) and to their family and/or carers.

Part 1 (person-centred fire safety risk assessment) will be of particular interest to this group. Some of the benchmarks in Part 2 that apply to sheltered housing may also be of interest, such as the standards of fire detection.

9. The Guidance applies to domestic premises registered with the Care Inspectorate as providing a "care home service" for a small number of residents (typically less than 5 residents). It should be noted that the majority of care homes are purpose-built and fall outwith this criteria, and sector specific guidance already exists for those premises: https://www2.gov.scot/Publications/2014/03/1383.

10. There is specific fire safety guidance available for other premises with sleeping accommodation which are required to comply with fire safety law, such as hostels, refuges and licensed Houses in Multiple Occupation. These are covered by "Practical Fire Safety Guidance for Premises Providing Sleeping Accommodation": https://www.gov.scot/publications/practical-fire-safety-guidance-existing-premises-sleeping-accommodation/

11. Fire safety guidance is also available for "general needs" high rise blocks of flats [Scottish Government has recently consulted on this and the Guidance will be published once it is complete]. For sheltered housing in a high rise block, reference should also be made to that guide.

12. Part 1 of this Guidance (person-centred fire safety risk assessment), complements the Sleeping Accommodation and High Rise fire safety guidance referred to above, where people living there are receiving care and support.

Fire Safety Law

13. In Scotland, domestic premises are generally exempt from fire safety law. Therefore, for most premises, this Guidance is best practice and not statutory. However, there are exceptions:

    - any premises which meets the criteria for requiring a licence to operate as a House in Multiple Occupation under Part 5 of the Housing (Scotland) Act 2006
    - any premises in which a "care home service" is provided, as defined by the Public Services Reform (Scotland) Act 2010
    - some supported housing in which residents have occupancy agreements, rather than tenancy agreements, and where the main purpose is to provide care

Further information can be found in Part 4.

Structure of the Guidance

14. The Guidance is built on 2 main pillars:

    - the person-centred fire safety risk assessment
    - the premises based fire safety risk assessment.

15. Fire risk is a combination of the likelihood of fire occurring and the consequences for life safety if it does occur. The person-centred approach is focussed on the individual and is more about introducing prevention measures to directly reduce

personal risk to a resident within their own home. The Scottish Fire and Rescue Service (SFRS) have, for many years, provided fire safety advice in the form of Home Fire Safety Visits which is an example of a person-centred approach to fire safety. There is no legal requirement to undertake a person-centred fire safety risk assessment, however, doing so and acting on the findings is effective in reducing personal risk and good practice.

16. The premises based fire safety risk assessment is also about life safety but is wider in its remit: it considers the risk to others beyond the room or compartment where a fire originates. It is more technical than the person-centred approach and requires an understanding of the application of fire safety principles to the built environment. Premises based risk assessments are required by law in most non-domestic premises and sector specific guidance is available for different premises types. However, they are increasingly used as an effective way to manage and ensure adequate fire safety in the domestic sector, regardless of whether fire safety law applies. Where required by law, compliance is normally audited and enforced by the SFRS.

17. There is an overlap between the two types of assessment; for example, the provision of fire detection and suppression systems can impact on personal safety and that of other residents.

Who is the Guidance for?

18. The person-centred fire safety risk assessment is a simple way to determine whether additional fire precautions might be appropriate. Who should carry out the assessment depends on the circumstances of the housing and support provision but a specialist is not necessarily required.

19. The assessment can be carried out by care and support staff and will usually involve the residents themselves. In sheltered housing schemes, scheme managers (where provided) or health visitors/care providers in regular contact with residents may undertake the assessment. In supported housing, those responsible for care and support may be best placed. For vulnerable people in general needs housing, the assessment could be carried out by a family member or a care provider (where engagement is frequent) who is familiar with this Guidance. A Home Fire Safety Visit should also be sought from the SFRS.

20. The scope for housing providers or landlords to implement measures to prevent fires within residents' accommodation will, in some cases, be dependent on the cooperation of the individual residents. Scheduled gas safety checks and inspections of electrical installations can provide opportunities.

21. Premises based fire safety risk assessments require to be undertaken by a competent person with the necessary skills, knowledge and/or experience. This may be a trained member of staff employed by the housing provider/managing agent or by contracting the services of a competent fire risk assessor. See Part 2 for more information.

22. The Guidance will also be of interest to the following parties:

    - Commissioners of care services
    - Building owners / Managing agents
    - Fire risk assessors

- Housing officers
- SFRS

23. Many are already considering resident safety more widely, which could offer a way of mainstreaming fire safety management into existing structures/processes, if not already embedded, for example:

Housing –

- The Scottish Social Housing Charter, which incorporates the Scottish Housing Quality Standard, covers aspects of tenant safety, landlord/tenant engagement, and equalities: including meeting the needs of those with protected characteristics such as age and disability
- Scottish Housing Regulator's Regulatory Framework requires an Annual Assurance Statement for Local Authorities and Registered Social Landlords. Landlords are required to consider whether any non-compliance with the regulatory standards affect the interests and safety of tenants
- Tenant and resident safety is a priority in the Scottish Housing Regulator's Corporate Plan
- Landlord "Housing Health Checks" consider the suitability of accommodation and the need for any adaptations that may be required

Care –

- Single Shared Assessments (community care needs)
- Personal Support Plans (housing support)
- Potential role of Joint Health & Social Care Integration Boards / Care Inspectorate in encouraging a person-centred fire safety approach

SFRS –

- Home Fire Safety / Safe and Well visits
- Fire Safety Enforcement Audits

Partnership Working -

- Community Safety Partnerships (fire safety initiatives)

Chapter 1: Fire Safety Design Principles

Key Points

- Fire safety design of specialised housing comprising blocks of flats is based on the same principles as in general needs blocks of flats
- Each flat is a fire-resisting “box” which facilitates a “stay put” evacuation strategy for blocks of flats
- Fire safety design of supported housing is usually based on the same principles as dwelling houses
- In supported housing, it is normally necessary to evacuate all residents, some of whom may have significant assistance requirements
- Evacuation generally takes longer in specialised housing than in general needs housing
- Design of means of escape and fire detection and alarm systems should take account of occupancy characteristics and fulfil the objectives of the evacuation strategy

General Characteristics

24. Specialised housing is purpose-built or converted residential accommodation designed to facilitate independent living for people with specific needs. Fire safety design of these buildings should take account of the residents’ vulnerability in the event of fire.

25. Much specialised housing stock comprises sheltered and extra care housing in blocks of flats. Sheltered housing schemes, in particular, vary in size, design, use and complexity. They can range from a collection of self-contained bungalows or flats, with no additional on-site facilities or staff to manage the building and support residents, to larger complexes that provide communal facilities such as kitchens, laundries and lounges, with on-site scheme managers or other staff.

26. Sheltered and extra care schemes are not generally staffed at a level to assist residents to evacuate. The design assumption is that residents are able to escape unaided from their own flats and make their way to a place of safety, using the common means of escape. It is recognised that, for some residents, their vulnerability may make this difficult and certainly slower. In some schemes, there may be an on-site scheme manager although many rely on social alarm (“Telecare”) systems linked to alarm receiving centres to provide support to residents. There may be limited day time cover with no on-site staff during the night to provide any assistance to the residents in the event of a fire. Even in extra care housing schemes, with higher staffing levels and carers on-site, there is limited assistance that can be provided to residents in the event of fire.

27. Sheltered and extra care housing schemes are designed and constructed on similar lines to purpose-built blocks of flats. Communal facilities might be provided but this does not alter the fundamental premise that people are living in their own private flats. A ‘stay put’ strategy is usually adopted in the event of fire where the design and construction of the building satisfies the fire safety

principles applied to blocks of flats, particularly for means of escape and fire separation.

28. In supported housing and small, domestic care homes that are more akin to single-family dwelling houses, a fundamentally different approach is adopted, particularly in relation to the evacuation strategy. Residents will have their own rooms and will normally share common facilities: the intention being for people to live in an environment that resembles a domestic house. Many premises are domestic family dwellings which have been converted or extended to provide supported housing. Fire protection requirements will generally follow the principles adopted for domestic properties, shared housing and houses in multiple occupation. This includes a simultaneous evacuation of all residents in the event of a fire. The fire strategy should include the potential need for staff to assist with evacuation. In premises where fire safety law applies, such as small, domestic care homes and some forms of supported housing (such as licensed Houses in Multiple Occupation), it is a requirement to have a sufficient number of nominated staff to ensure appropriate evacuation procedures can be implemented effectively.

Escape in the Event of Fire

29. In a fire situation, it should be possible to escape unaided (i.e. without external assistance) before being affected by fire or smoke. Smoke is toxic, which causes incapacitation and it also reduces visibility. High temperatures and radiant heat from the flames will also impact on people's ability to escape. Recognising these hazards and providing safe escape routes underpins fire safety design in all buildings.

30. In sheltered and extra care housing schemes, mobility and health issues may slow a person in their escape. Consequently, the distance from a flat entrance door to a place of relative safety such as a protected stairway, protected lobby or even to a sub-dividing corridor door often needs to be shorter than in general needs blocks of flats.

31. While the design of means of escape and other fire safety measures is not based on external rescue, some residents may have difficulty in evacuating without a degree of outside assistance.

Evacuation and Rescue

32. It is important to distinguish between the concepts of evacuation and rescue. In sheltered and extra care housing, only the flat of fire origin needs to be evacuated, at least initially. Rescue by the SFRS may, ultimately, be necessary if a resident is unable to self-evacuate because of issues such as infirmity, reduced mobility or mental health. This is no different from the situation that would arise if that resident were living in a flat in a general needs block or a bungalow, nor does this imply any failure of the emergency plan for the premises.

33. Widespread evacuation of general needs, sheltered and extra care housing in the event of fire should not normally arise. If it does become necessary, this may reflect a failure in fire separation between occupancies (or some other catastrophic fire safety failure).

34. In supported housing, if assistance is required for evacuation this should be provided by staff on the premises. Emergency evacuation is a management responsibility and rests with whoever has control of the premises.

35. The SFRS may need to rescue people from the affected accommodation and they may also assist with any ongoing evacuation.

Suitability of Accommodation

36. Due to changing circumstances, a resident may become so vulnerable that they are no longer suited to their accommodation. For example, it might be more appropriate to be accommodated in a care home, where staff can provide assistance in the event of a fire.

37. Those responsible for the safety of the residents (commissioning groups and care providers) should consider whether additional fire safety measures are necessary before offering a placement or whether the premises are actually suitable for the residents in the first place.

38. The use of a person-centred approach (see Part 1 of this Guidance) will enable measures to be put in place for an individual in their own accommodation to reduce this vulnerability.

Fire Separation

39. The most likely place for a fire to start will be within private accommodation. In blocks of flats, each flat is effectively a fire-resisting box bounded by non-combustible separating walls and floors that will resist the passage of fire and smoke for a period of time. Separating walls and floors are provided between individual flats and between flats and other parts of the building, helping to contain the fire and smoke to the flat of origin.

40. Separation is key to the ‘stay put’ strategy that is commonplace in blocks of flats (NB separation is a term used in Scottish building standards. It is often referred to more generally as ‘fire compartmentation” in the UK). Separation will normally ensure that a fire will not spread to other parts of the building although this can be affected by a number of factors such as an abnormal fire load within a flat, combustible cladding, unprotected voids/ducts within the building, or defects in the separating walls or floors.

41. The building’s structural elements must have sufficient fire resistance when exposed to a fire of predicted severity to not only prevent fire spread, but also to prevent structural collapse for a reasonable period.

42. In supported housing and small domestic care homes which are akin to dwelling houses, the level of protection provided to escape routes is likely to be lower than that provided to separating walls and floors in a block of flats. However, there is still a need to provide protected escape routes that will remain safe long enough for a complete evacuation of the premises.

Evacuation Strategies – Stay Put vs Simultaneous

43. Blocks of flats are designed to facilitate a “stay put” strategy - only residents at immediate risk need to escape while those in flats remote from the fire are normally safe to stay where they are. The principle applies equally to sheltered and extra care blocks of flats.

44. A “stay put” policy does not stop any unaffected residents from leaving the building, although they may actually be at greater risk by doing so, particularly if smoke has affected the common escape routes or if firefighting operations are underway.

45. Residents in the common areas should not return to their flats if the communal fire alarm system operates. They should proceed immediately to a place of safety. This may be an external assembly point or, to avoid exposing vulnerable residents to inclement weather, a relatively safe area, such as a communal lounge on the ground floor with an exit to open air.

46. On rare occasions (for example, where there is a failure in separation), the SFRS may need to evacuate residents from other flats in the building.

47. In supported housing, there is usually inadequate separation to support a ‘stay put’ strategy, and so a “simultaneous evacuation” of all residents is needed. This requires a common fire detection and alarm system and a suitably protected means of escape to allow all residents to hear the alarm and escape safely.

48. Simultaneous evacuation is sometimes advocated in sheltered and extra care housing schemes where there are doubts over fire separation. Resolving concerns and addressing deficiencies is usually more appropriate than changing the evacuation strategy. There may be rare occasions where it becomes necessary to temporarily adopt a simultaneous evacuation policy until major deficiencies are remedied, for example, if serious failures are found in fire separation or the use of inappropriate cladding systems. This will normally require the installation of a common fire detection system capable of providing warning throughout the premises and/or additional staffing requirements. Further guidance for the temporary adoption of a simultaneous evacuation strategy in high rise buildings can be found at https://www.nationalfirechiefs.org.uk/Simultaneous-evacuation-guidance .

Fire Detection and Alarm Systems

49. Early warning of fire is essential to ensure that residents can evacuate quickly and safely from their accommodation in the event of fire. Domestic smoke alarms have been successful in reducing the number of fire casualties. In sheltered and extra care flats, smoke and heat alarms should be provided extensively in all new schemes and should be an objective for existing schemes. It may also be identified in a person-centred risk assessment to provide additional protection for an individual. In supported housing, extensive provision should also be present.

50. If a fire occurs, early attendance by the SFRS will help ensure early extinguishment of a fire, reducing the likelihood of the need to evacuate other residents where a “stay put” policy applies. If wider evacuation is necessary, it also enables the SFRS to initiate this at an earlier stage, so compensating for the slower response of some older and mobility impaired people.

51. Fire detection within flats is important in this respect. Early attendance by the SFRS is achieved by remote monitoring of the detection at an alarm receiving centre, normally via a social alarm (“Telecare”) system, which ensures a call is made to the SFRS without delay. Social alarms normally allow for 2 way communication which also helps to filter out false alarms from individual flats.

52. In addition, sheltered and extra care housing often have communal detection systems for the common areas because they have shared facilities, such as lounges and laundries. These systems should also be monitored remotely and provides warning to those in the common parts who should then leave the building immediately (its purpose is not to alert the occupants of flats who should continue to “stay put” if unaffected by fire or smoke).

53. In sheltered schemes without common facilities, a communal system may not be required. This is why such systems are not normally required in general needs block of flats, although there may be a need for detection to operate automatically-opening vents for smoke control purposes (these do not raise an alarm).

54. It is feasible for a single fire detection and alarm system to provide a local warning for residents in flats, warning in the common areas and early summoning of the SFRS by remote monitoring. However, as the communal system includes smoke detectors in the flats, “filtering” would be required by an on-site scheme manager (when present) and an alarm receiving centre (when there is no scheme manager on site). This is to prevent the summoning of the SFRS to false alarms.

55. A communal fire detection and alarm system will always be necessary in supported housing to warn residents of the need to make their escape immediately.

56. There should also be appropriate management arrangements in place. Residents should not normally be required to silence and reset a system. They must understand how to respond to fire alarms, and should have a means to contact someone who can respond quickly if the system is activated when there are no staff on site. This information should be displayed prominently next to the fire alarm control panel. In some supported housing, there will be reliance on carers to respond to alarm signals.

57. More information on fire detection and alarm systems and other fire safety measures can be found in Part 2.

Part 1 Person-Centred Safety Risk Assessment

Chapter 2: The Person-Centred Fire Safety Risk Assessment

Key Points

- The person-centred approach relates to the safety of residents who are at high risk from fire in their own accommodation
- The person-centred assessment is generally outside the scope of fire safety legislation but is strongly recommended as good practice
- The assessment considers the characteristics of the resident which might impact on the likelihood of a fire occurring and the physical and/or mental ability of the person to recognise and respond appropriately to a fire or warning of fire
- The outcome of the assessment will determine what additional preventive and protective measures may be required
- The appropriate person to carry out the assessment will depend on the circumstances of the housing and support provision, but may involve sheltered housing scheme managers, care providers or any other party who regularly engages with the resident

Introduction

58. Most fires occur within residents' own accommodation and the characteristics of the person directly impact on risk.

59. The greatest risk of death is for those in the room in which the fire starts and they are often directly involved in the fire, for example, their clothing or bedding may be the item first ignited. The premises may have adequate fire safety measures for compliance with Building Regulations, but the level of fire risk is greatly influenced by the occupants such that additional measures become necessary to address that risk. Where mobility or other issues affect the ability of an individual to escape from fire within their accommodation, additional measures may also be required, even if the person is not in the room of fire origin.

60. A person-centred approach reduces this risk and needs to be specific to the individual. Prevention is the priority, particularly to reduce the serious risk to individuals who are present in the room in which the fire starts. Protection measures should also be provided to help protect people when fire occurs.

61. This approach is appropriate for any resident who is considered at high risk from fire. It should consider the characteristics of the resident, identify fire hazards, consider the potential consequences in the event of fire (taking account of existing fire precautions) and, where appropriate, develop a suitable action plan to ensure a reasonable standard of fire safety.

62. The first step in any person-centred approach to fire safety is to engage with the residents. Through engagement, it is often possible to identify those at greatest risk.

Engaging with Residents

63. All housing providers, landlords and managing agents should make efforts to engage meaningfully with residents and provide basic fire prevention advice. Resident's handbooks, fire safety leaflets and joint working with care and health workers provide opportunities to inform and educate.

64. In sheltered and extra care housing, residents' handbooks are often used to communicate basic fire safety advice to new residents. This may also be made available on company websites. Where appropriate, and subject to the policy on the use of the common parts, such advice may be reinforced with notices displayed in the building.

65. Within supported housing and small domestic care homes, residents will often share facilities in a group home environment. Care / support workers will generally have a greater degree of control and responsibility for the residents and their accommodation. Fire safety information is often best discussed face-to-face with each resident.

66. It is important that there is engagement with residents to communicate a number of vital fire safety messages, including:

- how to prevent fires in their own accommodation and common areas;
- the importance of security;
- why they should never store or use petrol, bottled gas, paraffin (for heaters), or similar materials in their accommodation or common areas;
- what action to take if they discover a fire;
- how to respond to fire alarm signals in their own accommodation;
- in sheltered and extra care housing, how to respond if the fire alarm sounds in the common areas;
- why they should not interfere with the fire alarm system, for example to silence the system;
- how to make their way safely from their accommodation and exit the building;
- in sheltered, extra care and general needs housing, what 'stay put' means if there is a fire elsewhere in the building;
- in sheltered/extra care housing, whether any limited assistance will be provided in the event of fire (for example, it should be made clear in "welfare packs" that assistance to residents may not include assistance with evacuation in the event of fire);
- safeguarding communal escape routes, for example, ensuring fire doors self-close properly and are not wedged, tied or otherwise held open;
- what the policy on the use of common areas requires of them;
- how to avoid damaging fire protection measures when making changes to their accommodation;
- how to report faults or damage to fire safety measures in their accommodation and common areas

67. Appendix 1 contains basic advice for residents. Fire action notices highlight the actions that residents should take in the event of a fire (these might not be necessary in all supported housing). Appendix 2 contains templates.

68. Leafleting campaigns and other fire safety initiatives may be necessary to keep the message fresh, up to date and relevant. The SFRS, in partnership with housing providers and other agencies may assist. SFRS also offer free home fire safety checks and have useful information/materials on their website such as Supporting Fire Safety in the Home – A Carers' Guide. https://www.firescotland.gov.uk/media/1363280/Carers_Guide_Fire_Safety_leaflet.pdf .

69. Representatives of organisations who visit residents in their own accommodation should be instructed to identify obvious fire hazards and residents who are particularly at risk from fire. This is an integral part of the person-centred approach. Basic fire awareness training will assist in this regard.

70. The Health and Social Care Standards published by the Scottish Government are applicable to the NHS and services registered with the Care Inspectorate and Healthcare Improvement Scotland. They set out service user expectations, including around protection and safety, with assessments and referrals being made to appropriate agencies.

Steps to a Person-Centred Risk Assessment

71. Having identified those at greatest risk (whether through engagement or from a referral from a concerned party), the next step is to carry out a person-centred fire safety risk assessment. These should always be carried out for higher risk residents. In supported housing, the number of residents is usually quite small and so it may be possible to carry them out routinely when a new resident first moves in. Wherever possible, the assessment should be completed with the individual (or with others who are able to speak on their behalf, if this is not possible). A blank template is provided in Appendix 3.

72. Steps to a Person-centred risk assessment:

    1. Consider how the characteristics, behaviours and capabilities of the resident may influence fire risk (individual risk)*
    2. Consider the capacity of resident to respond appropriately in the event of fire (individual risk)*
    3. Consider the ability of resident to evacuate in the event of fire (individual risk)*
    4. Identify the potential causes of fire and factors which may cause rapid fire development
    5. Evaluate existing fire prevention measures
    6. Evaluate existing fire protection measures
    7. Determine the level of risk to resident
    8. Prepare and implement an action plan
    9. Review regularly

The Individual (Steps 1 – 3)

73. It is important to consider all 3 individual risk factors (asterisked above). Where there are concerns over more than one of the individual risk factors, the impact can be significant. For example, a typical high risk resident would be an

individual who smokes, has the potential to set fire to their clothing or bedding and will be slow to evacuate without assistance. Smokers who may have cognitive or physical challenges and use Oxygen cylinders and emollient creams can also be at serious risk.

74. Careless use of smokers' materials, forgetfulness or lack of awareness while cooking, and drug or alcohol misuse can all result in an increased likelihood of fire. If fire does occur, hoarding and the presence of Oxygen cylinders or stored flammable substances can increase the development and severity of the fire. In combination, these factors would represent a very high risk such that additional measures to prevent fire (fire prevention measures) and to protect the resident in the event of fire (fire protection measures) may be necessary.

75. Residents may not recognise danger or be able to make decisions in order to respond appropriately to a fire, or a warning of fire. This may be due to cognitive issues, sensory impairment or the effects of alcohol or medication.

76. The assessment should also consider the ability to evacuate. Evacuation from private accommodation is the most critical stage, and from there on to a place of relative safety, which may involve using corridors and stairs. Each stage needs to be considered in terms of the physical abilities of the resident.

77. In supported housing and small domestic care homes with 24 hour staff, personal emergency evacuation plans (PEEPs) may be required. Evacuation may involve an element of staff assistance. PEEPs should be agreed and drafted with the person, where possible. More information on PEEPs is provided in the Scottish Government publication "Practical Fire Safety Guidance: The Evacuation of Disabled People from Buildings".

78. Where the evacuation strategy does not rely on staff assistance, additional fire safety measures may be necessary to ensure sufficient time is available for residents to safely self-evacuate the premises. Appendix 4 suggests a range of measures which may be appropriate, depending on individual circumstances.

Fire Hazards (Step 4)

79. Fire hazards within the accommodation also need to be considered. This includes sources of ignition, fuel and oxygen.

Sources of Ignition:

- smoking and smokers materials
- electrical wiring and appliances (overloading or signs of damage)
- heating appliances (inappropriate use of portable heaters)
- electric blankets (wear and tear, age)
- cooking (particularly if left unattended)
- use of candles (particularly if in unguarded holders and left unattended)

Fuel

80. To reduce the likelihood of a fire starting, it is important that combustible materials are separated from potential sources of ignition, such as tea towels left adjacent to a cooker hob, combustibles stored adjacent to electrical intakes and candles in the vicinity of curtains. The presence of combustible materials within

hallways or adjacent to flat entrance doors should be avoided. Hoarding is a particular hazard which can place the occupier and other residents at risk.

Oxygen

81. Some residents may use medical gases in their own accommodation, either on a temporary basis or permanently. This will generally involve the use of small mobile oxygen therapy units. In these instances, residents should be given advice and guidance on the safe use and storage of such equipment.

82. Cylinders present an explosion risk if exposed to extreme heat. Leaks from cylinders and tubing or from around the edge of facemasks can create an oxygen rich atmosphere which can increase the intensity of a fire and the combustibility of clothing worn by residents who receive oxygen therapy. This is a serious risk for smokers.

83. Residents should be advised not to use oxygen therapy when smoking or in the vicinity of other forms of ignition, such as cookers or heaters. Rooms in which oxygen therapy is administered should be well-ventilated. Cylinders should not be stored in combination with combustible materials or flammable materials, such as alcohol hand gels, or materials containing, or contaminated with, oils or grease. The provision of warning signs on residents' accommodation should be considered.

Fire Hazard Indicators

84. The following are some of the warning signs which may indicate that a person could be at a higher risk of having a fire in their home:

Kitchen	Burnt pans or cooking Paper or rubbish stored around the cooker hob
Lounge	Used as a bedroom (using the sofa as a bed for example)
Bedroom	Smoking in bed Burn marks on bedding or carpets Old or damaged electric blanket in use Combustible materials near heat sources (such as an electric fire/heater)
All rooms	Overloaded electrical sockets Burn marks on carpet or furniture Combustible storage around electrical intake and meter Electric or gas heaters close to storage, furniture, clothes drying Paper or rubbish stored around the heat sources such as electric fire/heater Burn marks or discarded cigarettes on carpets and furniture. Overfilled ashtrays Unsafe use of candles (no candle holders for example) Combustible materials near heat sources (such as an electric fire/heater)
The person	Burn marks on person or clothes

Fire Safety Measures

85. Person specific measures to reduce risk from these hazards can include both fire prevention and fire protection measures. Appendix 4 contains an expanded list of potential measures mapped to a range of common vulnerabilities. Measures should be thought of as a menu of options on a sliding scale, ranging from relatively inexpensive and basic through to more expensive and sophisticated. The selection of the most appropriate measures will be dependent upon the individual findings of the person-centred fire safety risk assessment. It is a principle in fire safety risk assessment that measures to address shortcomings in fire safety should be proportionate to the risk. The cost, practicality and benefit gained are all taken into account.

Fire Prevention Measures (Step 5)

86. Examples include:

- fire-resistant furniture and bedding / clothing / throws etc
- safer forms of portable heating
- safety ashtrays / metal bins
- fire-resistant smoking apron
- cooking appliances with enhanced safety features
- fire prevention advice and engagement, taking into account the person's mental capacity to understand, remember and apply such guidance
- replacing old electrical appliances
- good housekeeping

Smoking

87. Fires started from smokers' materials is the biggest cause of fire deaths in the home. In small domestic care homes and supported group home environments, arrangements may already include individual risk assessments for vulnerable residents who smoke, and control measures which restrict access to smokers' materials. The level of assessment and control may be similar to those in purpose built care homes. Assessments should consider the mental/physical capacity of residents, as well as medical risks, such as the use of oxygen and emollient creams. Smoking policies should also take account of the use of e-cigarettes, given the number of fires which have been caused by defective and non-regulated charging devices.

88. Smoking policies do not generally apply to self-contained units of accommodation such as flats in sheltered, extra care or general needs housing. However, straightforward risk reduction measures can often be implemented easily, such as encouraging smokers to use Reduced Ignition Propensity cigarettes which self-extinguish if not smoked, or by providing fire retardant smoking aprons which cover clothing and gaps between the smoker and the sides of their chairs. Safety ashtrays can be effective in immediately extinguishing cigarettes. For those who tend to overfill ashtrays, the use of metal waste bins (sometimes partially filled with sand) may be a better option.

89. Fire-resistant upholstery conforming to the *Furniture and Furnishings*

(Fire)(Safety) Regulations 1988, as amended, will help to reduce risk further.

90. Despite advising of the dangers of smoking in bed, some residents may continue to do this. Additional measures should be considered in these cases, such as fire-resistant mattresses which conform to the 1988 Regulations. Fire resistant bedding, such as pillows, pillowcases, duvets and sheets, are also available and should meet the appropriate test requirements of *BS 7175 (1989) Methods of test for the ignitability of bedcovers and pillows by smouldering and flaming ignition sources.* Guidance produced by the Health Facilities Scotland on the type of furniture and furnishings in hospitals is given in *SHTM 87 (Firecode: textiles and furniture)* which may be more appropriate in some cases.

Cooking

91. Cooking can be a particular hazard for those with dementia or who are easily distracted and is the most common cause of fire in residential dwellings. Automatic cooker isolation devices are available to isolate electricity and gas supplies, linked to heat detection sensors or timers. Other examples are listed in Appendix 4.

92. In most sheltered and extra care resident flats, the role of housing providers will be limited. The responsibility for ongoing maintenance and cleaning generally rests with residents. Intervention strategies involving external agencies and relatives might be appropriate to reduce risk for vulnerable individuals. All gas and electrical supplies should be subject to ongoing servicing and maintenance and housing providers and support agencies should provide advice and guidance to residents on the risks of fire from cooking.

Electrical

93. Within residents' accommodation, the use of extension cables and adaptors should be kept to a minimum, as inappropriate use presents a risk. Housing providers and landlords should ensure premises have sufficient electrical outlets. Fire safety guidance should include information on:
    - trip hazards posed by trailing leads
    - the overloading of sockets
    - the dangers of combustible items such as bedding, being in the vicinity of heaters
    - using electrical outlets in dangerous situations in kitchens or bathrooms

94. Where housing providers, care workers or others identify hazards, they should bring them to the individual's attention and ensure that appropriate action is taken.

95. Oil-filled radiator portable heaters should be used in preference to convector or fan heaters, particularly for vulnerable residents. LPG gas heaters, paraffin heaters and open bar heaters should always be avoided and replaced with a fixed heating system or, if required, a portable oil-filled radiator heater.

96. Electric blankets over 10 years old or that show signs of wear and tear should never be used. Blankets should be checked by a specialist every three years or as recommended by the manufacturer and bear the BEAB certification mark.

97. Where electric profiling beds (EPBs) are used, measures should be taken to

reduce the risk of damage to the cables in line with manufacturer's instructions. This should include routine examination of cables. 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. A residual current device (RCD) should be used to provide additional protection of cables that supply EPBs. The best place for an RCD is built into the main switchboard or socket outlet, as this means the supply cables are permanently protected. If this is not possible, a plug incorporating an RCD or plug-in RCD adaptor can also provide additional safety.

Housekeeping

98. Good housekeeping is key to reducing risk, regardless of the type of accommodation. Controlling the presence of combustible materials and ignition sources reduces the risk of fire and helps to ensure escape routes are free from obstructions which might otherwise hinder evacuation.

99. Hoarding poses a risk to the occupier and other residents in the premises. If landlords or housing providers become aware of hoarding, measures should be taken to reduce the risk. Lease or rental agreements may cover hoarding as it can be deemed to place others at risk. External agencies and relatives may need to be involved. Serious hoarding should be regarded as a mental health issue, which should be referred to Adult Social Care services.

Fire Protection Measures (Step 6)

100. Examples include:

- enhanced fire detection and assistive accessories
- fire doors
- fire suppression
- personal protection watermist systems
- staff assisted evacuation in supported housing/small domestic care homes

Fire Detection and Warning

101. Fire detection within private accommodation is key to ensuring that fire is detected as early as possible and an alarm is raised, giving residents sufficient time to escape. Unless there is a continuous staff presence, a social alarm monitoring service such as Telecare, is recommended. To protect high risk individuals, a high level of coverage is required and so a LD1 system complying with *BS 5839-6* will often be appropriate. This requires the provision of a heat detector within kitchens and smoke detectors in all circulation spaces and all other rooms (excluding toilets, shower rooms, bathrooms).

102. Additional sounders and/or low frequency, square wave sounders (520Hz) may also be beneficial for those with hearing difficulties. *BS5446-3* provides further information. Visual alarms may be required if a person is deaf or has very impaired hearing, complemented by vibrating pads linked to the fire detection system for use under pillows or mattresses when asleep.

103. Voice alarms giving clear instruction in the event of fire may be more appropriate where conventional alarm signals might cause confusion or distress, for example, for some dementia sufferers.

104. Part 2 provides further information on appropriate fire detection and alarm systems and system requirements and the need, or otherwise, for remote monitoring by alarm receiving centres, which allows for 2 way communication with the resident.

Fire Doors

105. Fire doors may protect a high risk resident from fire spread within a dwelling, particularly where persistent hoarding is an issue which cannot otherwise be easily resolved. Providing fire protection to internal escape routes, such as the provision of fire doors to rooms off internal hallways (excluding toilets/bathrooms) within private accommodation, may also be considered where significantly prolonged evacuation times are likely. Part 2 provides further information and benchmarks.

Automatic Fire Suppression Systems

106. In cases of serious risk, automatic fire suppression systems, such as domestic sprinklers or watermist systems, may be considered. Alternatively, moving to accommodation with suppression already provided might be a possibility. These systems are actuated by heat and will usually contain or even extinguish a fire in the room of origin, providing more time for occupants to escape. However, should a resident be present in the room of fire origin and the fire already involve the resident's clothing, a sprinkler head is unlikely to prevent harm.

107. Retrofitting a sprinkler or watermist system may not always be realistic. An assessment of the benefit in risk reduction measured against the potential cost and disruption will normally be necessary and is an underlying principle of fire safety risk assessment. Technology is always developing and it may become easier and less expensive to retrofit newer systems to existing premises. Each system will have its own advantages and limitations, so it is important that the fire safety objective is clear and the limitations are fully understood, particularly where systems are not verified as compliant against any recognised standard.

108. Self-contained personal protection watermist systems are also an option. They have a container of water and a pump, with a single nozzle that discharges water over a defined area, such as a bed or chair. They are often operated by smoke detection and so respond faster than conventional suppression systems, to further reduce the likelihood of harm. These are local application systems which are designed to protect individuals in a particular location and will not have any impact beyond the protected area. The use of a multi-sensor detector, rather than a smoke detector, may reduce the potential for false alarms. Such systems should also be remotely monitored by an alarm receiving centre or social alarm provider, to ensure early summoning of the SFRS.

109. Other systems are available that utilise heat scanning technology with rotating heads that target the fire with a jet of water mist. Triggered by a multi-sensor detector, the spray heads begin scanning. They measure the temperature in the room using an infrared sensor, looking for high readings, or a differential increase between scans. Once the temperature readings exceed a threshold, the heads are deemed to have located a fire. The head with the best "view" then directs a jet of watermist onto the fire.

110. There are currently no British Standards for personal protection watermist systems. Guidance on their use and application is dependent on manufacturer's guidelines. The Loss Prevention Certification Board has produced a standard for approval: *LPS 1655: Requirements and test methods for the approval and listing of personal protection watermist systems*. This does not assist in determining suitability for use, although "*Guidance on the use, deployment and limitations of Personal Protection Watermist Systems in the homes of vulnerable people"* has been produced by the Building Research Establishment in partnership with London Fire Brigade (BRE Global).

111. The early provision of suppression within specialised housing at the design and building phase will provide flexibility to accommodate the changing circumstances of residents. In the long term, a high risk resident will undoubtedly benefit from such provision. More information on suppression systems can be found in Part 2.

Other Options

112. Support requirements can change over time and sometimes risk cannot be sufficiently reduced with the additional measures identified by the assessment. For their safety, a resident might need to move into new accommodation, for example, with suppression; or where self-evacuation is unachievable, more suitable accommodation such as a care home. In the case of supported accommodation, some organisations may provide additional equipment or additional staff for evacuation purposes.

Determine the level of risk (Step 7)

113. This may be expressed as a simple subjective description of overall risk to the resident such as low, medium or high.

Prepare and Implement an Action Plan (Step 8)

114. Measures in the action plan should relate directly to the risk factors identified in the assessment and be effective in reducing risk. The outcome will need to be referred to persons or organisations that can assist, such as housing providers, care providers and others. For high risk residents, this might be led and coordinated by locally based adult health and social care teams. There should always be meaningful engagement with the resident, to ensure that measures are, and continue to be, effective in reducing risk.

115. The SFRS have undertaken Home Fire Safety Visits for many years and have developed policies and procedures to ensure people at risk of harm are referred to the appropriate agencies for specialist support. Engagement with housing and care providers and local authority health and social care departments may also take place through local Community Safety Partnership schemes. Partnership working has been shown to be successful in securing fire safety improvements, as well as addressing other health and wellbeing concerns, such as slips, trips and falls, dementia support, loneliness and isolation.

Review (Step 9)

116. The risk assessment needs to be reviewed regularly to take into account

changes in the resident’s capabilities, which may deteriorate or vary over time. This may result in changes to the fire safety measures required. Engagement remains important, particularly where any new measures impact on personal liberty.

Part 2 Premises Based Fire Safety Risk Assessment

Chapter 3: Assessment of Fire Risk in Premises

Key Points

- The objective is to evaluate the risk to people in the building from fire and determine if existing fire safety measures are adequate or if additional measures are required
- The assessment will focus primarily on the common areas and building-wide fire safety measures which are provided within private accommodation
- Where concerns remain regarding the risk to individual residents within their own accommodation, this should be followed up with a person-centred fire safety risk assessment (see Part 1)
- Intrusive checks (involving exposure of construction) will only be necessary where there is justifiable concern regarding structural fire precautions
- Assessing risk need not always be carried out by specialists, but where external specialists are used, care should be taken to ensure their competence
- Fire safety risk assessments should be reviewed regularly and when circumstances change or after a fire or near miss
- The premises based fire safety risk assessment is a legal requirement for premises which fall within the scope of fire safety legislation (see Part 4)

Introduction

117. A premises based fire safety risk assessment is a systematic and structured examination of the likelihood of fire and the likely consequences to residents and others who may be affected by a fire anywhere in the premises. This is normally carried out by the building owner, occupier or managing agent. Despite being referred to as “premises based”, the focus of the premises based risk assessment is still life safety: property protection and business continuity assessments are outside the scope of this Guidance. It is a more technical process than the person-centred approach, and requires an understanding of the application of fire safety principles to the built environment.

118. While the person-centred assessment is particular to a specific high risk individual, the scope of the premises based risk assessment is far broader, going beyond a single individual and unit of accommodation. It does not consider the specific characteristics of each and every vulnerable resident, other than possibly in very small supported housing premises. The number of residents in a sheltered or very sheltered complex would make this impracticable. It should, however, consider the generic physical and cognitive characteristics of the residents.

119. It will usually focus on the common areas. It is unlikely to include a detailed consideration of the risk within residents’ private accommodation, although it should take account of any features or measures within private accommodation which may have an impact on the safety of the building as a whole (for example, servicing/maintenance of gas/electricity supplies; provision of automatic detection systems; potential breaches in fire separation).

120. There is an overlap between the person-centred and premises based approaches, particularly where measures provided within private accommodation can impact on others elsewhere in the building. Examples include:

- Flat front doors - important to the safety of the common areas in the event of a fire within private accommodation
- Internal doors - to protect the hallway enclosure within a flat, reliance is sometimes placed on internal fire doors
- Ventilation systems - common kitchen or bathroom extract arrangements can be a route for fire-spread between flats
- Suppression systems – these will normally contain a fire within a flat/room

121. The findings of the premises based fire safety risk assessment should provide a minimum “baseline” standard of fire safety for all residents. In addition, it should confirm the arrangements for carrying out person-centred risk assessments, which, in turn, will determine what additional measures are necessary to protect those at greatest risk in their own private accommodation.

122. Existing fire safety measures are evaluated to establish whether they are adequate or if more requires to be done. Fire safety measures include not just physical measures, but also standards of management.

123. Where fire safety legislation applies (such as domestic care homes and premises which require to be licensed as a House in Multiple Occupation (HMO) under Housing legislation), it is a legal requirement to carry out this type of fire safety risk assessment and to act on its findings. If individual person-centred risk assessments are not undertaken, the premises-based risk assessment should ensure it considers the need of persons who are identified as being especially at risk from fire. The provision of Personal Emergency Evacuation Plans (PEEPs) may also be necessary.

124. Where fire safety law does not apply, it is recommended that those persons or organisations responsible for their management, carry out an assessment of fire risk in the building, as part of their corporate responsibility.

125. As with the person-centred approach, measures to address shortcomings in fire safety should be proportionate to the risk and the cost, practicality and benefit gained should all be taken into account.

Extent of Fire Safety Risk Assessment

126. The assessment of risk should be specific to fire safety and to the premises concerned. A generic risk assessment will not be appropriate. It will normally be non-intrusive without any opening up of construction and will consider:

- the common area arrangements for means of escape and other fire safety measures
- an examination of a sample of entrance doors to resident accommodation to ensure adequate fire resistance/self-closing ability
- the separating construction between private accommodation and the common area
- the potential for spread of fire on the external envelope of the building

127. Where there are demountable false ceilings in the common areas, a sample of ceiling tiles should be lifted to check fire stopping. A sample of service risers should be checked for measures to stop vertical fire spread. An inspection of roof voids should also be carried out to ensure appropriate barriers against fire spread are provided.

128. Intrusive inspection is usually a one-off exercise, which is carried out only if there is good reason to suspect serious physical deficiencies. It can be carried out on a sampling basis if serious issues in structural fire protection are suspected, such as inadequate fire separation or poor fire stopping. A contractor will normally be required for opening up the construction and making good after the inspection. It should not be recommended as a matter of course and the age of the building alone is not sufficient reason. Intrusive inspection within private accommodation should normally be carried out in those that are vacant. Before starting work, the risk of disturbing asbestos should be considered.

129. Effective fire separation between individual flats, and between flats and common areas, is essential for a “stay put” policy to be safe and appropriate. The premises based risk assessment must, therefore, include an assessment of fire separation. Any defects would place vulnerable residents at significant risk.

Competence of Fire Risk Assessors

130. The decision on whether to use outside specialists to carry out the risk assessment rests with the building owners or management organisation. They will need to decide whether they, or their employees, have the capability and capacity to assess fire risk. If not, they can arrange for a suitably qualified person or company to carry out an assessment on their behalf. It can be difficult to judge the competence of companies and persons who advertise their services. The fact that a person or company is operating in the fire sector or that someone has previous fire service experience, does not mean that they are a fire safety specialist.

131. The use of registered or third-party certificated persons or third-party certificated firms to carry out fire safety risk assessments is one way to establish due diligence. The Scottish Government and the SFRS recommend that those who wish to contract the services of external fire risk assessors, select an assessor who is third party certificated by a United Kingdom Accreditation Service (UKAS) accredited Certification Body or a similar Professional Registration Scheme. The SFRS maintains a list of UKAS and other recommended schemes on its website. The SFRS has not assessed and does not endorse any individuals or companies participating in these schemes. However, participation in such schemes can offer a degree of assurance that a risk assessor (individual or company) has met the professional requirements of the scheme.

132. In selecting a fire risk assessor, their competence should extend to the principles of fire safety in specialised housing. When commissioning a risk assessment from an external consultant, the following should be specified:

- the extent of the fire safety risk assessment required
- the style and format required for the report
- that an improvement plan will show priorities and timescales

- that the report differentiates between recommendations that are essential to safety and those that are less important but represent good practice

133. Conclusions from a risk assessment should be supported by reasoned judgement. Generic recommendations that are not specific to the premises and any conclusions that attempt to transfer risk away from the risk assessor decisions that appear to be precautionary and to be risk-averse should be challenged.

A Methodology for Assessing Fire Risk

134. Guidance on one approach to fire safety risk assessment is set out below and shown in Figure 1. There is no requirement to use any particular style or format for carrying out an assessment or recording the findings; other approaches and formats may be equally acceptable.

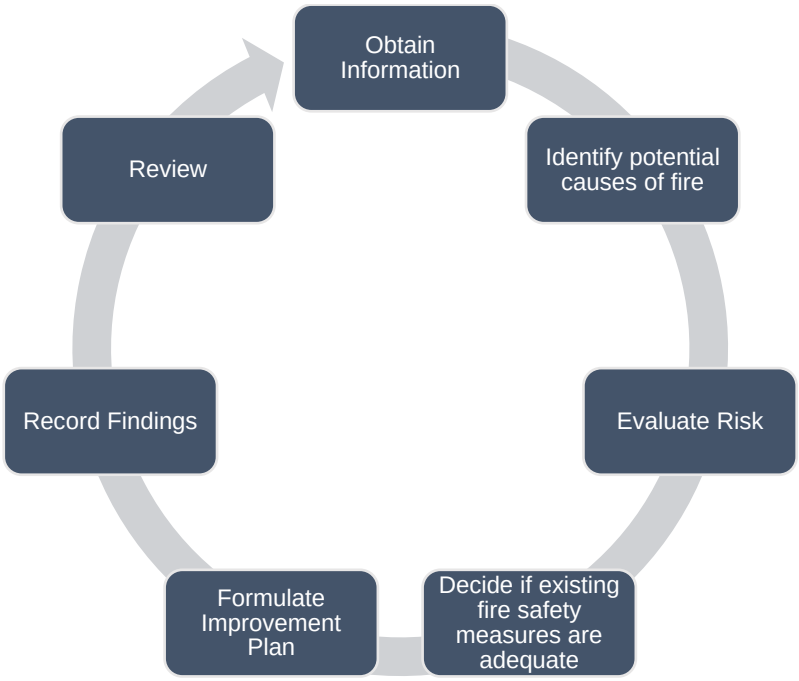


Figure 1 Fire safety risk assessment process

Step 1: Obtain information

135. The following information will be relevant, as it has a bearing on fire risk and control measures:

- the number of floors and approximate area of each floor
- any ancillary uses to which the building is also put, such as commercial, community activities and care services.
- the number and nature of residents (identify any residents who have difficulty in self-evacuating and who may require rescue by the SFRS. Make reference to the provision of person-centred risk assessments for higher risk residents / PEEPs)
- the presence of any staff, such as a sheltered housing scheme manager or care/support staff

- staff training
- previous history of fires
- the result of any previous examination of external cladding
- how fire safety in the building is managed
- whether the evacuation strategy is based on "stay put" or "simultaneous evacuation" and the procedures underpinning each approach
- testing and maintenance of fire safety systems and equipment
- arrangements for routine inspections of the building
- arrangements for engagement with residents
- the process for identifying the need for person-centred fire safety risk assessments

Step 2: Identify potential causes of fire

136. For a fire to start, three components are needed: a source of ignition, fuel and oxygen. If any one of these components is missing, a fire cannot start. Taking steps to avoid the three coming together will reduce the chance of a fire occurring, while reducing the quantity of oxygen (smothering) or fuel (starvation) may restrict the development of a fire. Any measures designed to achieve this end are known as fire prevention measures.

137. The premises as a whole should be examined to identify potential ignition sources and materials that might fuel a fire and the circumstances which might allow a fire to start. Specific measures to prevent or protect individuals from the risk of fire from within their own private accommodation should be identified through the person-centred process (see Part 1). Measures such as fire detection and warning are likely to involve a building-wide strategy (even where separate domestic systems are provided within flats) and so would normally be considered primarily through the premises based risk assessment, with refinements or additional requirements being identified through the person-centred assessment.

138. Consideration should be given to the potential following causes of fire and to measures provided to eliminate or reduce the likelihood of each cause (also known as fire prevention measures – see Chapter 4):

- fire raising
- electrical faults (in fixed wiring and any equipment provided)
- smoking
- cooking
- use of portable heaters
- contractors' activities
- heating installations
- lightning
- combustible items within common areas
- storage and charging of mobility scooters
- housekeeping

Step 3: Evaluate the risk

139. The risk should be evaluated so that a judgement can be made on the adequacy of fire safety measures. Risk has two components: the likelihood that a

fire may occur; and the potential for a fire to cause death or injury i.e. consequence. Both likelihood and consequence should be considered in order to determine the overall level of fire risk.

140. Having considered the risk to people and the chances of a fire occurring, the consequences and extent of the risk to those people if a fire starts and spreads should be considered. In evaluating the risk to people, it is necessary to consider possible scenarios such as:

- the potential for fire to affect escape routes
- fire or smoke spread through a building via routes such as vertical shafts, service ducts, service penetrations, ventilation systems, cavities, voids and open doors
- how residents are likely to respond in the event of fire taking into account generic resident characteristics;
- fire and smoke affecting the behaviour of residents
- fire and smoke spread into the premises from exterior fires

141. If there have been any previous fires in the premises, considering the circumstances and lessons learned may assist with evaluating risk.

142. Principal fire safety measures to consider are explored further in Chapter 5 but include:

- the means of escape from fire
- fire separation, particularly the enclosure of private accommodation within fire-resisting construction which should ensure adequate separation between units of private accommodation and between private accommodation and the common areas
- flat entrance doors, which should be fire-resisting and self-closing
- protection of stairways from fire in adjacent areas
- travel distance from private accommodation to the nearest stairway or final exit
- means for smoke control within the common areas
- emergency escape lighting
- fire escape route signs
- any fire suppression installations provided

Step 4: Decide if existing Fire Safety Measures are adequate

143. A judgement is required to determine whether the fire safety measures and arrangements provided to both prevent fire and to provide protection in the event of fire are adequate, or if more needs to be done. The level of fire safety measures provided in premises should be proportionate to the level of risk posed to the safety of people and will therefore vary between premises.

144. Measures to assist the SFRS, such as fire mains and fire-fighting lifts may have been required under Building Regulations at the time of construction. Adequate maintenance of these measures should be verified (see Part 3).

Step 5: Formulate an improvement plan

145. Carrying out an assessment of the premises is not an end in itself. The outcome of the risk assessment needs to be acted upon; risks need to be

controlled in a practical way and fire safety measures and arrangements need to be put in place.

146. The improvement plan should set out a list of any preventative, protective or managerial measures that are necessary to ensure that fire risk is maintained at, or reduced to, an acceptable level. It may be worth consulting with residents on any proposed improvements. The actions should be reasonably practicable, taking cost, effort and risk into account. The improvement plan should also include any specific measures and precautions that need to be taken during upgrade work.

147. The plan should prioritise measures for action and assign timescales (unless all required measures are relatively minor and can be implemented in a short time). If it is considered that the fire risk and existing fire safety measures are such that no improvements are necessary, this should be recorded within the findings of the fire safety risk assessment.

148. Where improvements involve building work, the work should be done in accordance with Building Regulation procedures.

Step 6: Record the findings

149. There is no prescribed format for reporting the findings of the fire safety risk assessment process but as a minimum, a record should be kept of the significant findings and any action taken, or still to be taken. This is a legal requirement for those premises to which fire safety law applies with either five or more employees or where a licence (such as an HMO licence) or registration under an enactment is required (for example, care services registered with the Care Inspectorate).

150. A copy of any completed fire safety risk assessments should be available to those living in the building, on request.

Step 7: Review

151. Set a date for a review. The assessment should be reviewed regularly at pre-determined intervals. It should also be reviewed:

- when material alterations take place (where changes are proposed, the consequence to fire safety in the premises should be considered before the change is introduced)
- when there is a significant change in the matters that were taken into account in the risk assessment
- when there is a reason to suspect that the original assessment of risk is no longer valid
- after a fire or near miss

152. A review of a fire safety risk assessment is not necessarily the same as a repeat of the entire fire safety risk assessment process. If a thorough assessment has been carried out, a shorter review exercise might be carried out regularly, with a full fire safety risk assessment completed at less regular intervals.

153. Less frequent reviews may be acceptable if there is effective management control and lower levels of resident vulnerability. As a general guide, for low risk sheltered housing, an annual review might be appropriate, with a new fire safety

risk assessment every three years. For higher risk accommodation, taking into account considerations such as resident vulnerability, building age/complexity, management controls, a full annual risk assessment might be more appropriate.

154. It is possible for reviews to be carried out by competent, in-house staff who have received suitable training, as the review concentrates primarily on progress with the previous improvement plan and identification of changes. This will reinforce ownership of fire safety management and assist in the development of relevant knowledge and of a fire safety culture. The skills and knowledge required of those carrying out assessments and reviews must be commensurate with the complexity of the premises and the vulnerability of the residents.

Chapter 4: Risk Management – Fire Prevention

Key Points

- It is as important to prevent fires as it is to provide measures to protect people when fire occurs
- The most likely place for fire to start is within a flat but the possibility of fires within common areas cannot be discounted
- Poor housekeeping in the common areas is a significant risk
- There should be a clear policy on whether common areas remain free from combustibles with a 'zero tolerance' approach, or are subject to 'managed use'

Introduction

155. Preventing fire is a key aspect of reducing risk and is fundamental to good fire safety management. It is particularly important where residents have difficulty evacuating in the event of fire or where the likelihood of a fire starting is high. In sheltered and extra care housing, it can be challenging for housing providers, management or landlords to influence the safety of people living in their own self-contained accommodation. In such cases, care / support workers or family members may be able to help with fire prevention as part of the person-centred approach set out in Part 1.

156. This chapter offers guidance mainly on fire prevention in communal and other areas under management / landlord control. Common causes of fire and possible measures to control or eliminate them are set out below. Risk assessors should consider these but also be alert to other hazards or new hazards that might emerge in the future.

Cooking

157. Communal cooking facilities can include kitchens, restaurants and cafes. Where these are operated by external companies, separate fire safety risk assessments by third parties may be required.

158. Communal cooking facilities may also be provided for the use of residents, volunteer groups, friends or relatives. Facilities may include appliances such as cookers, microwave ovens and toasters. There should be policies and procedures for the safe use of equipment and for cooking in general.

159. In supported housing, the use of kitchens by vulnerable residents may be an integral part of any care package, or simply part of day to day living. Staff may be available on site to assist or supervise residents. The use of shared kitchens and the type of equipment provided must be considered in fire safety risk assessments. Devices that facilitate the automatic isolation of cookers can improve safety. For example, isolation switches can control the use of cooking during periods where supervision is not available. Gas or electricity cut-off switches (linked to timers or sensors) and portable fire-fighting equipment,

including fire blankets may be necessary. Replacing gas cookers with safer alternatives such as induction hobs might be appropriate in some supported housing.

160. Regular inspection, cleaning and maintenance of appliances and associated extract systems (particularly if deep fat frying occurs) is important.

Smoking

161. Smoking within workplaces or common parts of specialised housing is prohibited by law. However, residents may contravene this resulting in increased risk. Appropriate “No Smoking” signage should be provided in common areas and engagement with residents to reaffirm the no-smoking policy, may be necessary.

162. In any designated smoking areas, receptacles should be emptied regularly as fires have been known to occur as a result of a build-up of discarded cigarette ends.

163. Smoking policies should also take account of e-cigarettes and charging facilities. Defective and non-regulated charging devices have been known to cause fires.

Electrical

164. Overheating or arcing can result when faults develop in wiring or appliances. Such faults are often evident before a fire occurs. Periodic testing should be undertaken by suitably competent persons and the inspection, test and remedial work undertaken in accordance with current IET Wiring Regulations (*BS 7671*).

165. Fixed wiring in workplaces, supported housing and in the common parts of sheltered and extra care housing should be subject to periodic inspection and test at periods not exceeding 5 years.

166. Housing providers responsible for fixed wiring in residents’ accommodation should also arrange for the electrical installations to be inspected and tested regularly. Where providers have limited control, residents should be encouraged to make arrangements. The frequency of inspections will depend on the age of the property and installation, the duration of the tenancy and the nature of the tenant. As a guide, an interval of 10 years may be appropriate for privately owned accommodation; an interval of 5 years for rented accommodation.

167. Where tenant turnover is high, it is advisable to have a visual inspection of the accessible parts of the electrical installations after each tenancy.

168. Portable electrical appliances used in the areas under the control of the management should be subject to inspection and test on a regular basis. Guidance on the nature and frequency can be found in the *IET Code of Practice for In-Service Inspection and Testing of Electrical Equipment*.

169. Others beyond the control of management, such as Tenants’ and Residents’ Associations, should be encouraged to have suitable inspection and testing regimes for their portable electrical appliances.

170. In common areas, extension leads are often used inappropriately, for example, to charge mobility scooters or power Christmas lights, often in

conjunction with adaptors which power other items including portable heaters. The use of extension leads and adaptors provided by residents should not be permitted in common areas.

171. Ideally, additional electrical sockets should be provided to avoid the use of extension cables and adaptors. Where extension cables are considered appropriate, they should comply with industry approved standards, be subject to portable appliance testing and be fixed securely to prevent trip hazards.

172. Guidance in relation to Electric Profiling Beds (EPBs) and electric blankets can be found in Part 1.

173. Some additional measures to reduce the likelihood of an electrical fire are:

- electrical distribution boards are located in secure cupboards or rooms, with no combustible storage
- consider the installation of key-operated socket outlets in common areas, including lounges and kitchens, to restrict access to cleaners and other legitimate users

174. Photovoltaic (solar) panels may be in place above the roof covering or form part of the roof covering. Panels which form part of the roof covering should be fire-stopped on the line of any separating wall.

Heating Systems

175. Communal heating and ventilation systems can be a potential source of ignition and provide a route for fire spread through common ducts and risers. Planned preventive maintenance is key to reducing risk. Where gas-fired systems are in use, these will be subject to annual inspections and test in accordance with gas safety regulations.

176. Where separate systems are provided in private accommodation and the maintenance is the responsibility of the residents, they should also be encouraged to have their systems serviced regularly.

177. Housing providers are obliged to arrange annual gas safety checks for rented properties. Homeowners should also be encouraged to arrange for their appliances to be checked every year. Information on heating appliances for use in private accommodation is provided in Part 1.

178. The use of portable heaters should only ever be a temporary arrangement. The aim should be to provide a heating system which avoids the use of portable heaters. Where portable heaters are used in common areas, such as in lounges and community rooms, these should be suitable for their intended use and, ideally, they should be fixed to the walls to prevent them from being moved or knocked over. All portable heaters should be subject to regular inspection and test, for example as part of the portable appliance testing (PAT) regime. Portable electric heaters should be of the oil-filled radiator type, and the use of convector or fan heaters should be avoided where possible. Portable LPG gas heaters or open bar heaters should always be avoided.

Housekeeping

179. Regular inspection is key to good housekeeping. The ignition of combustible material within common corridors, stairways and landings will give rise to smoke in escape routes and the possibility of fire-spread into private accommodation. Controlling the presence of combustible materials and ignition sources reduces the potential for accidental fires. It also reduces the potential for deliberate fires, and ensures escape routes are free of obstructions that might hinder evacuation or access for fire-fighters. This is particularly important for single stairway buildings or "dead end" corridors which offer no alternative means of escape.

180. Occasionally, residents may even dump unwanted belongings and rubbish in the common areas. This should never be tolerated and management policies and controls should be in place to prevent this.

181. Sometimes residents see the common areas as amenity areas where they can store personal items and furniture. Some housing providers may add items such as door mats, pot plants, pictures and seating to promote the image of a homely environment. If allowed to escalate, this can bring problems for housing providers.

182. The risk can vary significantly, depending on the inherent properties of the items. Not all of the items commonly found are either easily ignitable or likely to give rise to a serious risk if ignited in isolation. This suggests that it might be possible to allow some items to be present without unduly exposing residents to risk. The challenge is how to manage the use of the building in this way. Unrestricted use of common areas is clearly not acceptable. It will, therefore, be necessary to adopt either a 'zero tolerance' policy or a 'managed use' policy.

183. A 'zero tolerance' approach is one in which residents are not permitted to keep any personal items in the common areas. No exceptions apply. The common areas are sterile areas, kept free of combustible material, ignition sources and obstructions at all times. This is not an approach that could be applied to most supported housing or small domestic care homes. However, in sheltered or extra care housing, benefits include:

- it is a simple policy to adopt
- it reduces the risk of accidental and deliberate fires in the common areas
- there is no ambiguity so residents know where they stand
- it is easier to 'police' when carrying out inspections

184. There are, however, disadvantages:

- by not taking into account the specific circumstances, this policy might not be risk proportionate
- it unduly penalises those who could manage their common areas effectively
- it denies residents an opportunity to personalise and improve their living environment

185. A 'zero tolerance' policy should always apply:

- when there is doubt about the ability of residents to abide by a 'managed use' policy
- in an escape stairway that is of timber construction

- where the standard of fire protection does not support a “stay put” policy
- where deliberate ignition is a significant concern

186. A ‘managed use’ policy places restrictions on the items allowed in the common areas, thereby controlling fire load and ignitability. For example, it might permit residents to place pot plants and door mats outside their front doors, have framed pictures and notice boards on walls, and allow furniture and seating in common areas.

187. In supported housing, a “zero tolerance” approach is not realistic and so a “managed use” policy is normally adopted. Protected routes and stairways should be kept free of any obstructions and significant fire risks, such as portable heaters or cooking facilities. However, this does not imply that stairways and corridors need to be sterile areas that contain no risks at all; the need to retain a homely environment must be considered. Therefore, items such as pictures on walls, plants, tables and other small items of furniture are normally acceptable. Storage cupboards in protected stairways should be kept locked shut.

188. While the ‘zero tolerance’ approach is easier to apply, residents may be put at significant inconvenience and infringe the policy through frustration and need. Careful consideration is required in order to meet the needs of residents. Encouraging residents to adhere to the policy, while meeting their needs, can contribute significantly to fire safety. When adopting a ‘managed use’ policy:

- ensure there are clearly defined ‘do’s and don’ts’ that residents can follow
- there should be a suitable standard of fire protection throughout
- particular care should be taken when applying it to situations such as single stairway buildings and “dead end” corridors – it may not be appropriate in such cases
- limit it to buildings in which the main elements of structure are non-combustible
- only apply it to buildings which have effective security, such as access control
- reduce the potential for inappropriate storage by providing communal storage facilities, preferably close to residents’ accommodation
- never allow combustible waste or recycling storage in common areas – even short term presence poses a risk
- manage the type and location of furniture/seating
- never allow charging of mobility scooters, batteries or other electrical equipment in common areas. Consider providing dedicated rooms for mobility scooter charging, suitably fire separated from the rest of the building (see Appendix 7 for more information).

189. Higher risk ancillary rooms that adjoin escape routes, such as communal boiler rooms and electrical switch rooms, should be kept free of combustible material as there is a risk that a fire could eventually threaten the escape of occupants of flats. Storerooms in common areas should not contain LPG cylinders, propane or flammable liquids.

190. Many sheltered and extra care housing schemes will have community rooms and larger schemes may have dedicated libraries, computer rooms, games rooms and meeting rooms. These rooms are sometimes used to store discarded furniture and electrical goods which do not meet current standards of design or

safety and can be overlooked for inspection and testing. The use of trailing leads and extension cables can add to the risk. Policies and procedures should control the equipment used in community rooms, which should be included in inspection and testing regimes.

191. Where shared laundry facilities are provided, filters fitted to tumble dryers should be cleared regularly. Records should be kept. Maintenance checklists can be useful and can incorporate other routine safety tasks. Gas-fired tumble dryers should be subject to regular maintenance in accordance with the manufacturer's recommendations.

Mobility Scooters

192. There has been a marked increase in the use of mobility scooters, particularly in sheltered and extra care housing schemes. For some residents with severe mobility problems, scooters are the only means they have of being able to travel beyond their accommodation. The use of mobility scooters can enhance the quality of life for many older or less mobile residents, who otherwise may be limited in their ability to access common facilities provided in the premises and external facilities in the wider community.

193. Where dedicated facilities are not provided, the storage and charging of mobility scooters can present a challenge. A lack of space and the layout of the corridors, lifts and stairways in common areas means that individuals will often leave scooters adjacent to their front entrance doors on protected escape routes or within protected stairways. Charging in the common areas poses a significant risk. The challenges can be even greater in supported housing. Ideally, the provision of suitable spaces for storage and charging of mobility scooters should be considered at the design stage for new premises.

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

195. The most common causes of fires are faults in electrical equipment/wiring, charging equipment (which is more likely during the charging process itself), and wilful fire raising. These have resulted in fire deaths and injuries.

196. The principles of fire safety risk assessment, based on likelihood and consequence, need to be applied when determining the risk associated with the storage and charging of mobility scooters. This Guidance considers a range of possible options and risk reduction measures as part of the fire safety risk assessment. These options are set out in Appendix 7.

197. The provision of safe storage and charging facilities in some premises will prove difficult and, in certain locations, it may not be physically possible to provide suitable storage or charging facilities, either internally or externally. Where this is the case, the opportunity to hire vehicles could be considered. Schemes such as 'Shopmobility,' provide for delivery of vehicles to hirers' homes, if individuals are unable to store or charge vehicles where they live.

Policies and Procedures

198. There should be clear policies and procedures to address the risks. In some cases, residents are required to apply and seek permission to use, store and charge mobility scooters on the premises. Policies will generally cover the adaptation of premises, the provision of storage and charging facilities, maintenance requirements and the ongoing management and control of the use of mobility scooters in premises.

199. Residents should be made fully aware of the policy and, in particular, any restrictions that may be placed upon them.

Furniture and Furnishings

200. Upholstered furniture, furnishings and textiles that can be easily ignited or would contribute to rapid fire spread should be avoided in the common parts.

201. Guidance in *BS 7176* should be followed. In general, furniture should be ignition resistant to Ignition Source 5 of *BS 5852*; though such furniture can still be set alight, it is particularly resistant to ignition.

202. Landlords should comply with the *Furniture and Furnishings (Fire) (Safety) Regulations 1988*, as amended, which places requirements on the flammability of domestic furniture and beds. In supported housing, it may be necessary to consider the ignitability and flammability of bedding, mattresses and curtains in use in housing and bedrooms, particularly where these are provided for the use of residents (see Part 1).

Fire Raising

203. Measures that can be used to reduce the potential for fire raising include:

- good physical security and access control
- effective lighting, both externally and internally in the common areas
- where appropriate, CCTV on entrances and external facades
- maintaining common areas free from combustible material
- vigilance by residents, staff and contractors

204. Residents should be encouraged to make their homes secure. Advice on crime prevention in the home is available online and from Police Scotland. Possible conflict between security and fire safety should be taken into account. Measures taken to restrict access must not prevent people from escaping easily in a fire, prevent access by the SFRS or interfere with the operation of fire safety measures.

205. In premises where it is known that individuals have a history of fire raising, additional measures may be necessary to restrict access to materials that can be used to start fires.

206. Waste skips and combustible materials associated with building works should be sited clear of the building, ideally at least 6m away.

Medical Gases

207. Medical gases, including oxygen, may be stored or used in either residents' accommodation or the common areas under the control of management.

208. These gases are not inherently flammable but cylinders will present an explosion risk if exposed to extremes of heat and fire. 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, it also has the potential to increase the combustibility of materials which could be a risk in the vicinity of potential ignition sources, for example, smoking and cooking.

209. Where possible, cylinders should be stored outside in a well-ventilated, secure location. If 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.

210. Cylinders should not be stored in combination with 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.

211. Although it may be anticipated that medical gases might be in use, the SFRS should be made aware of the location of stored cylinders and rooms where medical gases are used or located. This information should be held in premises information boxes that are easily accessible. Information may also be held by SFRS on data systems within fire appliances.

212. Keeping this information up to date can be difficult: the use of medical gases by residents can change on a regular basis, occasionally without the knowledge of those responsible for the management of the building.

213. Warning signs on residents' accommodation may be considered but, again, this needs to be closely managed.

Other Causes of Fire

214. A fire outside but near to a building could affect its external façade. Therefore, vehicles, temporary structures, and materials should not be sited close to the exterior of the building.

215. Retrospective installation of lightning protection is unlikely to be required in existing specialised housing. However, any existing lightning protection systems should be subject to regular inspection and testing. Guidance on this is available in *BS EN 62305*.

216. Building works and contractors operations can also be a source of fire. This is considered in Part 3.

Chapter 5: Risk Management – Fire Protection

Key Points

- Benchmarks are used to assess the standard of fire safety measures - these are not prescriptive standards
- Upgrading existing buildings to meet current benchmarks may sometimes be appropriate where the original standards are far removed from what is acceptable today, and, as a result, there is unacceptable risk
- When upgrading fire safety measures, fire protection products and services should be fit for purpose and properly installed - third party certification schemes are available for many products and services

Introduction

217. This Chapter is about assessing physical fire safety measures which are designed to protect people in the event of fire. This includes people escaping from a fire and, where a "stay put" policy applies, those remote from the fire while they remain in their flats. Measures required where a "stay put" policy applies will be significantly different to those where a "simultaneous evacuation" policy applies and much of this Chapter is structured to reflect this.

218. Benchmarks are useful for assessing whether existing fire safety measures are appropriate but they are not prescriptive standards to be applied regardless of risk. The aim should be to achieve an integrated "package" of fire safety measures. Care should be taken not to consider any specific fire safety measure in isolation.

219. In timing upgrading work, it is often possible to minimise cost by delaying work that is not of an immediate priority to coincide with capital maintenance programmes. Depending on the risk, improvement works affecting private accommodation may be scheduled for when premises are vacant, avoiding disruption for vulnerable residents.

Methodology for using Benchmarks

220. When carrying out a fire safety risk assessment, it is important to compare the standard found against appropriate benchmarks, before making judgements about the adequacy of the fire safety measures.

221. The standards that applied when the premises was built should be established to determine how far removed they are from what is acceptable today, and whether that gives rise to an unacceptable level of risk.

222. There have been variations in the fire safety design of domestic buildings over the years. For example, since May 2005, automatic fire suppression systems have been a requirement in all new sheltered housing complexes.

223. With older blocks, it may be difficult to discern what the original design intent was, and whether it has been preserved or altered. For example, fire separation can be difficult to assess, given that elements of structure are often hidden and inaccessible.

224. It is inappropriate to retrospectively upgrade existing premises to meet current benchmarks without justification on the basis of fire risk. Requirements for upgrading fire safety measures should be based on risk, and not prescriptive application of guidance.

225. The objective is to establish whether departures from benchmarks create significant risk and, if they do, to determine a realistic solution that can be implemented within the constraints of an existing building.

Third-party Certification

226. Fire safety products and related services should be fit for purpose and properly installed and maintained in accordance with the manufacturer's instructions or a relevant standard.

227. Third-party certification schemes are an effective means of providing assurance of quality, reliability and safety. This does not mean goods and services that are not third-party approved are less reliable, but there is no obvious way in which this can be demonstrated. Schemes operated by certification bodies which are themselves accredited by the United Kingdom Accreditation Service (UKAS) are widely recognised as providing the highest levels of assurance.

Fire Separation in Sheltered and Extra Care Flats ("stay put")

228. Fire separation is about inhibiting fire and smoke spread between areas in different occupation. The fire-resisting enclosure of flats should include flat entrance and other doors, any internal windows into an access corridor, or any glazing above or around the flat entrance door doorways or hatches in walls for access to read meters or for deliveries.

229. A 'stay put' strategy relies on adequate separation to restrict fire spread, so that only the occupants of the flat of fire origin would need to evacuate, while the occupants of flats unaffected by a fire should be safe to remain in their flats. Design guidance recommends the following:

- separating walls and floors between individual flats and between flats and any other part of the building in common occupation, including common access corridors, to have a minimum fire resistance of 60-minutes
- a separating wall enclosing a lift well to have a minimum fire resistance of 60-minutes (NB A platform lift constructed in accordance with the guidance in *BS 6440* need not be enclosed by separating walls or separating floors)
- Separating walls and floors may be constructed from combustible materials provided the appropriate fire resistance duration is maintained, although wall linings and insulation used in a cavity should be non-combustible or of a low risk classification
- self-closing fire doors in separating walls to have a minimum fire resistance of 30-minutes
- junctions between separating walls and separating floors and other parts of the building should be designed and constructed in such a way to prevent a fire in one part of the building flanking the separating wall or

separating floor and entering another part of the building under different occupation, including any solum space or roof space

230. The lines of separation between flats located on the top floor of a building should extend through the roof void in a continuous vertical plane to the underside of the roof (see Figures 2 and 3). This will ensure that the fire-resisting 'box' principle extends into the common roof voids, preventing fire spread between flats, and from a flat into other areas of the building, via the void (see Figures 4, 5 and 6). Installing cavity barriers directly above the walls that separate flats may not provide adequate separation; simply placing cavity barriers at regular intervals is unacceptable.

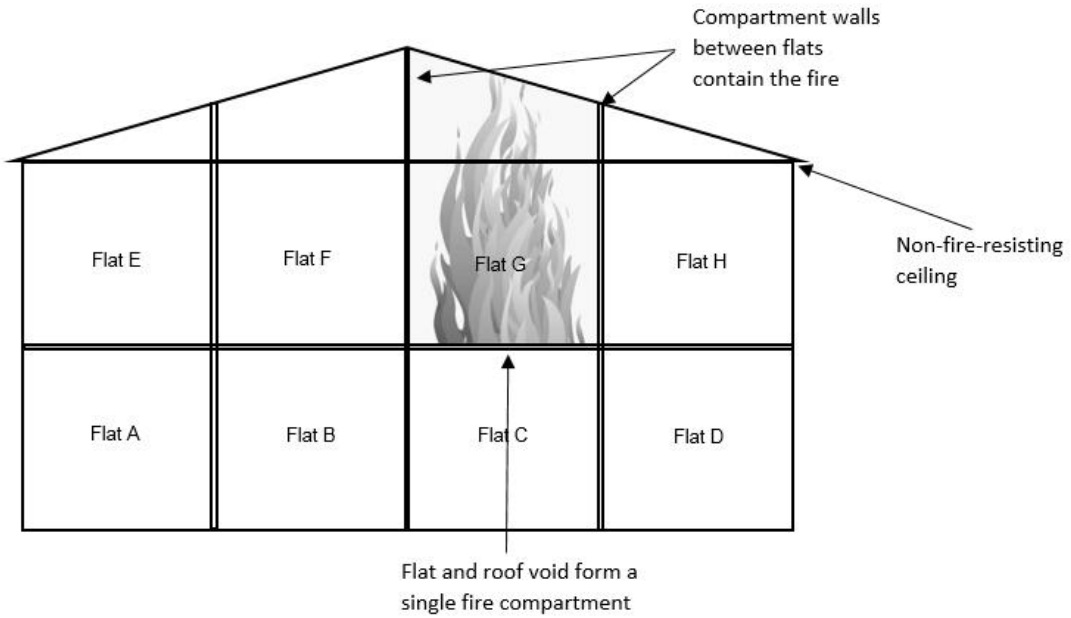


Figure 2 Separating Walls within Roof Void

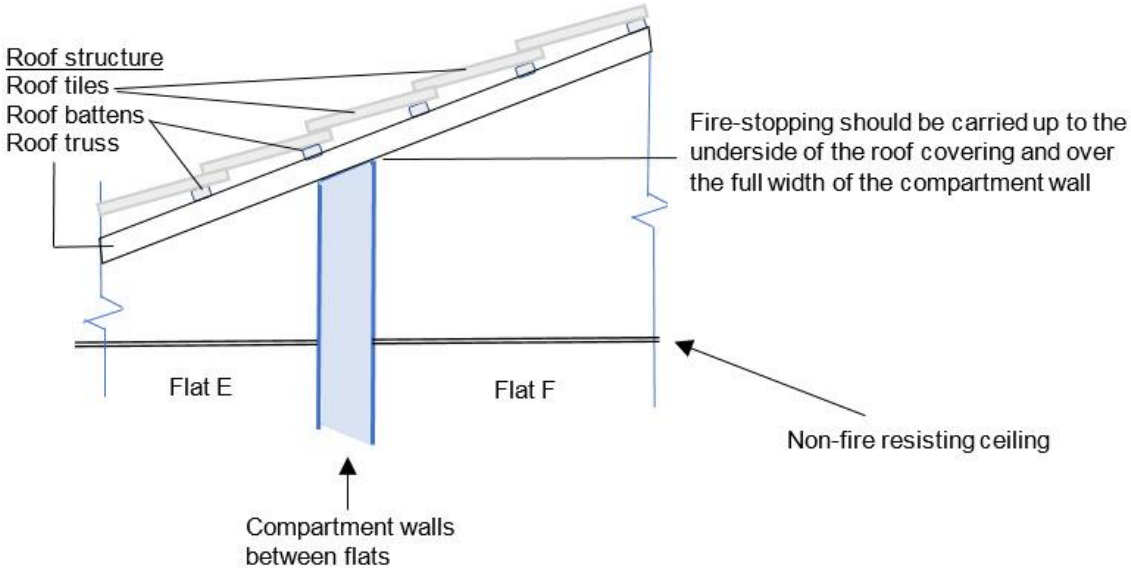


Figure 3 Separating Wall junction with Roof

231. The provision of fire-resisting ceilings in top floor flats (see Figure 4) would not normally achieve an equivalent standard of safety. It fails to address the possibility of a fire within the roof void (see Figure 5) or that enters the roof void externally (for example, as a result of flames projecting from a top storey window – see Figure 6). A fire-resisting ceiling will afford protection against fire-spread from a flat into the roof void, but not normally vice versa (unless double facing).

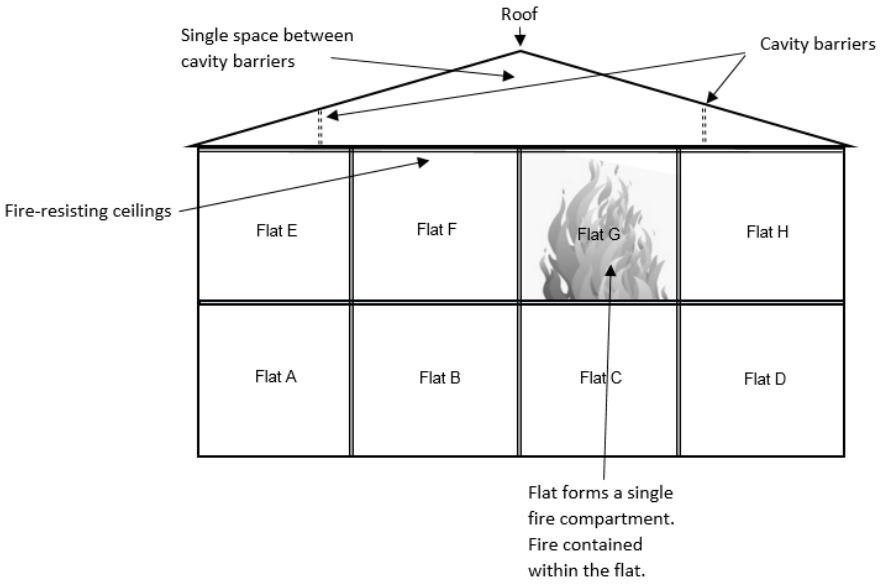


Figure 4 Fire Resisting Ceiling and Cavity Barriers in Roof Void

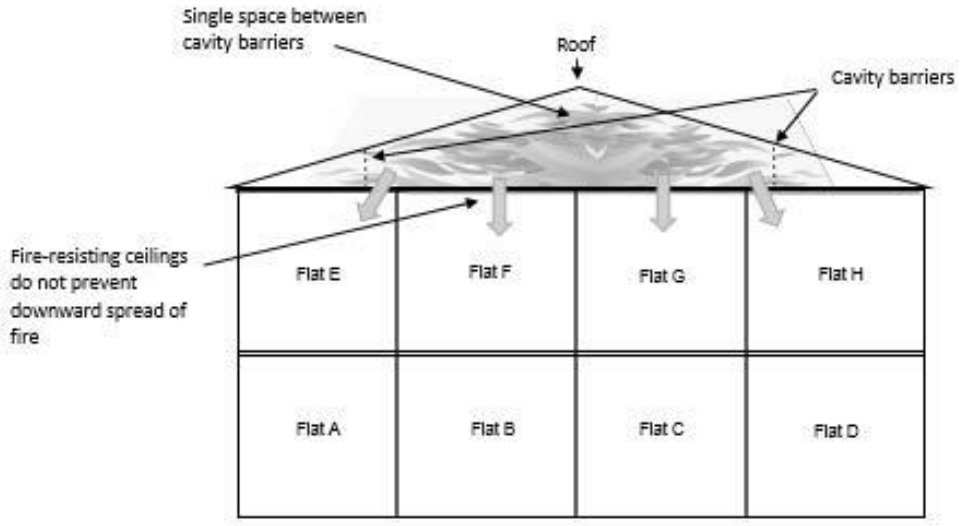


Figure 5 Fire within Roof Void

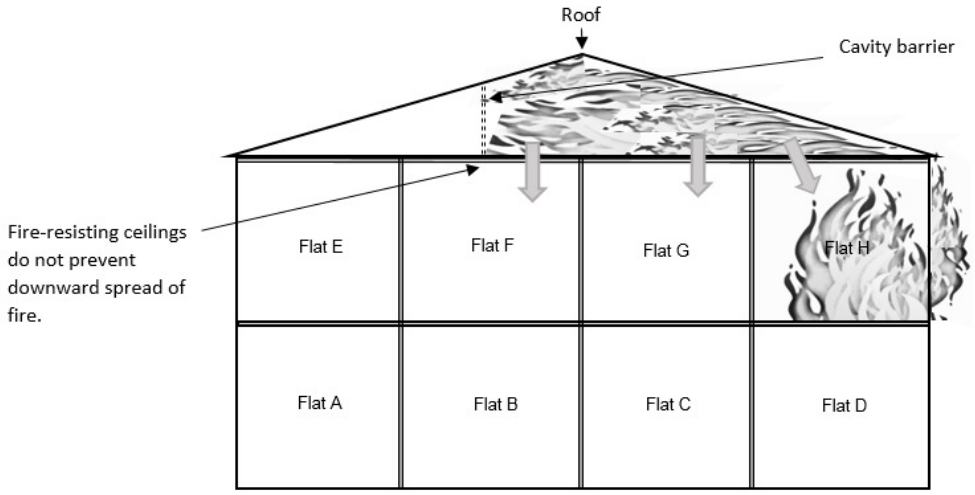


Figure 6: External fire spread from Flat to Roof Void

232. If there is no separation within roof voids, fire-resisting barriers should be provided in line with every separating wall between flats. Where installation involves major structural work or major capital expenditure, it may be appropriate to develop a programme for completion of the work over a period of time, particularly if it is considered that other fire safety measures are of higher priority; this should be considered within the Action Plan of the fire safety risk assessment.

233. A simultaneous evacuation strategy would, in theory, constitute an alternative solution. However, this is not normally suitable where staff are not available at all times to manage, and assist with evacuation, unless it is certain that residents would not need assistance. Moreover, as the residents occupy their own private accommodation, simultaneous evacuation cannot be forced upon them.

234. The standard of fire separation has changed over the years. This has led to variations in the nature of the construction and in the periods of fire resistance that can be found in existing buildings. Previous design standards permitted a lower level of fire resistance. In existing blocks where 60 minutes' fire resistance is not met, or cannot readily be achieved by upgrading walls or floors, compensatory fire protection measures may need to be considered. These measures might include provision of an automatic water fire suppression system, such as a sprinkler or watermist system.

235. Separating floors and walls need to be in good condition and have no openings that would permit the uncontrolled spread of fire and smoke. Particular attention should be paid to service ducts or service risers and any common heating or ventilation systems.

236. Where balconies have been infilled and incorporated into flats, the adequacy of fire separation and fire stopping between flats should be considered.

237. Ducted heating, ventilation or air conditioning systems that serve dwellings, should be arranged so that they do not transfer fire and smoke. This may involve fire resisting construction and fire dampers.

238. The adequacy of fire stopping around any openings in walls and floors for services such as gas, water, electricity, telecommunications and drainage should

be checked. These may be present where such services enter from the common areas or pass between flats. In some cases, the extent of any openings and the extent of fire stopping can only be ascertained through intrusive inspections and by opening up panels in kitchens, bathrooms and other areas.

239. Small bore pipes, typically less than 40 mm in diameter, are not normally of concern. Larger pipes, especially if combustible, could allow significant fire and smoke-spread. Proprietary fire seals, including externally mounted collars or fire-resisting enclosures, could be used to address this issue in older blocks. However, it may only be practicable to undertake this on a long-term basis as and when flats become vacant.

240. In some blocks of flats, common ventilation ducts are used to provide extract from bathrooms and, less commonly, kitchens. These ducts may well travel the full height of the building, serving a large number of flats and terminate at roof level.

241. The common extract from bathrooms often incorporate shunt ducts to link each flat to the common shaft, which reduces the likelihood of fire and smoke-spread between flats. This is shown in Figure 7. Some early designs used the same arrangement for kitchen extract. However, there may be blocks of flats that do not incorporate shunt ducts and have no adequate means of preventing fire and smoke-spread between flats via ventilation ducts. This is so for removed from what is acceptable today that action should be taken to reduce the risk.

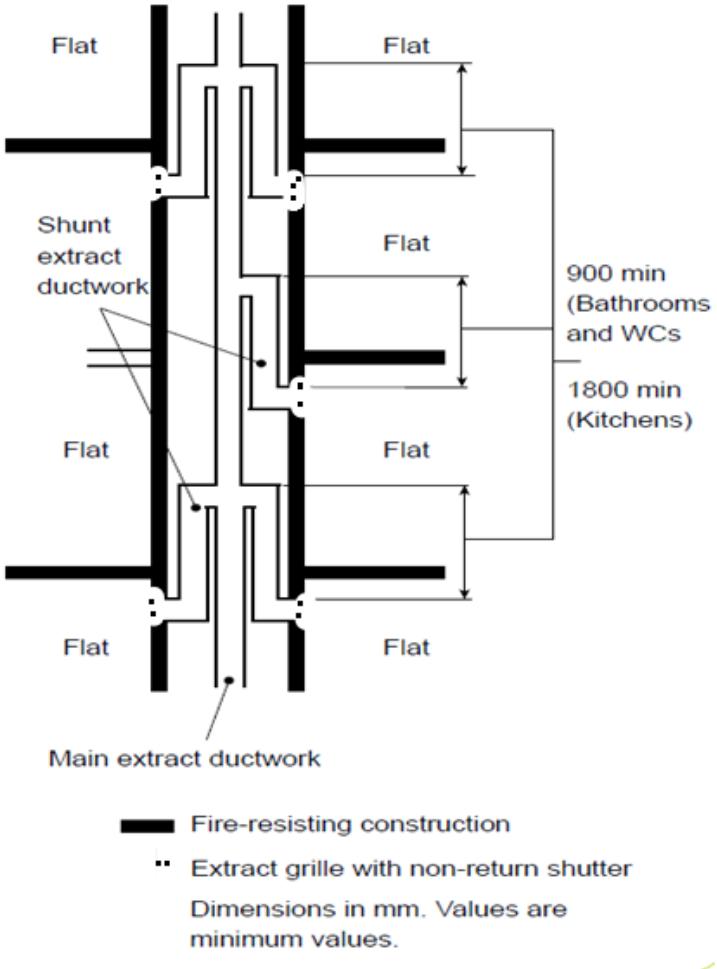


Figure 7 – Shunt duct arrangement

242. In flats, it will rarely be practicable to retrospectively introduce mechanical fire and smoke dampers into the ventilation ducts. However, one way of reducing the potential for fire spread between flats would be to retrofit intumescent fire dampers to the vents into the ducts. Although this would not restrict the spread of smoke in the early stages of a fire, it would prevent spread of flames and hot gases. This is a reasonable approach for bathrooms, but is less satisfactory for kitchens, where there is the potential for a serious fire in the room in which the vent is located. A solution would be to rearrange the ventilation to discharge directly to outside and not via a common duct.

Fire Separation in Supported Housing, including small, domestic care homes ("simultaneous evacuation")

243. If supported housing is provided in purpose-built blocks of flats, the principles discussed above for sheltered and extra care housing in respect of separation would apply, as would a 'stay put' strategy. However, the majority of supported housing comprises properties similar in design to domestic houses. A significant number were originally single-family dwellings that have been subsequently converted. The evacuation strategy will be simultaneous evacuation of all occupants in the event of a fire, however in a semi-detached or terraced block, fire separation between dwellings should also be considered to prevent fire spread from an adjoining property.

244. The benchmarks for floors and load bearing walls (or other structural element) of houses used for the provision of care are as follows:

Height of topmost storey above ground level	Fire resistance duration
Not more than 7.5m (up to 3 storeys)	30 minutes
More than 7.5m but not more than 18m (more than 3 storeys)	60 minutes

245. Existing lath and plaster ceilings that are in good condition are acceptable in properties of up to three storeys. In properties of more than three storeys floor/ceiling construction should be upgraded if necessary to achieve a fire resistance of 30 minutes (excluding any basement storey).

246. In existing supported housing of more than three storeys, floor/ceiling construction should be upgraded if necessary to achieve a fire resistance of at least 30 minutes. Upgrading to 60 minutes may be appropriate for higher risk supported accommodation. Upgrading will not be necessary if the premises are protected by a sprinkler or watermist system.

247. In carrying out fire safety risk assessments of supported housing, ceilings should be examined visually to ensure that they are not damaged and that there are no obvious breaches of integrity that would materially reduce the fire resistance or permit passage of smoke from one floor to the floor above.

248. Cavity barriers will not normally be necessary to sub-divide roof voids in supported housing that is similar in design to a domestic dwelling. However, cavity barriers should be provided above the enclosures to a stairway in properties of three storeys or more (excluding any basement storey).

Alternatively, it would be acceptable to either install smoke detection within the roof space, or to install a ceiling that would afford resistance to a fire in either the stairway or the roof void (e.g. comprising fire-resisting board within both the void and the stairway. See Figure 8).

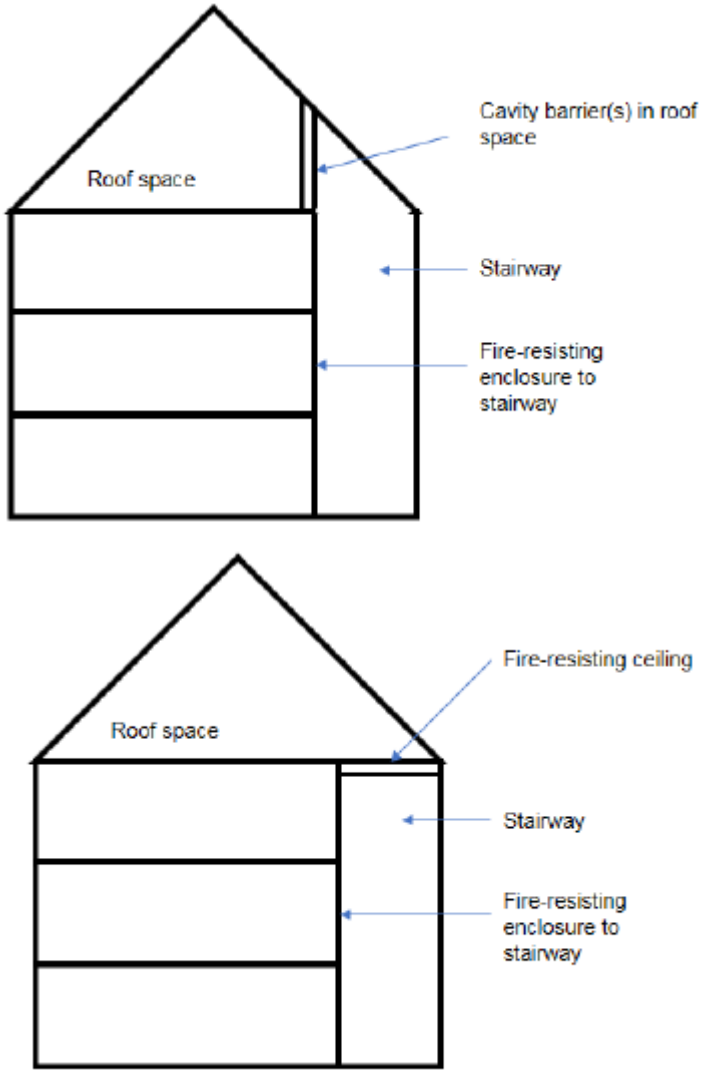


Figure 8 Methods of separating a protected stair from the roof space

Means of Escape

249. Depending on the type of accommodation, means of escape can be considered to comprise two distinct but linked components:

- escape from within an individual dwelling; and
- for flats, continued escape using the common horizontal and vertical routes in a building, to a final exit leading to a place of ultimate safety outside.

250. In general needs flats and houses with no floor more than 4.5m above ground level, a recognised alternative means of escape would be to use an escape window. This is not an alternative that could be realistically considered in premises covered by this Guidance. Even if it were appropriate for some residents, their ability to use them would diminish with advancing years. Therefore, the use of escape windows is not considered further.

251. The following section deals with means of escape in Sheltered, Extra Care and other private dwellings. Means of escape in supported group housing and small domestic care homes will be considered separately on p62.

(1) Means of Escape in Sheltered, Extra Care and other private dwellings

Flat internal arrangements

252. In blocks where flats open directly onto stairways, the protection of the internal hallway can act as a safeguard for the communal escape route, as well as providing enhanced protection within the flat.

253. In some housing, living room and kitchen doors may be solid fire doors, closing onto a 25 mm rebate and self-closing, while bedroom doors are often hollow core domestic doors, without any substantial doorstop.

254. It is not uncommon to find that some residents have either changed internal fire doors to non-fire-resisting doors or have removed doors or partitions altogether.

Means of escape within dwellings

255. A fire anywhere within a dwelling should not prevent the occupants from escaping, unaided. In general, flats in sheltered and extra care schemes are normally laid out on a single level, and it would be rare to find flats on two levels with an internal stairway. The means of escape from flats located on the ground floor with their own separate entrance doors, entered direct from open air and, potentially, with additional exit doors, should present few difficulties.

256. Design guidance recommends three acceptable approaches to providing adequate means of escape from dwellings where all rooms and the entrance door are on a single level. These are:

- limit the travel distance within the dwelling
- provide a protected entrance hall
- provide an alternative exit

257. Any departures from the following benchmarks should take account of individual circumstances, including the age, mobility and vulnerability of the residents, both now and in later years. Slightly increased travel distances of up to 3m might not require any additional measures, otherwise other approaches or compensatory measures are likely to be necessary. A person-centred risk assessment should be used to determine appropriate measures (see Part 1.) Compensatory measures might include Category LD1 fire detection, fire-resisting doors to the kitchen and lounge or an automatic fire suppression system.

Dwellings with limited travel distance

258. This approach is common in most sheltered and extra care flats to avoid the possible difficulty of older residents opening heavy internal fire-resisting doors (particularly any doors fitted with self-closing devices) as part of everyday living.

The travel distance from any point in a habitable room to the flat entrance door is limited, so reducing the chance that residents could become trapped in the event of a fire.

259. Although no longer reflected in current Scottish Technical Handbook guidance as an option, such a design is common in existing housing and incorporates the following benchmarks:

- the travel distance from any point in a habitable room to the entrance door should be limited to 9m
- cooking facilities should be remote from the entrance door and should not prejudice the escape route from any point in the dwelling

260. *BS 9991* contains further information.

Dwellings with protected entrance halls

261. Where there is a protected entrance hall (also known as a "protected enclosure"), the escape route within the dwelling should remain relatively smoke free in the early stages of a fire in a room. Current design guidance is as follows:

- all dwellings with a storey above 4.5m should have a protected entrance hall or suppression
- houses and maisonettes with a storey above 7.5m (less than 18m) should have a protected entrance hall and suppression/alternative exit
- all habitable rooms should open onto the entrance hall
- the entrance hall should be a protected route, enclosed in 30 minutes fire-resisting construction, in which doors are of at least 30 minutes fire resistance (FD30 doors)

262. In older blocks of flats, the fire resistance of partitions and doors may not meet current standards. Whether there is a need to replace or upgrade existing fire-resisting doors or partitions, will depend on the overall risk. The existence of, or fitting of, an automatic sprinkler system that complies with *BS 9251*, or a watermist system that complies with *BS 8458*, would also provide flexibility to accept levels of fire resistance that do not meet current standards.

263. A person-centred risk assessment should determine whether the problems experienced by older and frail residents negotiating internal self-closing doors are such that the use of swing free self-closing devices may be appropriate (see paragraph 306)

Dwellings with an alternative exit

264. Current design guidance for dwellings with alternative exits is as follows:

- all habitable rooms should be directly accessible from an internal hallway and have an alternative exit remote from the entrance door; or

- all bedrooms should have access to an internal lobby that is separated from the living area (lounge and kitchen) with 30 minutes fire-resisting construction; an alternative exit is then provided from the bedroom area

265. For an arrangement that relies on alternative exits, each alternative exit should lead to a final exit or common stairway by way of:

- a door to a common corridor, lobby or escape balcony; or
- an internal private stair leading to a common corridor, lobby or escape balcony; or
- a door onto a common stairway; or
- a door onto an external stairway

Inner rooms

266. An inner room is a room from which escape is only possible by passing through another room (the "access room"). These situations can commonly occur in some larger flats and those with open plan layouts. In addition, there is a possibility that residents might remove internal doors or partitions, thereby creating inner room situations. For the range of premises covered by this Guidance, habitable rooms, such as lounges and bedrooms, should not be inner rooms. To avoid the occurrence of inner rooms, all habitable rooms should either open directly onto a hallway or should be provided with an alternative exit. *BS 9991* advises that for general needs open plan flats with inner room sleeping accommodation, automatic fire suppression system may offer compensation but this is not normally appropriate for flats in sheltered and extra care housing.

Security locks

267. Any security locks fitted to entrance doors and alternative exit doors should be easily operable by the residents from the inside without the use of a key.

268. As flat entrance doors are required to be self-closing, there is a risk that any self-locking security devices fitted to the doors could accidently lock residents outside of their own dwelling. The danger in these circumstances is that residents may resort to removing or disconnecting the self-closing device. Entrance doors should be fitted with a suitable lock that can only be locked on the outside by the use of a key operated deadlock, but that can still be opened from the inside by a handle or lever without the use of a key.

Escape routes within common areas

269. Current design guidance recommends limiting the travel distance from a flat entrance door to a protected stairway, enclosing escape routes in fire-resisting construction and providing smoke control to ventilate corridors/lobbies and stairways. This is to ensure that smoke and heat from a fire in a flat or ancillary room will not prejudice use of the corridors, lobbies, balconies or stairways.

270. Buildings where flats are served by a single escape stairway:

- every flat is separated from the common escape stairway by a protected corridor or protected lobby (except as described in the paragraph 274)
- the distance of travel between the flat entrance door and the door to a lobby or stairway is limited to 10 m
- smoke control is provided by natural or mechanical ventilation automatically activated by smoke detection within each lobby or corridor adjacent to the stairway
- the stair is provided with a smoke vent at the head (normally under remote control for fire service use) or by manually openable vents on each level or by a smoke shaft arrangement incorporating the simultaneous

automatic opening of the lobby vent, stair head vent, and the vent at the top of the smoke shaft

271. Occupants using the escape stair should be safe from the effects of fire and smoke during their evacuation to a place of safety. Therefore, the enclosing structure of a protected zone incorporating an escape stair should have at least 60 minutes fire resistance and any door should achieve at least 30 minutes fire resistance. The stairway should lead directly to a final exit (or a protected route to a final exit) and not contain any significant fire hazards, other than lifts or protected electrical meter cupboards. Ideally gas installations should not be located within protected stairways.

272. A protected lobby may be located within a protected zone and is designed to inhibit the movement of fire and smoke from an adjoining room, storey or space into the escape stair. This is normally achieved by fire resisting construction together with at least 2 sets of self-closing fire doors between the fire and the escape stair. The wall between the protected lobby and the escape stair should achieve 30 minutes fire resistance duration and any door in the wall should be a self-closing fire door with 30 minutes fire resistance duration (see Figure 9 below).

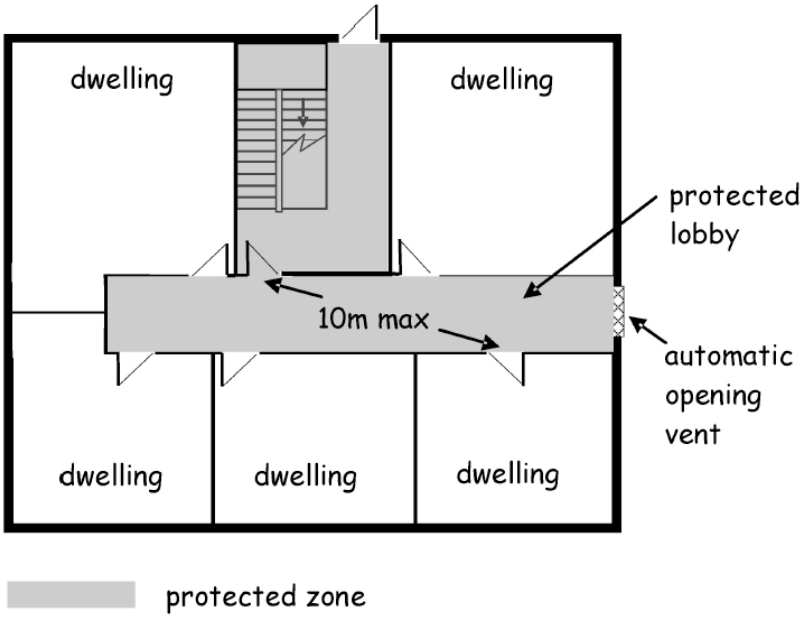


Figure 9 Single Stair Protected Lobby

273. Ancillary rooms, risers and other areas opening onto corridors and lobbies also need to provide this protection. Doors from ancillary rooms should be fire-resisting. The benchmark for doors opening into corridors and lobbies is a minimum of 30-minutes fire resistance and – with the exception of risers and ancillary rooms – the doors should be self-closing.

274. Where protected entrance halls or automatic fire suppression systems are installed within flats, protected lobbies between the flats and the escape stair may be omitted under limited circumstances: the number of dwellings should be limited to 4 dwellings per storey and no storey should be at a height of more than 7.5m above the adjacent ground level. The intention is to limit the size and height of a domestic building where some reliance is placed on fire precautions within a dwelling that also protects the common escape route.

275. A stairway width of 1 metre is normally adequate for means of escape. With a stay-put policy, the number of people expected to use a stairway at the same time in the event of a fire will be limited. Some residents will find it difficult to use stairs in the event of fire and additional measures may be needed, such as the provision of temporary waiting spaces within a protected stair or lobby. External stairways are unsuitable.

276. In single stairway buildings, the stairway should not continue unseparated down to a basement or enclosed car park. In multiple stairway buildings, where the stairways serve basements and car parks, one of the stairways should terminate at ground level. Other stairways may extend to serve basements, providing they have lobby or corridor protection at basement level. In addition, a single stairway should not serve a boiler room, fuel storage room or other similar high-risk ancillary rooms. In multiple stairway blocks of flats, the ancillary rooms should normally be separated from the stairways by a protected lobby or protected corridor.

277. The limitation on travel distance within protected lobbies is intended to reduce the time it takes occupants to escape and to reduce their potential exposure to fire and smoke. Automatic smoke ventilation should be provided within every protected lobby to improve tenability conditions within the escape route and to protect the stair.

278. Buildings where flats are served by more than one escape stairway:

- stairways should be separated from each other by fire-resisting construction so that a fire does not affect the use of more than one stairway (stairs should not terminate in the same enclosure)
- every flat is separated from each escape stairway by a protected corridor or protected lobby
- the travel distance from a flat entrance door to the door to the nearest stairway or stair lobby is limited to 30 m
- any dead-end section of an access corridor is separated from the rest of the corridor by a self-closing fire-resisting door – the single direction of travel in the dead end section of corridor should be limited to 10 m
- smoke control is provided by natural or mechanical ventilation automatically activated by smoke detection within each lobby or corridor adjacent to the stairway
- the stair is provided with a smoke vent at the head (normally under remote control for fire service use) or by manually openable vents on each level or by a smoke shaft arrangement incorporating the simultaneous automatic opening of the lobby vent, stair head vent, and the vent at the top of the smoke shaft

Figures 10 and 11 show these arrangements.

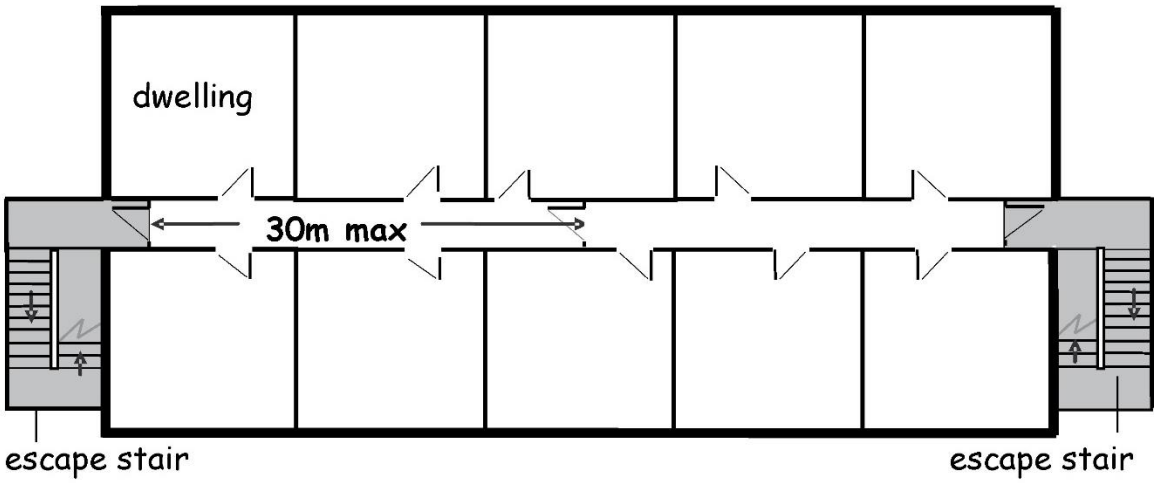


Figure 10 – Upper floor arrangement where flats are served by more than one escape stairway

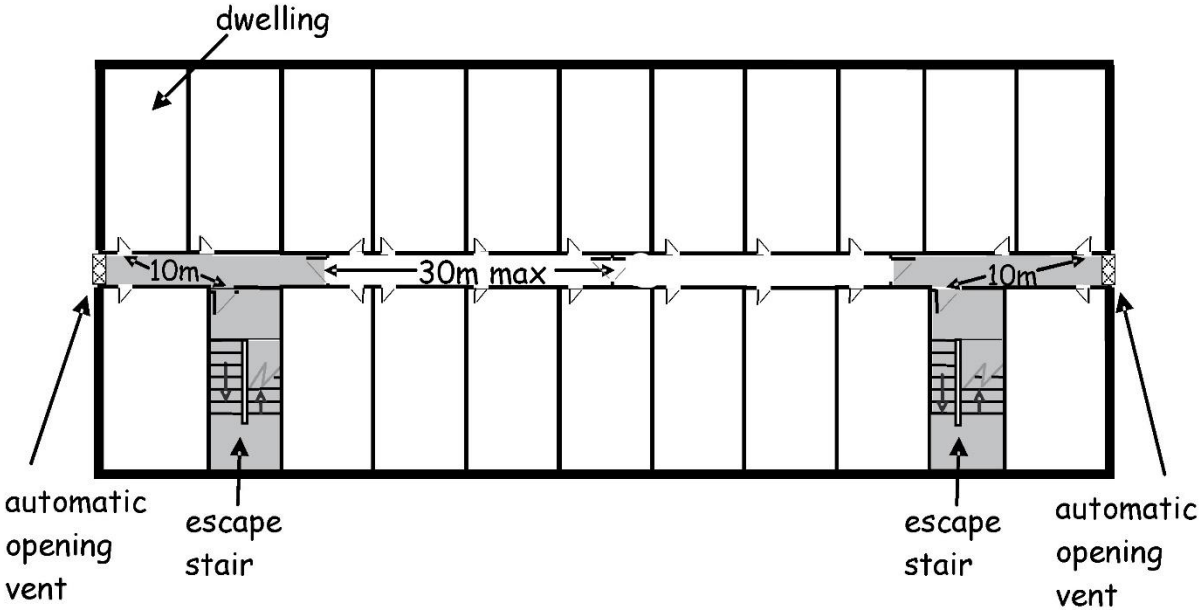


Figure 11 – Upper floor arrangement where flats are served by more than one escape stairway and there are dead ends

279. *BS 9991* recommends that residents incapable of independent evacuation should travel no more than 7.5m from a flat entrance door along a corridor or lobby to reach a fire door to a protected stairway, protected lobby to the stairway or a cross-corridor fire door. This principle should apply to sheltered housing, where practicable, and extra care housing, with a maximum permissible travel distance of 10m.

280. Small increases in travel distance can be accepted in most situations without any additional measures. However, significant increases in travel distance might necessitate:

- additional cross-corridor doors to restrict smoke-spread
- improvements to the smoke control arrangements

Flats with external balcony or access deck approach

281. There is little risk of external balconies or decks becoming smoke logged in the event of a fire and, consequently, in general needs blocks, there are few restrictions placed on travel distance. Although most sheltered schemes will generally be small and therefore travel distance will be limited, where this is not the case, the ability of residents to escape unaided along external balconies should be considered.

282. If the width of the access balconies or deck is less than 2m, it is assumed that there is little risk of horizontal smoke spread along the balcony or deck from a fire in a flat, which would prevent residents from using the escape route. There is, however, potential for smoke-spread along balconies or decks wider than 2 m. In these situations, downstands (minimum 300 mm deep) may restrict the lateral spread of smoke.

283. Ideally, there should be no stores or other ancillary rooms, located off the balcony or deck.

284. The maximum travel distance for a common access balcony or deck is 40 m. There are no limitations on travel distance in the common escape routes for flats with external balcony or deck approach where the balcony or deck provides two directions of escape.

285. In flats with a single direction of escape to a single escape stairway, the separating walls between the flats and the balcony or deck should provide 30 minutes fire-resistance up to a height of 1.1 m from balcony or deck level. The flat entrance doors in these situations are self-closing fire-resisting doors (minimum 30-minutes). This will allow residents, if they need to pass a fire in an adjoining flat, to reach the stairway. In flats with alternative independent escape to another balcony or deck on the same level, which leads back to the single stairway, only one of the enclosures between the flats and the balcony needs to be fire-resisting. It should be noted that for residents who require mobility aids, such as wheelchairs and mobility scooters, the 1.1m fire-resisting barrier may not allow some residents to safely pass beneath open windows or unprotected areas.

286. Where there is alternative escape available from each flat entrance along the open balcony or deck to two or more escape stairways, the separating walls between the flats and access balcony or deck and the balcony flat entrance doors are not required to be fire-resisting.

Smoke control

287. The subdivision of corridors and the separation of dead end sections of corridors, using fire-resisting, self-closing doors, is an accepted part of the design of means of escape in sheltered and extra care housing. This will ensure that corridors not directly affected by fire and smoke will remain relatively smoke free, and will ensure that smoke will not affect access to more than one stairway or, in the case of dead end corridors, affect access to the nearest stairway. The provision of additional cross-corridor doors in sheltered and extra care housing to reduce travel distance and, consequently, the length of corridors that may be affected by smoke, recognises that older and less mobile residents will take longer to reach a place of safety

288. In premises where a “stay put” strategy is adopted, protected lobbies, protected corridors and escape stairs (including those designed for fire service use) should also have additional measures for smoke control which can be achieved by natural means, using the buoyancy of smoke, or mechanical means. Natural ventilation efficiency, in particular, often depends upon the prevailing wind.

289. With natural ventilation, lobbies and corridors are ventilated where they adjoin a stairway, at a high level, by means of an automatically opening external wall ventilator (AOV) direct to open air or via a natural smoke shaft. AOVs which discharge direct to the external air should have a minimum area of 1.5 m^2. A smoke shaft rises up through the building and are usually found where the lobby or corridor does not have an external wall to allow direct ventilation to external air. It has a minimum 1.5 m^2 opening at roof level and AOVs in each lobby into the shaft should have a minimum 1 m^2 area. Replacement air is supplied by an AOV in the adjacent stairway. The shaft should have a minimum fire resistance of 60-minutes and all ventilators have a minimum fire resistance of 30-minutes. On detection of smoke in the protected lobby, the ventilator on the fire floor, the ventilator at the top of the smoke shaft and the 1m2 ventilator at the head of the stairway should all open simultaneously. The ventilators from the protected lobbies on all other storeys should remain closed.

290. Protected stairways should have means to ventilate smoke that may enter the stairway. A vent of at least 1 m^2 is provided at the head of the stairway. In blocks of flats with more than one escape stairway, this vent can be opened manually. However, in blocks of flats with a single stairway, the vent is operated automatically. The system is configured to operate if smoke is detected in any protected corridor or protected lobby. In older properties, openable vents at each level may be provided in lieu of a stair vent at the head of the stair.

291. It is important that fire-fighters can control the opening and closing of the ventilators on arrival at the building. Ventilators should be fitted with a simple handle or lock that can be easily operated by firefighters, including where automatic opening ventilators are recommended. If ventilators are not easily accessible they should be operated by a mechanism positioned within the building at the SFRS access point. In the case of an escape stair and fire-fighting stair, a local control should also be provided at the topmost storey. This will allow fire-fighters flexibility in their operations.

292. A mechanical smoke control system can be a mechanical ventilation system or a pressurisation system. A mechanical ventilation system extracts from the lobby or corridor by creating a negative pressure in the space using fans. Most systems use a vertical shaft. The shaft contains an AOV of 1 m^2 at the top storey.

293. A pressurisation system works on the basis of forcing air into a space to create a positive pressure to prevent smoke from entering. Pressurisation systems are most commonly found protecting stairs.

294. Any system installed to maintain environmental conditions, should be arranged so that it does not compromise the function of the smoke control system. In the event of fire, the system should either automatically shut off or, if it is integrated with the smoke control system, should operate in fire mode.

295. It is appropriate, when assessing an existing building's smoke control, to review the arrangements in the light of the standards in place at the time the block was built, and to determine whether it functions as originally intended before considering whether there is a need to improve the arrangements. It might be appropriate to leave in place existing arrangements, maintained as originally designed. However, it will be less appropriate to engage in capital expenditure to restore older non-functioning smoke control arrangements to their original design, if the expenditure could, instead, provide more effective smoke control in line with modern standards.

296. The philosophy behind corridor smoke control design has changed over the years. Previous design guidance included a smoke dispersal strategy, where reliance was placed on cross-ventilation of corridors, uninterrupted by cross-corridor doors. The cross-ventilation could be provided by manually opened vents, with either permanent vents or automatically opening vents operated by smoke detectors. In particular, smoke dispersal using permanently open vents (PV) has been shown to be vulnerable to failure as a result of wind direction or being undermined by residents who block the permanent vents because of discomfort. It is no longer seen as an acceptable method of smoke control. In blocks of flats designed with corridor smoke dispersal systems, consideration should be given to providing cross-corridor doors and to change to a smoke containment approach, but maintain the OVs or PVs to ventilate the sections of corridor remaining. Advice from a specialist should be sought if smoke dispersal is present in a single stairway building.

Lifts

297. The use of evacuation lifts or, exceptionally, normal passenger lifts, may also be considered. Specially designed evacuation lifts are safe for residents to use for vertical escape during a fire. Normal passenger lifts can sometimes be upgraded to evacuation lift standards (usually at the time of lift refurbishment); the major aspect of design is the provision of dual power supplies, which can be created by running two independent, fire-resisting circuits via diverse routes. Evacuation lifts should comply with the recommendations of *BS 9999*. It is possible for a modern fire-fighting lift to be used as an evacuation lift without modification, although discussions with the SFRS will be required to determine whether this is feasible (its use for evacuation may impede firefighting operations).

298. In exceptional circumstances within sheltered and extra care housing, the use of normal passenger lifts for evacuation, under the supervision of staff or the SFRS, might be considered. However, this needs to be based on a careful risk assessment that takes into account the likelihood of failure of power supplies to the lift, and entry of smoke into the lift shaft, during a fire. Nevertheless, if vertical evacuation of residents is essential, use of a passenger lift with fire-protected power supplies might be less hazardous to residents with severe mobility impairment than evacuating them down a stairway.

Surface finishes in common escape routes

299. The surface finishes of walls and ceilings can significantly affect the rate of fire-spread and contribute to the development of a fire. It is important to control

the fire performance of linings within the common areas. Combustible surface finishes should not be permitted in escape corridors, lobbies or stairways. Products and materials that will afford a 'Class 0' or European class B-s3, d2 performance are normally necessary for use in the common areas.

300. A wall or ceiling constructed of non-combustible materials, such as masonry, brick, concrete or has plaster finishes, will generally have an acceptable surface spread fire performance characteristic.

301. It is often difficult to identify existing surface finishes. Surface finishes normally considered acceptable may have been subject to many instances of over-painting and this can affect their performance when exposed to fire. Multiple layers of paint applied to walls and ceilings in the common areas over the years can give rise to rapid fire spread. Where the risk is considered significant, action should be taken to remove or treat the paint. Proprietary products are available that can be used to treat the surfaces to provide a protective outer coating that will reduce the extent of fire-spread.

302. Any false ceilings in common corridors and lobbies should preferably be non-combustible or, at least, Class 0. There should be little, or no, additional fire hazards within the false ceilings. On this basis, there may not be a need for cavity barriers to sub-divide the voids, other than above cross-corridor fire doors, subject to individual risk assessment.

Fire-resisting doors

303. A fire-resisting door assembly is one that has been independently certificated by a UKAS-accredited fire test laboratory as satisfying the test requirements for integrity and control of the passage of smoke at ambient temperature. Standards are contained in *BS 476-22* and *BS EN 1634* parts 1, 2 and 3. A modern fire-resisting door has intumescent strips and cold smoke seals fitted along its side and top edges or within the frame reveal. Any letterboxes are protected with intumescent material which seals the opening when exposed to the heat from a fire.

304. Doors protecting the common escape route between a flat and the escape stair, including flat entrance doors, are specified as minimum 30-minute fire-resisting self-closing doors (designated FD30S). Fire doors forming part of the stair enclosure should also be a minimum of 30-minute fire resisting and self-closing. Doors to certain high risk ancillary rooms, such as boiler rooms, should be FD60S. Doors to these ancillary rooms need not be fitted with self-closing devices if the premises are well managed and the doors are kept locked shut when not in use.

305. Fire-resisting flat entrance doors, and doors provided to protect common corridors, lobbies and stairways, should always be fitted with suitable positive action self-closing devices. The self-closing device should be capable of closing the door in its frame from any angle and overcoming the resistance of any latch. Where this is not the case, the fitting of suitable self-closing devices should be a priority.

306. Where fire-resisting, self-closing doors, particularly those in common corridors and circulation spaces, present an obstacle to normal movement for older and disabled residents, consideration should be given to the fitting of hold-open

devices or swing-free devices. Hold-open devices are designed to hold a door open against the action of the self-closing device. Swing-free devices allow a door to stand open at any angle in normal use. Both types of device automatically result in closure of the door in the event of fire. New hold-open devices and swing-free closers should conform to *BS EN 1155*. The fitting of any hold-open devices or swing-free door closers in sheltered and extra care housing can only be permitted if there is a suitable fire detection and alarm system fitted throughout the areas where these devices are used. Recommendations for the fire detection are given in *BS 7273-4*. Hold-open devices and swing-free closers should release to allow the door to close under the action of the self-closing device on operation of the fire alarm system and the failure of the power supply. Other than in the case of doors to protected stairways, acoustically-actuated hold-open devices are acceptable. *BS 7273-4* provides recommendations for the design, installation, commissioning and maintenance of door release mechanisms.

307. Powered doors, or powered door opening devices to existing doors, in common areas and, potentially, individual flats, may be suitable for use by residents who require the use of wheelchairs or mobility scooters. Typically, these doors would be fitted with controls located on each side of the door. The doors are designed to close automatically after a pre-set time has elapsed. It should be ensured that doors will fail safe to the closed position in the event of failure of the power and are capable of manual operation. Any in-built delay should be restricted to a maximum of 25 seconds to restrict smoke spread.

308. Three options exist in relation to original fire-resisting doors that do not meet current standards. These are:

- accept the door as it is, provided it is a good fit in its frame, is in good condition, and that it satisfied the standard applicable to fire-resisting doors at the time of construction of the building
- upgrade the door by fitting intumescent strips and smoke seals along the edges, and in the case of flat doors, fitting a protected letter box
- replace the door with a new FD30S door

309. Older doors which are solid and 44mm thick may provide a notional 30-minute fire-resistance. They may be acceptable providing they are in good condition. They may lack intumescent strips and cold smoke seals and there may have been reliance on 25 mm door stops but usually strips and seals can be easily fitted retrospectively to doors or doorframes.

310. Flat entrance doors may not have protected letterboxes. Upgrading to meet current standards is not always necessary and will depend on the location of the flat within the block and the construction of the letterbox. A letterbox in the middle or lower part of the door with a spring-loaded metal flap on the inside and outside of the letterbox may not require upgrading. A flat entry door on an external balcony or access deck does not require a fire-resisting letterbox.

311. Where older doors were self-closing, this was sometimes achieved by using rising butt hinges. Rising butt hinges are, however, unreliable and should be replaced with suitable self-closing devices conforming to *BS EN 1154* (see Fig 12).

312. Existing doors should not be replaced simply because they are not fitted with intumescent strips or smoke seals, or fail to meet some other requirement of current standards. Existing doors are likely to be acceptable where flats are protected by automatic fire suppression systems; or all flats are protected by Category LD1 fire detection systems that are monitored, so that, in the event of fire, early summoning of the SFRS will always occur (this may not be an acceptable in rural areas in which long attendance times are anticipated).

Figure 12 Rising butt hinge

313. It may still be reasonable to accept notional FD30 doors in smaller schemes, provided doors are in sound condition and are of good fit in their frames. In larger blocks, it might be more appropriate to upgrade existing flat entrance doors and doors to high risk ancillary accommodation (but not necessarily other fire-resisting doors) with intumescent strips and smoke seals, albeit as part of a long term programme (such as refurbishment).

314. Existing fire-resisting doors need to be a good fit within their frames with a maximum of 4mm gaps between the sides and tops of a door and the door frame. The gaps at the base of the door should be limited to 6mm. The doors and frames should be in good condition, undamaged, and have no openings in them where locks or security fastenings have been removed. The fire resistance of frames should not be compromised where cables pass through the frames into flats. Any existing doors that fail to meet these recommendations should receive attention.

315. Where a fire-resisting flat entrance door has been inappropriately replaced with a non-fire-resisting type by a resident, the non-fire-resisting door should be replaced with a new FD30S door.

Final exits and exit capacity

316. The number and capacity of exits will rarely present problems, as occupancy numbers will be limited, although communal meeting rooms may need to be assessed independently based on the number and width of exits available. Final exits should be sited so that they are clear of any risk of fire and smoke and will allow people to exit the building safely.

317. Final exit doors from the building should be easily openable from the inside without the use of a key or code. A simple turn handle or lever that can be easily operated by older or frail residents is preferred. Locks operated by thumb turns are unlikely to be suitable, as they can be difficult for frail residents to open. For exits that are normally secured and used only as a means of escape, a panic bar or push pad is more suitable. Any exits fitted with electronic locking mechanisms should comply with the recommendations of *BS 7273-4.*

318. Final exits and exit routes should not present an obstruction to residents who use mobility aids. Exits should, ideally, have a level threshold leading to level ground to allow people to make their way clear of the building to a place of safety. The surfaces of external exit routes should not present a trip or slip hazard and need to be regularly inspected to avoid, for example, a build-up of vegetation or algae and, during winter periods, a build-up of snow.

(2) Means of Escape in Supported Housing / Small Domestic Care Homes

319. Most properties used for supported housing and small domestic care homes are akin to single-family dwelling houses, albeit that most residents have their own rooms and share common facilities. The assessment of means of escape starts with an assessment of the residents and their ability to evacuate in the event of a fire (see Part 1).

320. Where residents are capable of responding appropriately in the event of fire (or alarm), means of escape will be similar to a single-family or shared house. Assuming a comprehensive level of fire detection is provided, the premises should be regarded as low risk.

321. If residents use wheelchairs to evacuate, it needs to be ensured that all fire exits are wide enough. For very high risk residents, measures such as additional fire detection, upgrading of fire doors and, in some cases, automatic fire suppression may be necessary.

322. Travel distances will not normally be an issue but should not exceed 9m in a room, or in a single direction of escape. Overall travel distance to a final exit should not exceed 18m. A degree of flexibility should be applied to travel distances, depending on the level of risk presented in each premises.

323. As a minimum, smoke seals should be fitted to fire doors (or frames) where staff assistance is required to evacuate residents or where prolonged evacuation times are anticipated such as in domestic care homes. If upgrading doors with intumescent strips, or replacing doors with new 30 minute doorsets, they should also be fitted with smoke seals.

324. Where fire-resisting, self-closing doors present an obstacle to normal access and egress, consideration should be given to fitting hold open devices or swing-free arms. Further information on fire doors and final exits can be found in the preceding Means of Escape section for Sheltered / Extra Care Housing (see pages 59-62).

325. Ideally, gas meters, electricity meters and distribution boards should not be sited in escape corridors or stairways, although if they are located at high level and are not accessible to residents, they should present little risk (provided they are installed and regularly inspected in accordance with gas safety regulations and current IET regulations). Those at low level should preferably be enclosed in fire-resisting construction and be secured to prevent unauthorised access.

Means of escape - single storey ground floor

326. In single storey ground floor premises (bungalows or ground floor flats), the means of escape requirements will be limited and relatively simple to achieve, and will be similar to those found in single-family dwellings. Doors to each room should be of sound construction and fit closely into their frames, but need not be fire resisting, unless prolonged evacuation times are anticipated.

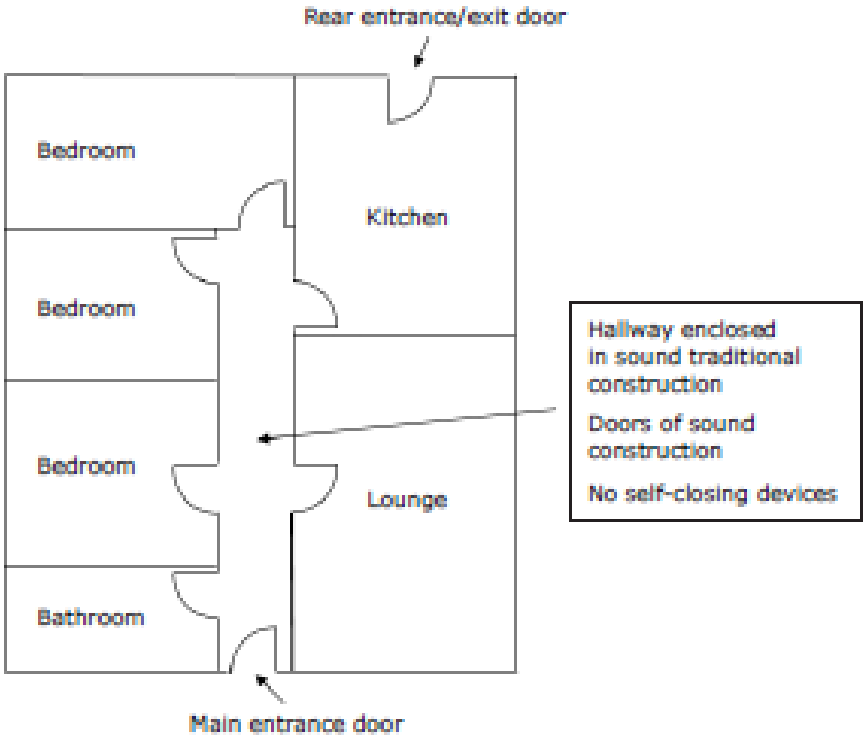


Figure 13 Single storey layout

Means of escape – 2 storey premises

327. The means of escape in two storey premises (with no floor more than 4.5m above ground level), will also be relatively simple. Habitable rooms on the ground floor should either have a final exit door, or, alternatively, a door that opens onto a hallway, which, itself, leads directly to a final exit. If habitable rooms are provided in the basement, they should have a final exit or a door that opens onto a protected stairway which leads directly to a final exit at ground level.

328. Stairways should be a protected route enclosed in 30 minutes fire resisting construction and doors to all rooms (other than toilets, shower rooms and bathrooms) should also provide 30 minutes fire resistance. Stairways should either lead directly to a final exit, or gives access to two separate escape routes, which are separated by fire-resisting construction and lead to final exits.

329. In lower risk premises, this may be a nominal period of 30 minute fire resistance with solid, well-fitting doors (hollow core or thin panelled doors should be replaced) and there will not normally be a need to fit self-closing devices to fire-resisting doors. In other premises, doors to any kitchens or lounges that open directly onto a protected stairway should be fitted with positive action self-closing devices.

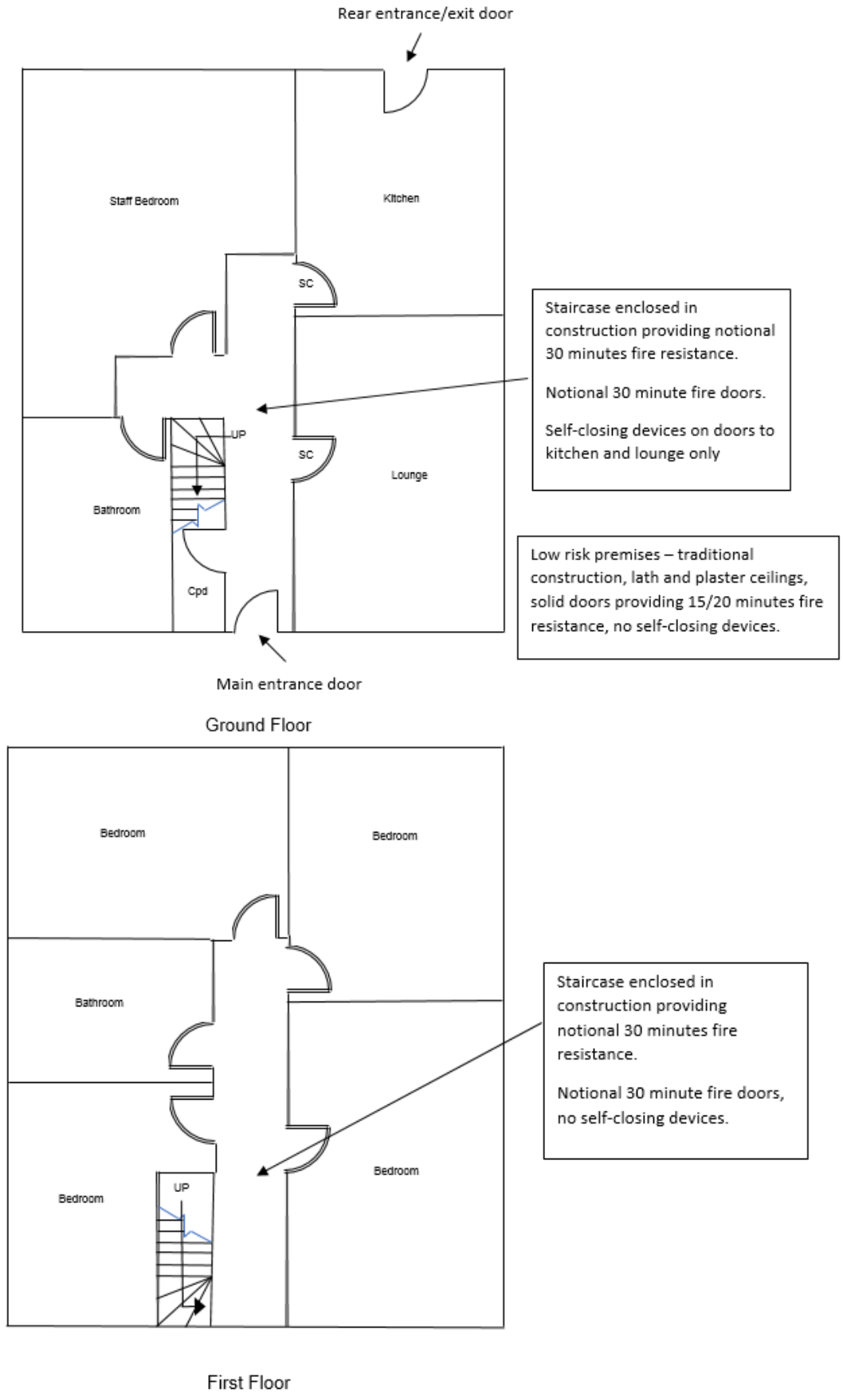


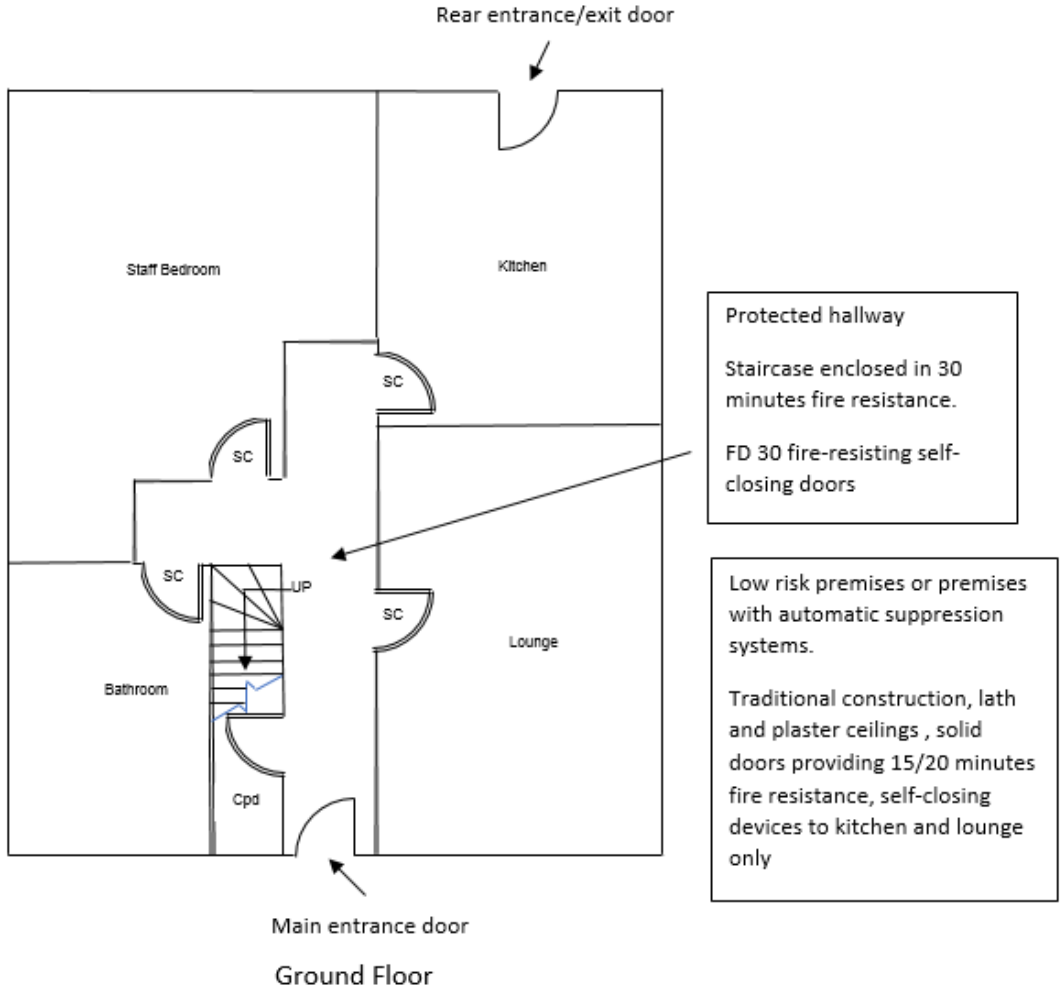
Figure 14 2 storey layout

Means of escape – ground and two upper floors

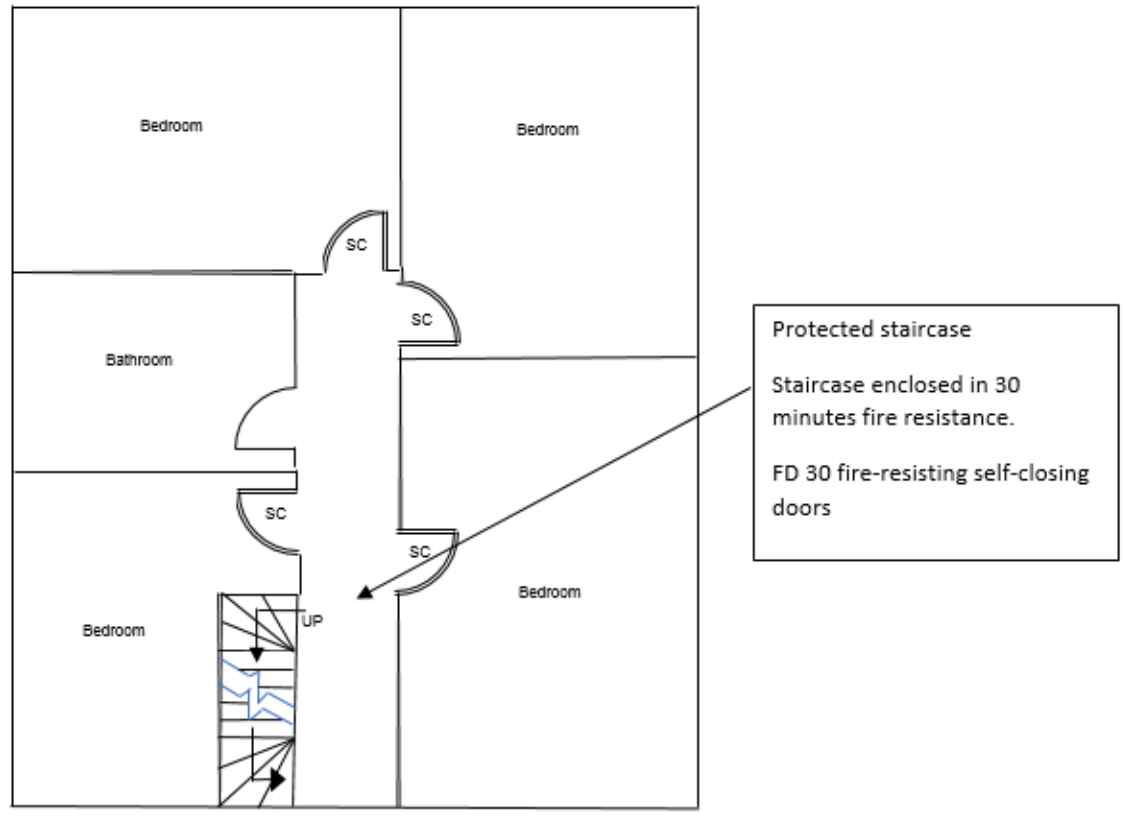
330. The means of escape in three storey premises should consist of a protected stairway that leads directly to a final exit, or gives access to two separate escape routes, which are separated by fire-resisting construction and lead to final exits. The stairway should be enclosed in 30 minutes' fire-resisting construction, and doors to all rooms (other than toilets, shower rooms and bathrooms) should afford 30 minutes' fire resistance (FD30 doors). This includes construction and doors to any cupboards that contain a source of ignition.

331. In low risk premises, and premises protected by a sprinkler or watermist system, original, traditional construction (for example, lath and plaster) in sound condition is acceptable; original, solid, well-fitting nominal doors that would be likely to provide a fire resistance of around 20 minutes are also acceptable, but hollow core or thin panelled doors should be replaced. Self-closing devices need only be fitted to the doors of any lounge or kitchen that opens directly onto a protected stairway. In other premises, all fire-resisting doors that open onto a protected stairway should be self-closing.

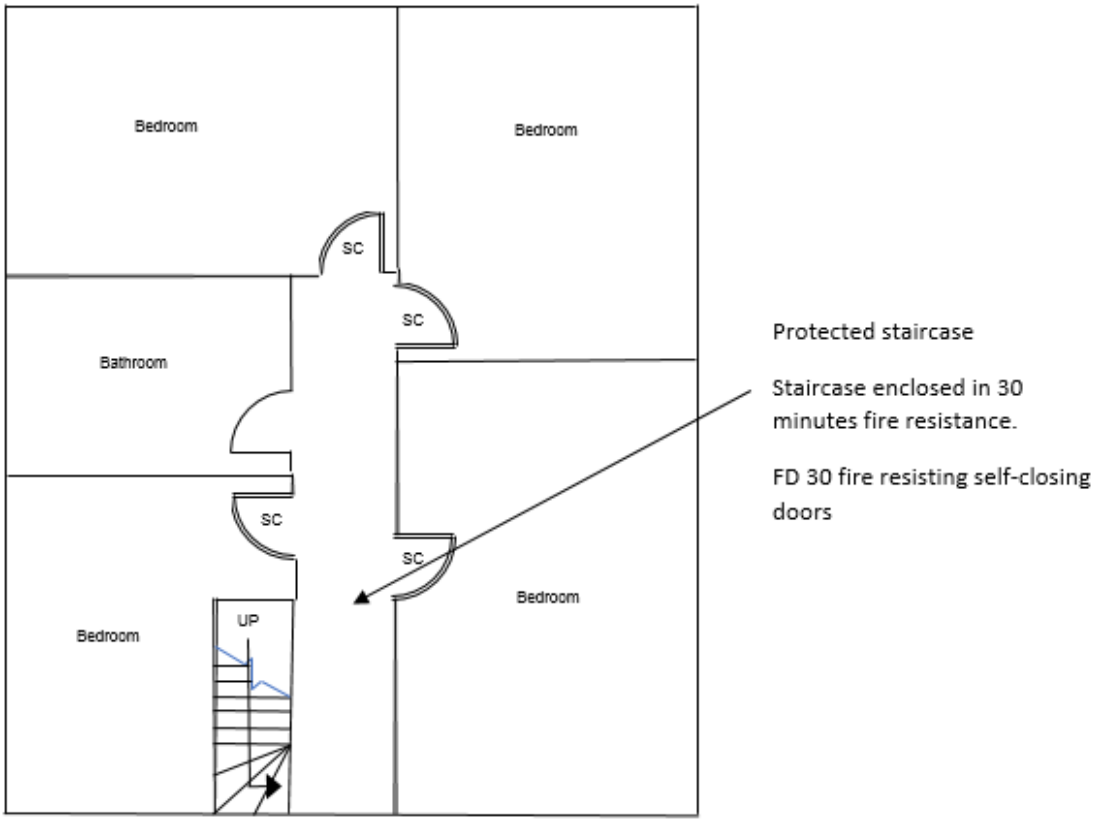
332. If, in a three storey house, a prolonged evacuation time is anticipated, notional FD30 doors should be upgraded by fitting intumescent strips to the head and vertical edges of the doors; alternatively, a new, certificated FD30 doorset may be installed.



Ground Floor



First Floor



Second Floor

Figure 15 3 Storey layout

Means of escape – properties of four or more storeys

333. Four (or more) storey supported housing is uncommon. Specialist advice on means of escape from such premises will be required.

Fire Safety Signs

334. Smaller premises and those with a single staircase would not usually require any fire exit signage. Where there are alternative exit routes or where there is any potential for confusion, fire exit signage may be required. The excessive use of signs should be avoided, particularly in supported housing.

335. In general, 'Fire Door Keep Locked Shut' signs should be provided on the following fire-resisting doors:

- the external face of doors to store rooms
- electrical equipment cupboards
- any ancillary rooms located within the common areas

336. 'Fire Door Keep Shut' signs should be provided on both faces of fire-resisting doors forming part of the protection to the common escape routes and on cross-corridor fire doors, but not to flat entrance doors. In the case of fire doors that are held open, and release on operation of smoke detectors, the signs should read 'Automatic Fire Door Keep Clear'.

337. New safety signs should comply with *BS EN ISO 7010*.

Lighting on Escape Routes

338. Emergency escape lighting should be provided throughout escape routes, other than in small premises of no more than two storeys with adequate and reliable levels of borrowed lighting.

339. In small supported housing where borrowed lighting is unavailable, automatic plug-in night lights, that continue to operate if the mains electricity fails, may be provided within the hallway and upstairs landing (if applicable). Where residents' rooms do not receive borrowed lighting throughout the night, the night light should be of a type that can be removed from its socket or mounting to be used as a torch.

340. In other cases, emergency escape lighting should conform to the recommendations and requirements of the relevant parts of *BS 5266.* It should provide illumination for three hours in the event of power failure.

341. One or more test switches should be provided, so that the emergency escape lighting can be tested by simulating failure of the normal power supply to the luminaires without the need to isolate normal lighting circuits.

342. The likelihood of a loss of normal lighting within escape routes, as a result of fire, at a time when residents may need to use the escape routes, is very low. Therefore, the provision of emergency escape lighting, might be a lower priority than other improvements, such as fitting self-closing devices on doors.

Fire Detection and Alarm Systems

Supported Housing / Small Domestic Care Homes

343. A fire detection and alarm system, complying with the recommendations of *BS 5839-6* for a Category LD1 system, should be provided. This requires the provision of a heat detector within kitchens and smoke detectors in all circulation spaces and all other rooms (excluding toilets, shower rooms, bathrooms). Optical devices are recommended in circulation spaces or areas into which kitchens open. Alternatively, appropriate multi-sensors may be used to limit false alarms, for example, where steam from bathrooms may enter hallways. There will normally be no need for fire detection within roof voids, unless these contain specific, significant fire hazards such as gas boilers or photovoltaic electrical equipment.

344. Domestic smoke alarms may be used in single storey premises and premises with no more than four bedrooms. Grade D (mains with integral standby supply) is recommended for these premises (although radio linked and long life tamperproof Lithium battery detectors are also available).

345. In other premises, a Grade A system, as defined in *BS 5839-6*, with control and indicating equipment, fire detectors and fire alarm sounders, should be provided. However, if existing premises of no more than two storeys are currently provided with sufficient mains-operated smoke alarms (with standby supply), these need not be replaced with a Grade A system until the smoke alarms reach the end of their useful life. Where there is, at any time, less than two members of staff on duty, the system should be addressable or there should be remote indicator lamps outside the entrance door to each resident's accommodation, so that the location of a fire can be quickly identified.

346. The standby batteries for a Grade A system should be able to operate the system for 72 hours in the event of mains failure, after which there should be sufficient capacity to sound an evacuation signal for 15 minutes. However, in premises with at least one member of staff present (whether awake or asleep) on a 24-hour basis, the period of 72 hours may be reduced to 24 hours.

347. *BS 5839-6* recommends that the sound pressure level of the fire alarm signal should be at least 85dB(A) at the open doorway of every bedroom, but might need to be a higher level of 75dB(A) at the bedhead of each bedroom. In practice, this higher level will be achieved in Grade D systems from the smoke alarms in bedrooms, as they acts as both a fire detector and sounder. In the case of Grade A systems, fire alarm sounders (which may be incorporated in the base of each detector) should be installed in each bedroom.

348. In areas other than bedrooms, the sound pressure level of the fire alarm system can be lower than in commercial premises. A sound pressure level of 55dB(A) will be sufficient. Care should be taken to ensure that the sound pressure level, frequency and other characteristics do not cause a serious adverse reaction from residents who are sensitive to alarm signals as the result of mental health problems. In such cases, alternative forms of warning, such as visual alarm devices or voice sounders, might need to be considered. More information on systems designed to meet the needs of the person can be found in Part 1 (Person Centred Approach).

349. In continuously staffed supported housing with a simultaneous evacuation strategy, it is not normally necessary for alarm signals to be transmitted to an alarm receiving centre. Where there is no 24-hour staff presence, or there is uncertainty that staff will summon the SFRS immediately, remote monitoring of fire alarm signals by an alarm receiving centre is recommended. Where this is the case, there should be arrangements to minimise false alarms and to avoid summoning the SFRS.

350. Manual call points will not normally be necessary. Their provision should be only be considered as part of a Grade A system if a verbal warning of fire, shouted by occupants, is unlikely to be heard throughout the premises.

351. If supported housing takes the form of small flats or bedsits in which smoke detectors might result in false alarms (for example, as a result of smoking or cooking), a "mixed system", as defined in *BS 5939-6* may be acceptable. Residents must be able to respond appropriately to an alarm in their own accommodation. Warning is given by a Grade D system, comprising mains-powered, interlinked detection. A Grade A system is provided in the common parts, with smoke detectors in all circulation areas and rooms, other than toilets, shower rooms and bathrooms. Sounders and heat detectors forming part of the Grade A system are installed in each resident's accommodation. Heat detectors rarely cause false alarms, and are much slower to operate than smoke detectors, but will give a warning to other residents in the event of a significant fire.

Sheltered/Extra Care Housing and other private dwellings

352. The extent of automatic fire detection in each flat (or house) should comply with the recommendations of *BS 5839-6* for a Grade D Category LD1 system (see paragraph 343 above for details).

353. All alarms should be ceiling mounted and interlinked. Smoke detector(s) in each flat should not give any other warning beyond the flat, but should be monitored by an on-site scheme manager (if present) and by an alarm receiving centre at all times when a scheme manager is not present. This is to ensure the SFRS are summoned without delay. This is important in any premises with a "stay put" strategy to ensure that a fire is extinguished quickly or to instigate an evacuation beyond the flat of origin if the fire proves difficult to bring under control. Evacuation may take longer than in a general needs block of flats and residents may be particularly vulnerable to smoke within escape routes. The likelihood of successful rescue is increased if the fire service are quickly on the scene.

354. Monitoring by a Telecare system, whereby two-way speech can be established between the alarm receiving centre (ARC) and each flat, is preferred, so that false alarms can be filtered.

355. Certain engineering safeguards are necessary to ensure reliable alarm transmission by a social ("Telecare") alarm system. In particular, it is necessary to ensure that a signal is transmitted, regardless of which smoke or heat detector operates. Fire signals need to be readily distinguishable from other social alarm signals. In addition, receipt of fire alarm signals should not be significantly delayed due to an earlier social alarm signal. At the very least, the display at the ARC should clearly indicate a waiting fire alarm signal, without the need to

interrupt speech communication initiated in response to a signal from a social alarm device. Information on systems designed to meet the needs of the person can be found in Part 1.

356. In schemes with communal facilities, there should be a communal fire alarm system compliant with *BS 5839-6*, but this should not give an evacuation signal within the flats (ideally, the sound pressure level within the flats should not exceed 45dB(A)). Manual call points should also be provided within the common areas. This too should be monitored by an alarm receiving centre.

357. No communal system is necessary in simple sheltered housing that, architecturally, is similar to a general needs block of flats with no communal facilities; fire detection can be limited to the remotely monitored smoke and heat alarms in each flat. However, smoke detection (but not manual call points) might be necessary to operate automatically opening vents. In this case, the smoke detection should generally be installed in accordance with the recommendations of *BS 5839-1*, except that no sounders should be provided.

358. No detection need be installed in roof voids, provided the separation within roof voids satisfies the recommendations of this Guidance and there are no significant fire hazards (for example, boilers and photovoltaic systems). Where hazards are present, the type of detection and its fire warning strategy will depend on the location of the hazards. If the hazards exist in the void above a flat, the detection may comprise smoke alarms linked only to the smoke alarms in the flat. If the fire hazards exist within a void over common parts, the fire detection should give a warning in the common parts.

359. As a further enhancement, heat detectors connected to a communal system could be installed within the hallway of each flat, to provide confirmation of a fire within a flat. However, this does not obviate the need for remote monitoring of each flat's LD1 system, as heat detectors would not summon the SFRS early enough. In these circumstances, if a heat detector operates, it might be appropriate to evacuate adjacent (or all) common parts. Where staff are present on a 24-hour basis, it may also be appropriate to evacuate flats in the immediate vicinity.

360. Fire alarm signals from a communal system in sheltered housing may be transmitted to the same ARC which receives fire alarm signals from individual flats. This is because filtering of false alarms by two-way speech communication is not normally possible for fire alarm signals within common parts or communal facilities.

Automatic Fire Suppression Systems

361. Automatic fire suppression systems installed in domestic premises are primarily designed for life safety purposes. They can provide vulnerable occupants with additional time to escape following the outbreak of fire. There is also the added benefit that the damage and disruption caused by fire is greatly reduced.

362. Generally, systems react to heat and so the greatest protection is afforded to those occupants outwith the room of fire origin. They may provide some benefit to occupants in the room of fire origin where for example the fire growth is fast and the temperatures allow the sprinkler system (normally 1 or 2 heads) to open early

in the development phase of the fire. The spray pattern delivered from the sprinkler heads should control fire spread. Whilst the effect of sprinkler spray will increase the smoke volume and could obscure exits, smoke temperatures and toxicity will be greatly reduced. In some cases, the fire might be extinguished if the fire is not shielded from the sprinkler spray.

363. Automatic fire suppression systems includes sprinkler systems but can include other systems which may be just as effective. The key characteristics are:

- it must be automatic and not require people to initiate its activation
- it must be designed primarily to protect lives, rather than property, which means it should be fitted with faster responding discharge heads, and
- it must be a fire suppression system, one designed specifically to deal with fires rather than other hazards

364. The retrofitting of sprinkler or watermist systems might also be used as a compensatory measure for fire safety measures that are so far removed from current standards as to present serious risk to residents. For existing high risk supported housing, retrofitting of such systems is likely to be necessary if residents need the assistance of staff to evacuate the premises and sufficient staff are not available at all times to do so.

365. Sprinkler systems should be designed and installed in accordance with *BS 9251*, but may, alternatively, be installed in accordance with *BS EN 12845*. For sheltered housing, extra care housing, small domestic care homes and for supported housing in which residents cannot evacuate without the assistance of staff, systems installed in accordance with *BS 9251* should satisfy the recommendations of that standard for a Category 2 system. In other supported housing, a Category 1 system will normally suffice. Watermist systems should be designed, installed and commissioned in accordance with *BS 8458*.

366. Concealed or recessed pattern sprinkler heads can be rendered ineffective or operate less efficiently due to decorative ceiling finishes. Therefore, consideration should be given to labelling of the heads with words 'DO NOT PAINT'.

367. Designers should liaise with Scottish Water to determine what supply is likely to be available and what pressure can be expected. Pressures can be variable and may change in the future. It is imperative that the system is designed on the basis of what the minimum pressure and flow is likely to be. If there is any doubt, a tank and pump arrangement should be used.

368. Water supplies should use a direct connection to a town main, where possible. However, where the pressure is insufficient and to achieve the higher pressures required for watermist nozzles, there may be a need for a dedicated booster pump.

369. If a pump is required, it should be duplicated so that if the duty pump fails, a standby pump automatically takes over. Duplication is not necessary for personal protection watermist systems. There should be a suitable standby power supply for the pumps, comprising secondary batteries of sufficient duration to operate the system for the minimum duration over which the system is required to operate. Further guidance on performance, reliability and resilience for sprinkler and watermist systems installed in the homes of vulnerable people can be found in Annex B of *BS 9251* and Annex B of *BS 8458* respectively.

370. In sheltered and extra care housing, it may not be necessary for a suppression system to protect common corridors or staircases, unless it is anticipated that these areas will not be kept clear of combustible materials.

Portable Fire Extinguishing Equipment

371. Fire extinguishers do not need to be provided in the common areas of sheltered or extra care housing, but should be provided in plant rooms and staffed areas such as laundries, common lounges, kitchens, hairdressers, staff rooms. They should only be used by trained staff; it is not appropriate for residents to use fire-fighting equipment. Their provision in the common areas might encourage residents to return to their flat to fight a fire.

372. In the majority of supported housing and small domestic care homes, portable fire extinguishers and fire blankets should be provided only for use by trained staff.

373. Extinguishers should be installed in accordance with *BS 5306-8.* In single storey supported housing with no more than four bedrooms, fire extinguishing appliances may be limited to a single fire extinguisher with a 13A rating and a fire blanket within the kitchen. Where hose reels are provided, it is recommended that they be removed.

Facilities and Assistance for Firefighters

374. Fire-fighting facilities for the SFRS may have been required under Building Regulations in larger, more complex premises. Vehicle access for fire appliances should be maintained and in sheltered and extra care blocks, smoke control systems may be provided. In larger schemes, there may be fire mains, fire-fighting shafts and fire-fighting lifts.

375. There is not normally a requirement to provide or upgrade fire-fighting facilities in existing premises, although occasionally it may be appropriate in older premises as part of any planned major refurbishment programme. Where facilities are provided, they must be maintained in efficient working order (see Part 3).

External Fire Spread

376. The external facades of buildings should not provide potential for extensive fire spread. Particular attention should be given to any rain-screen or other external cladding system that has been applied to facades that have been replaced and to balcony infills.

377. The use of combustible cladding materials and extensive cavities can present a risk, particularly in taller or complex blocks. Restrictions are normally applied to the nature of such materials and in particular their fire propagation and surface spread of flame characteristics. Cavity barriers are also required.

378. Assistance from specialists may be required to determine if the construction and materials used are satisfactory and whether there is adequate provision of cavity barriers.

Part 3 Ongoing Management Control

Chapter 6: Ongoing Management Control

Key Points

Arrangements for managing fire safety should include:

- Developing a fire policy and appointing someone in the organisation to take overall responsibility for fire safety
- Providing staff training (where applicable) and generic fire safety awareness training to other agencies involved in the provision of housing or care services
- Preparing fire procedures and making everyone aware of them
- Managing the risk from building works, including adopting a 'hot work' permit system
- Putting in place programmes for routine inspection, testing, servicing and maintenance of fire safety measures and systems
- Monitoring the internal common areas and external areas through formal inspections, and as part of day-to-day activities by staff
- Liaising with the SFRS and encouraging residents to take up the offer of home fire safety / safe and well visits

Introduction

379. Whatever physical fire safety measures are provided, their effectiveness will only be as good as their management and maintenance.

380. In specialised housing, responsibilities may be dispersed across several different organisations, all of which need to co-operate with each other to co-ordinate the measures. Where fire safety law applies, this is a legal requirement.

Responsibilities for Fire Safety in the Building

381. Those responsible for ensuring adequate fire safety and managing this on an ongoing basis can include owners, registered social landlords, private sector landlords, managing agents, commissioners of care services (for example, local authorities) and care providers.

382. In sheltered and extra care housing, landlords and others responsible for fire safety may have limited rights of access and control over the activities of tenants within their flat, and even less over owner occupiers. This is not likely to be the case in supported housing or small, domestic care homes.

383. All organisations should formalise the roles and responsibilities of those contributing to the management of fire safety. This should form part of a fire safety policy which should be documented. Someone should have overall control and authority to ensure that activities are coordinated. In some specialised housing, there will not necessarily be anyone on site to manage fire safety on a day-by-day basis. Nevertheless, it is important that a named person takes overall responsibility, so that no key aspects of fire safety management are overlooked.

384. The more agencies that are involved, the more complex the situation becomes and there is a real risk of significant matters being overlooked (for example, because every party assumes that some aspect of fire safety management is the responsibility of another). To avoid this, there should be a formal agreement, documented in the form of a matrix, which clearly identifies the agreed responsibility for every key aspect of fire safety management. The allocation of responsibilities will vary according to contracts and agreements. A template is provided in Appendix 6.

385. When a fire safety risk assessment is carried out, the fire risk assessor should take account of this matrix and verify that the agreed arrangements are still in place and working effectively.

386. On-site staff will have a role to perform in the event of fire. They may also take responsibility for routine housekeeping matters and, in some cases, routine checking and testing of fire protection measures (such as checking that fire extinguishers are present, checking that fire doors operate effectively and weekly testing of the fire alarm system).

387. Residents' understanding of fire prevention, the evacuation strategy and fire procedures is equally important. This requires regular and ongoing engagement (see Part 1).

Instruction, Training and Information for Staff

388. Anyone regularly working in specialised housing must be provided with instruction, training and information relating to the fire procedures and measures provided.

389. For most employees, all that is required is basic fire awareness training. This will ensure that they:

- are aware of fire hazards that might occur - in supported housing, where there is a right of access to residents' accommodation, consideration of fire hazards extends to hazards within the residents' accommodation
- know how to prevent fires
- recognise the importance of good housekeeping
- know when and how to use any fire extinguishers
- understand what to do if they discover a fire
- know how to escape from the premises if they encounter a fire
- are aware of how their actions might adversely affect the fire safety measures present in the building, for example, wedging open fire doors
- are able to identify and report obvious deficiencies in fire safety measures

390. Employees need to receive instruction as soon as they start work for the organisation and again at appropriate intervals to ensure they remain vigilant and prepared.

391. More extensive training will be required for staff with a specific role to play in responding to alarm signals. It is important that they are fully conversant with the emergency plan, understand the evacuation strategy and can interpret and, where appropriate, operate the fire alarm panel.

392. Additional training may also be required for staff who undertake fire safety inspections. Risk assessors and reviewers will need appropriate training to ensure competence.

Fire Drills

393. It is neither practical nor necessary to carry out drills in most sheltered and extra care housing. However, discussing a pre-planned scenario with residents can be a good way to check they understand the actions to be taken in the event of a fire.

394. In larger schemes with extensive communal amenities, such as hairdressers, cafeterias and shops, fire drills may be necessary. However, these will still only apply to people present in the common areas. Residents in flats would not be expected to take part.

395. In supported housing, fire drills can be useful and should be considered in the fire safety risk assessment. They can identify any evacuation difficulties and give an indication of the likely evacuation time.

Emergency Plan

396. There should be a suitable emergency plan for the premises. This is also known as the fire procedure or emergency fire action plan.

397. In supported housing, the emergency plan will be a simple fire evacuation procedure. Where residents in supported housing need assistance with evacuation, there should be a personal emergency evacuation plan ('PEEP') created for each resident. The minimum number of staff that must be available in the event of fire should be determined. Interim measures will need to be put in place whenever there is a staffing shortfall.

398. In sheltered and extra care housing, emergency plans will need to be more detailed. The role of scheme managers, carers and others in responding to fire alarm activations needs to be clearly defined. Particular consideration should be given to the risks of entering a flat where there might be a fire. This does not imply that, in sheltered and extra care housing, staff are always present to respond to alarm signals or assist residents.

399. A resident's support needs are usually assessed when they take up occupation, and this should include their ability to escape unaided in a fire. As with other aspects related to their welfare, this should be kept under review (see Part 1).

400. In sheltered and extra care schemes, there may ultimately be reliance on SFRS to rescue any residents that cannot escape by themselves. While detailed PEEPs need not be prepared for every resident, information should be collated of any particularly vulnerable residents.

401. This information should be made available to the SFRS on arrival by keeping it in a 'premises information box' at the main entrance. This should be accessible to SFRS or unlocked remotely by a Telecare ARC. Details of residents using medical gases should also be included. A plan should be provided next to the fire alarm control panel, showing the locations of residents who need assistance to evacuate (for example, by using red stick-on dots). Such information must be kept up to date.

402. In larger schemes, plans detailing the layout of the building and its services should be included in the "premises information box" for the SFRS.

403. Fire action notices are not normally necessary in supported housing, but should be provided in sheltered and extra care housing (see Appendix 2). Notices should be relevant to the specific building. It is good practice to place them where they will be viewed routinely by people entering the building, such as by the main entrance or inside a lift.

404. In most specialised housing, there will be a communal fire alarm system. The fire action notice should reflect this and clearly state the action to be taken on hearing the alarm.

405. Contact details should be available by the fire alarm panel so that residents can arrange for the system to be silenced and reset as quickly as possible in the event of a false alarm. A prolonged delay could result in residents attempting to silence or re-set the system themselves.

Controlling Building Work and Alterations

406. There is potential during building works to start fires, create new hazards or impair existing fire safety measures.

407. Strict obligations should be placed on those undertaking works to implement appropriate fire precautions. Incorporating conditions within contracts is one way of achieving this, but this should also be reinforced by scrutiny of method statements and inspections during the course of the works. This is often applied rigorously to major projects, but less so in the case of smaller scale works.

408. 'Hot work' is of particular concern. It is vital that control is exercised over such works by adopting a 'permit to work' system. This places obligations on those carrying out the work to inspect the areas in which work is taking place, both before and after the work, and to take all necessary precautions, including provision of accessible fire extinguishers.

409. Contractors should be made aware of lines of fire separation and other fire resisting enclosures in the building, so that any breaches to walls or floors (for example, for pipes or ducts) can be appropriately fire stopped. Following the work, checks should be made to ensure that the original fire resistance is restored.

410. Processes should be in place to scrutinise alterations and building work within common areas that could have an effect on fire safety in the block. Building Regulation approval should be obtained where relevant.

411. Examples of new hazards or impairments to existing fire safety measures that can arise from building works include:

- making holes in separating walls and floors
- removing stairway doors to allow free access for delivering materials
- parking over fire hydrants
- placing site huts/waste skips too close to the building
- leaving gas cylinders inside the building overnight to avoid having to store them properly away from the building
- blocking access to a fire main inlet
- opening up parts of the structure without providing suitable fire-resisting hoarding to separate work areas from occupied areas
- blocking exit routes

- leaving combustible building materials and waste in common parts
- wedging of fire doors
- disablement of fire detection / covering of detectors

412. Further advice on fire safety during construction work is available from the HSE and the Fire Protection Association.

413. Tenancy agreements should also restrict the works that tenants can undertake without first seeking permission. Examples of alterations which could be detrimental to fire safety include:

- a resident changing their flat entrance door to one that is not fire-resisting and self-closing
- a resident installing a new bathroom suite, but not ensuring that breaches of riser walls created for new drains are fire-stopped afterwards to maintain fire separation to the common riser
- a resident removing the doors and walls to the kitchen and lounge to create an open plan living area, but in so doing making all the bedrooms inner rooms, and possibly impairing protection to the common parts
- a utility company installing new gas supplies to flats and creating the necessary ventilation to gas meters by unprotected openings into common corridors and stairways
- a landlord adding a pitched roof to a flat roofed block without providing suitable cavity barriers
- residents fitting non-condensing tumble dryers with holes through fire walls and doors for vent pipes
- a landlord replacing smoke vent windows with sealed units
- a contractor installing a new false ceiling without transfer grilles to allow smoke to reach existing permanent vents
- fitting rain screen cladding to an existing block of sheltered or extra care housing without considering the potential for a fire from a flat to travel upwards through the cavity behind the cladding to spread into the flats above
- the installation of downlighters in ceilings – which are not of a closed back 'fire-rated' design and which have not been fitted with intumescent fire hoods or covered by an insulation support box – therefore diminishing the fire resistance of the ceiling
- a resident undertaking DIY to fit additional socket outlets and, in so doing, damaging the protection to the timber frame construction

Inspection, Testing and Maintenance of Fire Safety Systems and Equipment

414. Fire safety systems and equipment need to be maintained in effective working order. There must be arrangements for routine inspection, testing, servicing and maintenance.

415. Some of the inspection and testing may be carried out by competent in-house staff. Other work should be carried out by competent contractors. Various third party certification and approval schemes are available that provide confidence that listed companies have been assessed in relation to their capability against a recognised standard.

416. Where systems are tested by in-house staff or other non-specialists, there should be access to a suitable contractor through a call-out arrangement in case deficiencies identified through the testing need to be repaired.

417. The following information details basic requirements for routine attention in relation to fire safety systems.

Emergency escape lighting

418. Unless the emergency lighting is of the self-testing type, test each fitting periodically. In most cases, the testing comprises:

- a monthly functional test using a suitable test facility to check that the fitting has not failed. This is a simple test that can easily be undertaken in-house.
- A full duration discharge test once a year to confirm that the batteries are still capable of supplying the fitting for its duration. (Care should be taken not to leave a building entirely without escape lighting while batteries recharge after a test).

419. Further guidance on testing and servicing emergency escape lighting systems can be found in *BS 5266-8.*

Smoke ventilation

420. AOVs and electrically operated OVs should be tested once a month for correct operation using the manual controls provided. This is a simple test that can be undertaken by non-specialists.

421. Testing smoke detectors and controls associated with AOVs should take place at least once a year, and in accordance with the manufacturer's instructions.

422. Other systems of smoke control, including smoke extract systems and pressurisation systems, should be tested and serviced periodically in accordance with the manufacturer's instructions. This will normally be at least annually, but may involve monthly or more frequent functional tests where the systems are intended to protect the means of escape. It is important that those servicing such systems are familiar with the performance parameters used in the design of the system.

423. Further guidance on testing and servicing of smoke control systems can be found in *BS 9999*.

Fire extinguishing appliances

424. Where fire extinguishers and fire blankets are provided, they should be inspected and maintained every 12 months. This is a task for suitably trained specialists. However, there is a role for others, such as staff in the premises, to be alert to any missing or damaged equipment as part of normal walk-rounds or formal fire safety inspections and to report this for action. A simple visual check of fire extinguishers should be carried monthly.

425. Further guidance on inspection and maintenance of fire extinguishing appliances can be found in *BS 5306-3*.

Fire detection and alarm systems

426. Where the system is connected to an alarm receiving centre (ARC), the ARC should be warned before carrying out the test, then confirmation requested after the test that the signal was received correctly.

427. A simple functional test should be undertaken, by operating a different manual call point each week. This can readily be carried out by non-specialists, such as scheme managers, housing officers, care workers and in-house maintenance teams. Where the system is interfaced with other hardware devices, such as swing-free arms or electromagnetic door holders, their operation should also be checked.

428. Where remote monitoring is in place, transmission from a resident's flat should also be tested. A different flat should be tested each week so that, over a period of time, all residents' systems are tested.

429. Periodic servicing should be undertaken at least once every six months. Further guidance on testing and servicing of fire alarm systems can be found in *BS 5839-1.*

Smoke and heat alarms

430. Smoke and heat alarms should be tested at least every month (preferably each week), using the test button on these devices or, where provided, a remote test switch. Many residents will be able to carry out this test themselves.

431. Those engaging with residents in sheltered or extra care housing can easily check for signs that a tenant has interfered with a smoke alarm or otherwise disabled it. Damage to the device and evidence of battery removal is often visible. Testing of alarms could be a value-added service carried out by any contractor undertaking a routine visit for the purposes of carrying out a repair or, for example, during annual gas safety checks.

432. Further guidance on testing smoke alarms can be found in *BS 5839-6.*

Fire dampers

433. Fire dampers should be subject to inspection and test periodically to ensure that they are functioning. This should be undertaken at least once every two years for those operated by fusible links and every year for those that are spring operated. Guidance on testing of fire dampers can be found in *BS 9999.*

Automatic fire suppression systems

434. Domestic/residential sprinkler and watermist systems should be maintained annually. Further guidance on maintenance of sprinkler systems can be found in *BS 9251.* Further guidance on testing and servicing of watermist systems can be found in *BS 8458.* Sprinkler systems installed in accordance with *BS EN 12845* should be subject to a weekly test and quarterly maintenance in line with that standard.

Fire mains

435. Fire mains should be inspected every six months and tested every 12 months. Inspections involve checks to confirm that the outlets are not damaged and padlocks and straps on the landing valves are still in place. This could readily be carried out in-house. Testing involves pressurising the main, and will require a specialist contractor. Guidance on testing and maintenance of fire mains can be found in *BS 9990.*

Fire-fighting lifts

436. Lifts used for fire-fighting need to be subject to tests and maintenance on a regular basis. This will involve weekly operation of override switches, monthly inspections and annual testing and maintenance of the lifts. Guidance on testing and servicing of fire-fighting lifts can be found in *BS 9999.*

Fire-resisting doors

437. Fire-resisting doorsets (including flat entrance doors) should be inspected every six months to identify defects such as:

- missing or ineffective self-closing devices
- damaged or missing intumescent strips and smoke seals
- damaged doors or frames
- poorly fitting doors caused by distortion, shrinkage, or wear and tear
- newly fitted, inappropriate, door furniture
- doors that have been replaced using non-fire-resisting types

438. Staff can be trained to identify these defects and remedial action should be taken as soon as possible.

439. Further advice on routine inspection and maintenance of fire-resisting doors can be found in *BS 8214*.

Fire-resisting construction

440. Damage to walls or signs of unauthorised work are likely to be obvious in common corridors, lobbies and stairways. Fire safety checks should also include areas such as riser cupboards and plant rooms.

441. When flats become vacant or change tenancy, the condition of fire-resisting construction should also be inspected.

442. Where the fire strategy for the premises relies on fire separation within roof voids (for example, in sheltered and extra care housing), the integrity of separating walls should be checked annually. Although there should be a check during fire safety risk assessments, these will normally be carried out on a sampling basis. More comprehensive inspections may also need to be carried out. After any work that might affect separation in roof voids has been carried out, a check should be made to ensure that, for example, new penetrations in separating walls have been fire stopped.

External escape routes

443. The use of external stairways should be avoided as far as practicable, owing to the age and vulnerability of the residents who may need to use them. Where they are provided, such as for staff use, they should be subject to periodic inspection and maintenance. Fire safety inspections should include visual checks for:

- evidence of damage or corrosion
- build-up of moss or other slip hazards
- trip hazards or obstructions on the stairway

444. A structural integrity survey should be undertaken at least once every three years by a specialist.

Manually openable smoke vents

445. Windows and other non-electrical means provided for venting smoke should be operated at least once a year, to ensure they open freely.

Checking Fire Safety Standards

446. A formal inspection is one way of identifying fire safety shortcomings. However, many routine activities provide opportunities to monitor fire safety in the common areas. Ensuring that scheme managers, housing officers, repair teams, cleaners, care workers and any other staff or regular contractors are "fire safety aware" can make a big difference to the standard of fire safety.

447. The extent to which formal inspections need to be carried out will vary. It depends on how well standards are being maintained. Those undertaking inspections should also be alert to new hazards that might arise , for example, use of extension leads from flats to charge a mobility scooter brought in by a visitor. Inspection checklists should at least cover the following:

- monitor housekeeping in common areas and check for infringements of the policy on the use of the common areas
- doors to residents' store rooms, electrical cupboards, plant rooms, bin stores and other ancillary rooms are secure and not being left or held open
- front doors and other entrance and exit doors are closing properly
- where provided, fire extinguishing appliances are not missing, discharged or damaged
- there are no signs of damage to fire-resisting walls, doors and glazing
- smoke control vents have not been tampered with or obstructed
- fire exit signs (if fitted) or fire action notices are not missing or defaced
- fire detectors, call points and sounders are still in place and have not been damaged, covered over or interfered with
- fire main outlets are not damaged or obstructed
- permanently illuminated (maintained) emergency lights/signage are working normally

Records

448. In addition to fire safety risk assessment records, it is good practice to keep records of:

- the fire safety management arrangements in place (commonly referred to as the fire safety policy)
- staff training and drills (where appropriate)
- inspection, testing and maintenance of fire safety measures

449. Records can help demonstrate due diligence as part of a routine audit or scrutiny after a fire. Where fire safety law applies, Enforcement Officers from the SFRS will want to review records as part of their fire safety audit.

450. In larger schemes, it might be appropriate to prepare a fire safety manual as a record of the fire safety arrangements, particularly where different organisations are involved in the running of the building and provision of care. Guidance on the content of a fire safety manual can be found in *BS 9999*.

Upgrading Fire Safety Measures

451. When alterations and improvements are planned this can provide an opportunity to upgrade the fire safety measures. For example, when lift replacement becomes necessary, upgrading to evacuation lift standard, will significantly improve the ability to evacuate mobility impaired residents.

Liaising with the SFRS

452. The SFRS may visits premises to obtain information so that operational crews can become familiar with the features of the building, including access, availability of water for fire-fighting, and fire-fighting facilities such as fire-fighting lifts and fire mains.

453. Most supported housing is unlikely to receive such a visit. However, crews may visit sheltered and extra care schemes. Whether any particular scheme needs to be visited is a matter for SFRS.

454. SFRS may also carry out an enforcement visit to check on the obligations to maintain the property and facilities for firefighter use or safety.

455. Home safety visits are a key component of SFRS's community safety engagement work. Housing providers and agents should inform residents of this service or make a referral to SFRS if they have serious concerns regarding domestic fire safety.

Part 4 The Law and Fire Safety

Chapter 7: The Law and Fire Safety

Key Points

- Compliance with Building Regulations provides a base-line standard of fire safety for new buildings and extensions, alterations and conversions of existing buildings, reflecting the standards at the time of construction. Current Building Regulation guidance cannot be applied retrospectively to existing buildings

- Housing legislation makes additional requirements in respect of smoke and heat detection and the Scottish Social Housing Charter requires social landlords to deliver services that recognise and meet the needs of residents

- The Civic Government (Scotland) Act 1982 requires occupiers to keep common property free of dangerously combustible items and obstructions

- Part 3 of the Fire (Scotland) Act, which places fire safety obligations on dutyholders (such as undertaking a fire safety risk assessment and acting on its findings), does not generally apply to domestic premises. It does, however, apply to any premises which provides a "care home service" or which requires a licence to operate as a House in Multiple Occupation. It may also apply to some other forms of supported housing, for example where occupancy agreements are in place and the main purpose of the accommodation is the provision of care

Introduction

456. This part gives an overview of the legislation in place in relation to Building Regulations, Housing (Scotland) Acts, the Civic Government (Scotland) Act 1982 and the Fire (Scotland) Act 2005. It includes a consideration of the application of Part 3 of the Fire (Scotland) Act to premises which provide care services, as defined in The Public Services Reform (Scotland) Act 2010.

Building Regulations

457. Building Regulations apply to new building work, such as the erection of a new blocks of flats and houses, buildings being converted to dwellings and alterations or extensions to existing buildings. They impose requirements in respect of various fire safety measures, including means of escape, structural fire precautions, smoke control, automatic fire suppression and facilities for the SFRS.

458. It is important to understand the relevance of the Building Regulations to alterations. Inappropriate and unauthorised alterations can undermine the measures provided to ensure safety of occupants from fire.

459. Any proposal to carry out alterations – such as to means of escape, automatic suppression, smoke control arrangements, structural alterations or alterations to

facilities for the SFRS – should be submitted to Building Standards Verifiers to determine if approval is necessary (and, if so, to obtain approval of the proposals) under the Building Regulations.

460. Unapproved minor alterations and building works can often result in a contravention of the Building Regulations, which is an offence. The replacement of a self-closing, fire-resisting flat entrance door by a non-fire-resisting door or by a door that is not self-closing is a common contravention. This may place other residents at risk if a fire occurs in the flat in question.

461. There is no requirement under the Building Regulations to upgrade existing fire safety measures to current standards. However, existing non-compliance with the current Building Regulations must not be made any worse in the course of alterations or building works.

462. Powers exist under the Building (Scotland) Act 2003 to require unauthorised alterations to be rectified if the work breaches the Building Regulations.

463. Anyone in doubt about the application of Building Regulations should contact their local authority Building Standards department.

Housing (Scotland) Acts

464. The Housing (Scotland) Act 2006 requires that private rented housing must have satisfactory provision for detecting fires and for giving warning in the event of fire or suspected fire. The Housing (Scotland) Act 2006 also requires inspection and testing of electrical installations in private rented housing.

465. The Housing (Scotland) Act 2010 makes provision for a Scottish Social Housing Charter which sets out standards and outcomes that social landlords should aim to achieve when performing housing activities. The Charter includes a duty to ensure compliance with the Scottish Housing Quality Standard. The Standard includes requirements for electrical safety testing, fire detection and the provision of thumbturn locks to allow escape in event of fire. The Charter also includes outcomes in relation to responsibilities of social landlords to communicate effectively with tenants and to deliver services that recognise and meet individual needs. This should be achieved regardless of age, disability or other protected characteristic, in line with Equalities legislation. The Scottish Housing Regulator sets out its role, requirements and powers in its Regulatory Framework and associated guidance.

466. From 1 February 2021 an amendment to the statutory tolerable standard comes into force under section 86 of the Housing (Scotland) Act 1987, which requires that all houses, regardless of tenure, must have satisfactory provision for detecting fires and for giving warning in the event of fire or suspected fire. The standard requires:

- One smoke alarm installed in the room most frequently used for general daytime living purposes
- One smoke alarm in every circulation space on each storey, such as hallways and landings
- One heat alarm installed in every kitchen

467. All alarms should be ceiling mounted and interlinked. There is also a requirement for carbon monoxide detectors to be fitted where there is a carbon-

fuelled appliance (such as boilers, fires (including open fires), heaters and stoves) or a flue.

468. Reflecting the increased risk associated with those living in supported domestic accommodation, the benchmarks for fire detection and warning in Chapter 5 recommends a higher standard than that required in either Building Regulation or Housing legislation guidance.

The Civic Government (Scotland) Act 1982

469. Section 93 of this Act requires occupiers to keep common property free of combustible substances and anything which might obstruct egress from and access to the property in the event of fire.

470. This Act has been amended by the Fire (Scotland) Act 2005 (Consequential Modifications and Savings) Order 2006 and the Police and Fire Reform (Scotland) Act 2012. This was to ensure alignment with Part 3 of the Fire (Scotland) Act 2005 and to take account of the formation of the SFRS in 2013.

471. The SFRS has power to enter the common property to determine if the duty is being complied with, and if it is not and there is an immediate risk of fire likely to endanger life, to do anything necessary to remove that risk including seizing and retention of items. The SFRS can recover from occupiers the expense of removing items or substances from common property. The SFRS can issue notices requiring occupiers to remove or render safe items or substances in common property. Any person who fails to comply with a Notice from the SFRS is guilty of an offence.

Fire (Scotland) Act 2005 and Regulations

472. Fire safety obligations are imposed on dutyholders by Part 3 (Fire Safety) of the Fire (Scotland) Act 2005 ("the 2005 Act") and the Fire Safety (Scotland) Regulations 2006 (the Regulations).

473. Duties include undertaking a fire safety risk assessment and taking measures to ensure the safety of persons from fire on, or in the immediate vicinity of, the premises. A "competent person" must be appointed to assist in undertaking the necessary measures. Risk assessments must be reviewed regularly. Records must be kept of the significant findings of the risk assessment; the fire safety management arrangements (for the effective planning, organisation, control, monitoring and review of fire safety measures); and information regarding any relevant persons identified by the assessment as being especially at risk from fire, where:

- a dutyholder employs 5 or more employees, or
- a licence/registration under an enactment is required, or
- if required by an Alterations Notice issued by the SFRS

474. Additional duties include:

- nominating a sufficient number of competent persons to implement fire procedures in so far as they relate to the evacuation of relevant persons from relevant premises

- where necessary, nominating competent persons to implement measures for fighting fire

475. Whether these fire safety duties apply in respect of premises, or part of premises, depends on whether the premises, or part of the premises, are 'relevant premises' as defined in section 78 of the 2005 Act. The 2005 Act and Regulations apply mainly to non-domestic premises; "domestic premises" as defined, are not "relevant premises". Therefore, the legislation does not generally apply to individual dwellings, or to the common areas of blocks of flats.

476. However, one provision of the Regulations does apply to the common areas of domestic premises. This is the requirement to ensure that the common areas and any facilities, equipment and devices provided for the use by, or protection of, fire-fighters, are maintained in an efficient state. This provision is imposed on the persons who have control of the common areas (dutyholders). The SFRS may inspect premises to audit compliance with the specific provision. If the SFRS identifies a breach, it may notify the dutyholder(s) of steps to be taken to remedy the breach. If not resolved it may issue an enforcement notice. Any person who fails to comply with an enforcement notice from the SFRS is guilty of an offence. A person on whom an enforcement notice is served has the right of appeal to the Court for 21 days after service of the notice. Alternatively, if the dutyholder and the SFRS cannot agree on the measures necessary, either party may refer the matter for a determination by the Chief Inspector of the Fire Service Inspectorate.

477. The Act may, of course, apply to some parts of sheltered or extra care complexes which are not considered to be "domestic premises", such as offices, day care facilities for non-residents, commercial premises and dedicated guest overnight accommodation outwith individual dwellings.

478. Some premises, such as houses which fall within the scope of House in Multiple Occupation (HMO) licensing in the Housing (Scotland) Act 2006, which may normally be considered domestic in nature, are excluded from the definition of domestic premises in section 78 and are therefore deemed to be "relevant premises". Likewise, any premises in which a "care home service" is provided, will always be "relevant premises", regardless of whether it is purpose-built or is small and domestic in nature.

479. In most cases, application of the 2005 Act and Regulations will be a straightforward consideration, but in some cases the application may not be straightforward and may require interpretation and judgement. The remainder of the guidance in this Chapter is offered to provide clarity although it should be noted that it is not definitive and it therefore remains for each dutyholder and the SFRS to reach their own conclusions in the individual circumstances of each case.

COMMON AREAS OF PRIVATE DWELLINGS

480. The common areas of private dwellings, such as stairs and corridors, are specifically excluded from being relevant premises by section 78(4) of the 2005 Act.

481. For the purpose of the 2005 Act, premises can only be considered as a workplace where they already meet the description of relevant premises in section 78. This means that the definition of workplace does not extend to the

common areas of private dwellings since these parts are expressly not relevant premises by virtue of section 78. For example an office for a concierge in a block of flats may be relevant premises, but the common parts of the building are not relevant premises even though the concierge may, as part of his or her employment, use or carry out work in the common parts.

SHELTERED HOUSING FOR OLDER PEOPLE

482. Housing for older people falls into the following broad categories:

- Amenity or medium dependency housing. This is housing generally considered suitable for older people due to the physical characteristics of the house, but does not necessarily include any services.

- Sheltered housing. This is a generic term to describe housing with a warden service which combines older people's accommodation requirements and support needs into a single package. Usually built in a block or comprises a cluster of bungalows and often includes communal facilities, such as a lounge. Scheme residents can call upon a warden for support and the warden may also organise activities. Wardens tend to live off-site. Sheltered wheelchair housing is housing adapted to wheelchair standards for elderly people who use wheelchairs.

- Very sheltered housing (sometimes known as 'care housing' or 'extra care housing'). This is accommodation generally suitable for frailer people who might otherwise be in a care home. These schemes may have additional facilities such as special bathroom facilities, a greater level of care and support through extra wardens, full-time carers, domiciliary assistance, or the provision of meals. However there is no single model for this type and provision can vary.

483. There are three main categories of provider of sheltered housing for older people.

 Local Authority Providers

Most Scottish local authorities provide sheltered housing and several also provide very sheltered housing. Some have transferred their stock to housing associations.

 Housing Association Providers

A number of housing associations provide sheltered and/or very sheltered housing. These range from 'national' organisations such as Bield and Hanover (Scotland) who manage large numbers, to small organisations responsible for one or two schemes. Some of these organisations have a small proportion of shared ownership or shared equity accommodation.

 Private Sector Providers

There is private sector provided sheltered housing where the dwellings within the schemes are privately owned and buildings are managed by a private company. Dwellings can subsequently be sold on. Some private sector schemes include very sheltered housing. Almost all the schemes provided by the private sector comprise freehold properties.

484. In general, sheltered housing comprises private dwellings. These dwellings, and the common areas serving the dwellings such as the corridors, entrance lobby, stairs, common room/lounge, are therefore not relevant premises.

485. However some specific parts of some sheltered housing complexes may be relevant premises, examples are:

- offices used by persons other than the residents, such as a non-resident warden
- guest overnight rooms, outwith individual dwellings, which are kept available for the exclusive use of visitors
- rooms or facilities within a building which are regularly used for the day care of non-residents

486. Where, within a building, there are areas that are relevant premises, such as an office used by a warden, this does not mean that the common areas of the building such as corridors or a common room then become relevant premises simply because they may be accessed by employees.

487. In some very sheltered housing complexes, shared facilities are provided to the extent that this brings the premises within the scope of HMO licensing. Where HMO licensing applies to sheltered housing, the premises will then be relevant premises.

488. Where only part of a building is relevant premises, such as will be the case in many sheltered housing complexes, persons in other parts of the building may fall within the description of ‘relevant persons’ in section 79 of the 2005 Act, with the effect that dutyholders responsible for fire safety in the parts that are relevant premises, must take into account the safety of the other persons in the building from a fire starting in the relevant premises.

PROVISION OF A SUPPORT SERVICE

489. Support services are services designed to help a wide range of people, from those who need support with very complicated needs, to people who need time-limited support at different points in their lives.

490. The Public Services Reform (Scotland) Act 2010 (“the 2010 Act”) includes a care registration category of ‘support service’ and a separate category of ‘‘housing support service‘. A “care at home” service, delivered in a person’s own home, is an example of a “support service.” Sheltered Housing is an example of a “housing support service”.

491. Registration of these services under the 2010 Act applies to the service provider rather than to the premises where support is delivered. There are no references to these services in the 2005 Act.

Care at home

492. ‘Care at home’ (also known as ‘home care’ or ‘home support‘) is care and support provided in a person’s own home to enable that person to function as independently as possible and/or continue to live in their own home.

493. Home care services may be provided to older people, children and young people and their families and carers; adults with learning disability or mental health problems; people with physical disabilities; people with alcohol and drug problems, and other vulnerable groups. The time, length and areas covered will be different for different individuals. Care at home can include:

- routine household tasks within or outside the home (basic housework, shopping, laundry, paying bills)
- personal care" as defined in schedule 1 of the community care and health (Scotland) act 2002
- respite care in support of the person’s regular carer(s)
- overnight, live-in and 24 hour services

494. Care at home may be provided by local authorities or private or voluntary sector agencies. Primary healthcare teams may also be involved in intensive home care schemes.

495. There are a significant number of dwellings where treatment and care is provided by NHS Scotland bodies for patients in their own homes.

496. Since care at home is delivered in a person’s own home it follows that these will generally be private dwellings and will therefore not be relevant premises. Where a person living in their own private dwelling receives care or support to allow that person to continue to occupy their home, their home is deemed to be domestic premises; a change in mobility and dependency of the person, or the provision of a carer, will not alter this.

497. Private dwellings, within the meaning of section 78 of the 2005 Act, are not relevant premises. Obligations in respect of the fire safety of employees involved in domiciliary care may sit within the scope of the Health and Safety at Work Etc. Act 1974. Guidance is available on the HSE website at www.hse.gov.uk/healthservices/domiciliary-care.htm

Housing support service

498. Housing support covers a range of activities that allow people to maintain their accommodation, meet their duties and responsibilities as a tenant and to live independently in the community. Housing support services can range from around one hour a week to 24-hour residential support.

499. A wide range of people with particular needs can receive housing support services - the largest group is older people living in sheltered housing. Other groups include homeless people, refugees, women escaping domestic violence, people with a chronic illness, people with a physical impairment or learning disability, ex-offenders and people with drug and alcohol related problems. They may use these services when their accommodation is temporary (for example, in a crisis) or when they are being re-housed.

500. Housing support services may be provided or commissioned by a landlord as

part of a tenancy agreement where the provision of accommodation is part of the support.

501. Housing support may be provided in all types of accommodation and tenure such as to people living in ordinary houses, sheltered housing, hostels for the homeless, accommodation for the learning disabled, women's refuges and group homes where people share accommodation supported by residential or visiting housing support workers.

502. Premises where persons are in receipt of housing support may or may not be relevant premises. The existence of housing support in itself is not an indication that premises are relevant premises, there needs to be an individual consideration of each premises.

503. The tenure of the premises - whether the residents are tenants or occupiers - is a strong indication as to whether they are private dwellings or not.

504. A tenancy agreement is an indication that the person rents the house or flat exclusively (or with another person), and that the premises are a private dwelling and not then relevant premises.

505. An occupancy agreement is an indication that the person rents a room in a group home where some rooms are shared with other people, or the main purpose of the stay is to receive support, for example in a rehabilitation centre or a hostel. These premises are likely to be relevant premises. Any premises with shared facilities to the extent that this brings the premises within the scope of HMO licensing, will of course be relevant premises.

CARE HOMES

506. The term care home is sometimes used generically to describe a wide range of premises where care is provided. For the purposes of fire safety legislation, care homes are only relevant premises where there is the provision of a care home service as defined in paragraph 2 of schedule 12 to the 2010 Act.

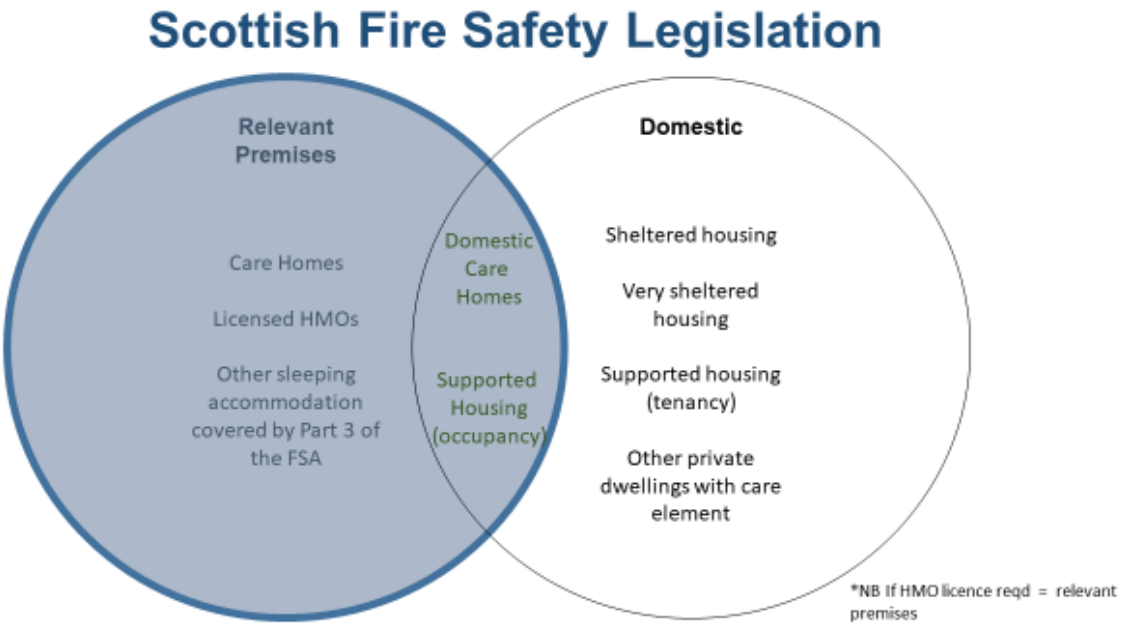
507. Section 78(5)(b) of the 2005 Act specifies that such premises are not to be regarded as domestic premises. This means that a care home, which matches the description, is always relevant premises. Wider definitions of care home must not be used in the interpretation of the legislation.

ADULT PLACEMENT SERVICE

508. Adult placement is a registered care service which is defined in schedule 12 to the 2010 Act. An adult placement service arranges the provision of accommodation and support for vulnerable adults by placing them in the homes of families or individuals where they will be part of the household, and where there is support and care. Generally, premises used for adult placement are private dwellings and are, therefore, not relevant premises.

509. However, there is no exclusion from HMO licensing, so in those cases where the number of persons living in the premises exceeds the HMO licensing threshold, the premises may be a licensable HMO and then would be relevant premises.

510. A summary of the application of fire safety law to the premises covered by this Guidance (shown within the “domestic circle”) is given in Figure 16 below:



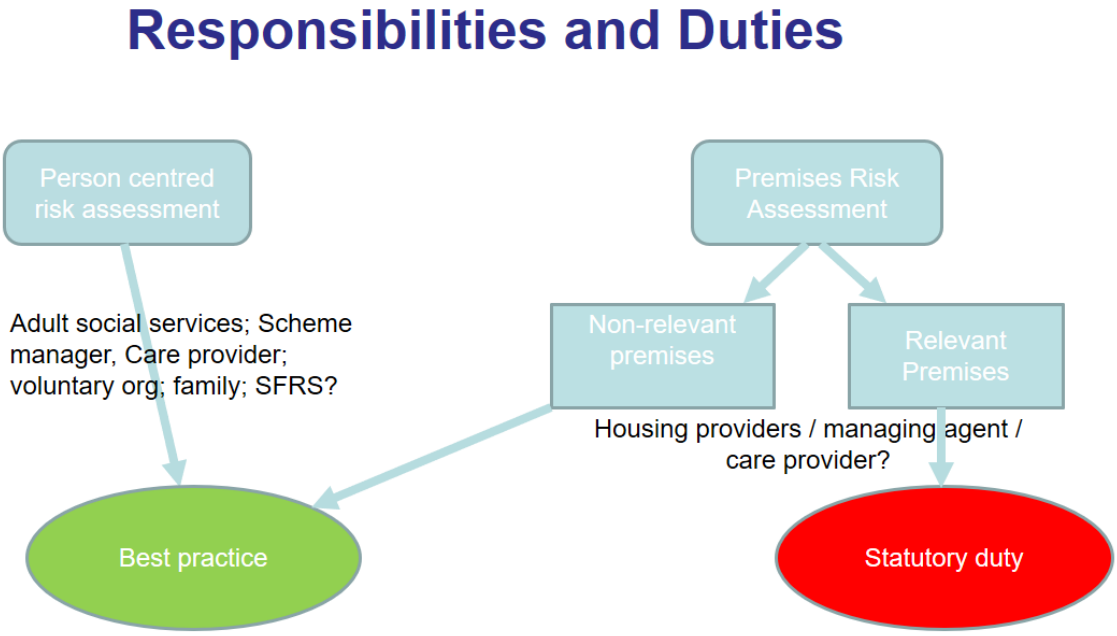


Figure 16: Application of Fire Safety Law

Appendices

Appendix 1: Example of Fire Safety Advice for Residents

Smoke and heat alarms save lives. These alarms can provide an early warning of a fire and allow you to make your escape – but only if they are working. You are more likely to die in a fire if you do not have working smoke and heat alarms. For the best protection, smoke alarms should be provided in every room, including bedrooms and the lounge, and a heat alarm in your kitchen. Speak to your housing provider if you do not have adequate provision.

You can prevent fire from happening by taking a few simple steps:

- Don't leave cooking unattended, and avoid leaving children in the kitchen alone with cooking on the hob
- Be vigilant when cooking with oil - don't overfill chip pans and never throw water on a chip pan fire
- Take extra care when drinking alcohol -don't cook, and if you feel sleepy don't smoke in your chair, go outside
- Make sure cigarettes are put out properly - use an ashtray - don't smoke in bed
- Don't overload electrical sockets
- Turn off appliances when not in use - don't leave them on standby
- Keep matches and lighters out of reach and sight of children
- Avoid the use of candles - if you must use them, make sure candles are secured in a holder and away from materials that may catch fire, like curtains - children must never be left alone with lit candles
- Take care if you use portable heaters. Don't dry clothes over them or otherwise obstruct them
- If you use an electric blanket, make sure it is in good condition. Only use blankets that bear the BEAB certification mark. Do not use blankets that are more than 10 years old or that show signs of wear. Arrange for the blanket to be checked by a specialist every three years or as recommended by the manufacturer
- If you have a mobility scooter, follow the guidance from your housing provider as to where it can be stored and charged. If you need to keep it in your own accommodation, make sure you don't leave it where it will stop you getting out quickly in an emergency
- If you require oxygen therapy, follow the guidance you are given on using this safely. Never smoke when using oxygen

Keep safe and plan your escape

Your flat is in a building designed to be fire-resisting; the flat entry door has fire-resistance and is fitted with a self-closing device. It is important that the self-closer works correctly to make sure a fire should not spread from one flat to another.

You need not leave your home if there is a fire elsewhere in the block. Though, if in doubt, get out. Always leave your flat if it is affected by smoke or heat or if told to by

the Fire Service. Follow the instructions on the fire action notices. Take time to read them, so that you know what to do if there is a fire or the fire alarm sounds.

If you discover a fire or hear the smoke alarms operating in your flat, alert anyone else in the flat and get out at once and leave the building.

If you are in the common parts and you hear the fire alarm sounding, leave the building. Do not return to your flat. If the building is fitted with a fire alarm system, operate a fire alarm call point on your way out.

Your stairway is designed to be safe for escape throughout the course of a fire. Always use the stairway to descend to ground level if escaping.

Your housing provider may have specific instructions including where to wait outside (it may be possible to wait inside, for example, in a communal lounge, but this will be dependent on the circumstances in your building – check the instructions from your housing provider).

Always call the fire service if there is a fire.
Do not return to your flat until it is safe to do so.

Key things to remember:

- Test your smoke alarms regularly (at least once a month, preferably once a week)
- Keep the exit from your accommodation clear so you can escape in an emergency
- Close doors at night, especially the doors to the lounge and kitchen
- Plan your escape now. Be prepared and don't wait until it happens
- Carry out a safety check at the end of the day to reduce the risk of night-time fires, such as closing internal doors, checking cookers and electrical appliances are switched off and cigarettes are extinguished
- If your clothes catch fire 'stop, drop and roll'

Assist your housing/care provider in keeping you and others safe from fire:

Follow the advice of your housing/care provider in preventing fires in your accommodation and elsewhere in the building and in avoiding false alarms from smoke alarms that disrupt you and others. In particular;

- Do not interfere with the fire alarm system
- Never leave your belongings or rubbish in common corridors, the lift lobby or the stairways. This could affect you and your neighbours if there was a fire.
- Provide information when requested so that the SFRS can be advised of those with mobility issues/using oxygen
- Do not wedge open fire doors. If you see a fire door that is not closing or is damaged, let your housing provider know
- Follow restrictions that may apply to what you can store and use in your accommodation

Appendix 2: Example of Fire Action Notices

Example of notice for use in sheltered / extra care housing with a 'stay put' strategy

Fire Action

If Fire Breaks Out In Your Home:

- Leave the room where the fire is straight away, then close the door
- Tell everyone in your home and get them to leave - close the front door of your flat behind you
- Call the Fire Service
- Do not use the lift (unless it is a confirmed, fire-protected, evacuation lift)
- Wait outside, away from the building

If You See Or Hear Of A Fire In Another Part Of The Building:

- The building is designed to contain a fire in the flat where it starts - this means it will usually be safe for you to stay in your own flat if the fire is elsewhere
- You must leave immediately if smoke or heat affects your home, or if you are told to by the Fire Service
- If you are in any doubt, get out

To Call The Fire Service:

- Dial 999 or 112
- When the operator answers, ask for FIRE
- When the Fire Service replies give the address, if available provide the floor and flat position of where the fire is
- Do not end the call until the Fire Service has repeated the address correctly

Example of notice for use in specialised housing with a communal fire alarm system and a simultaneous evacuation strategy

FIRE ACTION

IF FIRE BREAKS OUT IN YOUR ACCOMMODATION:

- Leave the room where the fire is straight away, then close the door
- Do not stay behind to put the fire out
- Raise the alarm by using a 'break glass' call point
- Call the SFRS
- Wait outside, away from the building at the assembly point*

* It may be appropriate to specify the location if not immediately obvious.

IF YOU SEE OR HEAR OF A FIRE IN ANOTHER PART OF THE BUILDING:

- If you discover a fire elsewhere in the building, raise the alarm by using a 'break glass' call point and leave by the nearest fire exit
- Call the SFRS
- Wait outside, away from the building at the assembly point
- You must also leave immediately if you hear the alarm

TO CALL THE SFRS:

- Dial 999 or 112
- When the operator answers, give your telephone number and ask for FIRE
- When the SFRS reply, give the address where the fire is
- Do not end the call until the SFRS has repeated the address correctly

Appendix 3: Person-Centred Fire Safety Risk Assessment Template

Full Address		**Resident Name**	
Date		**Name of Assessor**	
Date for review			

Hazard and risk factors	Circumstances (circle as appropriate)	Further details of current circumstances	Details of any existing control measures	Outstanding risk (Yes or No)	Additional actions required
Smoking	Non-smoker	No further consideration required.			
	Smokes but no signs of careless handling				
	Smokes and signs of careless handling	☐ Does not use reduced ignition propensity cigarettes. ☐ Discarded cigarettes and matches. ☐ A few burn marks found on carpets. ☐ Multiple burn marks found on carpet. ☐ Cigarette burns to clothes or furnishings. ☐ Other (please specify):			
Cooking	No cooking facilities.	No further consideration required.			
	Cooking, but no evidence or suggestion of careless behaviour.				
	Cooking and evidence or suggestion of careless behaviour.	☐ Inappropriate use of cooking equipment (e.g. microwave ovens). ☐ May occasionally leave cooking unattended. ☐ Likely to leave cooking unattended. ☐ History of alarm signals or small fires from cooking. ☐ Other (please specify):			
Electrical	Equipment safely used and maintained.	No further consideration required.			
	Extensive use of extension leads and adapters and/or electric blankets, but adequately maintained.				
	Use of extension leads and adapters and/or electric blankets, but lack of maintenance or signs of wear and tear.	☐ Cube adapters. ☐ Potential overloading of circuits. ☐ Worn equipment or cables. ☐ Electric blankets not maintained regularly. ☐ Other (please specify):			

Hazard and risk factors	Circumstances (circle as appropriate)	Further details of current circumstances	Details of any existing control measures	Outstanding risk (Yes or No)	Additional actions required
Portable heaters	No use of portable heaters.	No further consideration required.			
	Portable heaters limited to oil-filled radiators or convector heaters compliant with modern standards.				
	Higher hazard portable heaters, such as fan heaters, radiant bar fires or paraffin heaters.	☐ Evidence of heaters sited too close to combustible materials. ☐ Likelihood of heaters sited too close to combustible materials. ☐ Potential for other careless use (e.g. drying clothes, warming meals, etc.). ☐ Other (please specify):			
Use of candles	No candle use.	No further consideration required.			
	Candles used, but with appropriate precautions				
	Candle use without appropriate precautions.	☐ Please specify:			
Deliberate ignition	No history of, or likely potential for, deliberate ignition.	No further consideration required.			
	No history of deliberate ignition, but some potential.	Please specify:			
	History or likelihood of deliberate ignition.	☐ Previous history of deliberate ignition. ☐ History of malicious false alarms to the fire and rescue service. ☐ Other (please specify):			
Alcohol or drug use	None.	No further consideration required.			
	Alcohol or drug use, with no other high fire risk behaviour.				
	Significant alcohol or drug use, combined with high fire risk behaviour.	☐ Evidence or likelihood of careless handling of smoking materials. ☐ Evidence or likelihood of leaving cooking unattended. ☐ Other (please specify):			
Hoarding (access)	No hoarding, or hoarding of generally non-combustible materials that do not obstruct escape routes.	No further consideration required.			
	Hoarding between clutter levels 1 and 4[13]	☐ Hoarding confined to a single room. ☐ Hoarding in more than one room. ☐ Hoarding within escape route. Types of materials hoarded:			

Hazard and risk factors	Circumstances (circle as appropriate)	Further details of current circumstances	Details of any existing control measures	Outstanding risk (Yes or No)	Additional actions required
	Hoarding between clutter levels 5 and 9[14]	☐ Hoarding confined to a single room. ☐ Hoarding in more than one room. ☐ Hoarding within escape route. Types of materials hoarded:			
Oxygen	No oxygen used.	No further consideration required.			
	Use of oxygen combined with high fire risk behaviour.	☐ Oxygen use combined with smoking. ☐ Other (please specify):			
Sensory impairment	None.	No further consideration required.			
	Hard of hearing, or partially sighted.	Please specify:			
	Deaf or blind.	Please specify:			
Capacity of resident to respond appropriately to fire alarm signals or signs of fire.	Fully able to respond appropriately.	No further consideration required.			
	May be slow to respond.	☐ Limited decision-making ability. ☐ Learning difficulties. ☐ Dementia. ☐ Please specify:			
	Unable to respond; would need staff assistance.	☐ Inability to make appropriate decisions. ☐ Severe learning difficulties. ☐ Dementia. ☐ Please specify:			
Ability of resident to make their way to safety.	Fully able.	No further consideration required.			
	Limited mobility, so slow to evacuate.	☐ Ability to evacuate the building. ☐ Ability to move from the room of fire origin, but not the building. ☐ Ability to move away from the fire, but not the room of fire origin.			
	No mobility without assistance.	Please specify:			
Other factors.		Please specify:			

Risk Level	Low		Medium		High	

Appendix 4: Examples of Assistive Technology Options

Easy Reference Guide: Look at the 'factors' and at the corresponding tools

Key (1) Item Number o Recommended Sensors ▲ Suggested Additional Sensors	Bed/Chair Bound	Smoker/evidence of burn marks	Dementia	Mental Health	Falls Management	Frail & Vulnerable	Hearing Impairment	Mobility Problems	Visual Impairment
Access/ Carer Trigger (1)	o		o	o	o	o	▲	o	▲
Bed Occupancy Sensor (2)	o		o	o	o			o	
Big Button Phone (3)			▲	▲			o	▲	o
Chair Occupancy Sensor (2)	o		o	o	o			o	o
Clip on Ashtray with Remote Tube (5)		o							
Clocks and Calendars (6)			o	o					
CO Detector			o	o					
CO Detector (specialist) (4)							o		o
Detectors to turn off electric cooker (7)			o	o					
Falls Detectors (8)	▲		▲	▲	o	▲		o	▲
Fire Retardant Bedding (9)		o							
Fire Retardant Nightwear (11)		o							
Fire Retardant Spray (12)		o							
Fire Retardant Throws (10)		o							
Gas Cut Off Valve (13)			o	o		o		o	
Gas Detector (14)			o	o				o	
Heat Detector (15)	o	o	o	o		o	o	o	o
Induction Hob (16)			o	o	▲	▲		▲	▲
Kitchen Timer (17)			o	o		▲		▲	
Metal Waste Bin (18)		o	o	o					o
Object Locator (19)			o	o					o
Tactile Markings (20)									o
Pendant Alarm (21)	o		o	o	o	o	▲	o	o
PenFriend Audio Labeller (22)									o
Pill Organiser & Dossett Boxes (23)			o	o					
Safety Ashtrays (24)		o							
Smoke Alarms (25)	o	o	o	o	o	o	o	o	o
Smoke Alarms (specialist)(26)							o		o
Smoker's Fire Retardant Apron (27)		o							
Sounder Beacon (28)							o		▲
Stovetop/Cooker Shut off Device (29)			o	o		▲		o	o
Temperature Monitor (30)	o	o	o	o	o	o	o	o	o
User Alert Pager (31)							o		
Visual Call Beacon (32)							o		▲
Voice Record Reminder Sensor (33)			o	o					▲
Wi-Safe Remote Warning Handset (34)							o		
Water Suppression Systems (35)	o	o	o	o	o	▲	▲	▲	▲
Wheelchair Access to Ovens (36)								o	

Further information can be found at https://www.london-fire.gov.uk/media/2238/1-assisted-living-technology-catalogue.pdf It should be noted that the catalogue contains information from, and links to, external websites. The Scottish Government shall not be responsible or liable in any way for the content of any external websites, including the accuracy or relevance of information contained on such websites. The Scottish Government does not endorse the companies or products mentioned in the catalogue. In particular, the Scottish Government cannot vouch for the effectiveness, reliability or safety of the products displayed in the catalogue, which are examples only of the assistive technology options listed in the table

Appendix 5 - Fire Safety Risk Assessment Template

Record of Fire Safety Risk Assessment (premises based)

Print Form

Address			
Postcode			
Name of organisation			
Name and contact details of Assessor			
Assessor signature		**Date of assessment**	

PART 1 Obtain Information

How many floors does the building have?		
Number of residents in the building? Are any residents particularly at risk? / Have person-centred fire safety risk assessments been completed? Please include details below.		
Is there a staff presence, such as a scheme manager / care provider? If yes, please detail below.	Yes	No
Does the building have any ancillary uses such as care provision, commercial or community activities? If yes, please detail below.	Yes	No

Has the building any previous history of fire? If yes, please detail below.	Yes	No
Has there been any previous examination of the building's external cladding? If yes, please detail below.	Yes	No
Is there a current procedure for residents to follow in the event of fire? If yes please append a copy and explain below how it is communicated to residents.	Yes	No

PART 2	**Identify any potential causes of fire in the common areas**
Are there any sources of ignition present?	

	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**

Are there any sources of fuel present?			
	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**
Are there any sources of oxygen present e.g. Oxygen cylinders, ventilation			
	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**

PART 3	Evaluate the risk and adequacy of existing fire safety measures		
What is the likelihood of a fire starting?			
	Action required (Please tick) If you answered yes, record action at PART 4	YES	NO
What may be the consequences to people from a fire starting in the building?			
	Action required (Please tick) If you answered yes, record action at PART 4	YES	NO

Is there the potential for fire to spread and affect escape routes?			
	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**
Is there potential for fire or smoke spread through routes such as vertical shafts, service ducts, service penetrations, ventilation systems, cavities, voids and open doors?			
	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**
Is there potential for fire and smoke to spread into the premises from an external fire?			
	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**

Are the flat entrance doors sufficiently fire resisting and self-closing? Please see Chapter 5: Risk management – Fire Protection from Practical Fire Safety Guidance in Existing Specialised Housing

	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**

Is there protection of the stairways from fire in adjacent areas? For example, provision of properly maintained self-closing fire doors on stair and lobby enclosures, fire resisting glazing etc.

	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**

Is the travel distance from flat entrance doors to the nearest stairway or final exit acceptable? Please see Chapter 5: Risk management – Fire Protection from Practical Fire Safety Guidance in Existing Specialised Housing

	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**

Is there emergency escape lighting provided and maintained? Is it required if not?

	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**

Are there fire escape route signs? Are they required if not?			
	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**
Is there adequate fire separation evident, particularly the enclosure of flats within fire resisting construction? Please see Chapter 5: Risk management – Fire Protection from Practical Fire Safety Guidance in Existing Specialised Housing			
	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**

Where provided, are fire mains, fire-fighting lifts and smoke ventilation systems properly maintained?			
	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**
Are there any fire suppression installations provided/required?			
	Action required (Please tick) If you answered yes, record action at PART 4	**YES**	**NO**

The assessor completing the following section should prioritise remedial measures, based on the level of risk.

Priority ratings and suggested timescales:

Low (L) 3 – 6 months	Medium (M) Up to 3 months	High (H) As soon as possible

The above timescales are recommendations, however, risks should be removed as soon as possible.

PART 4 Action points			
	Priority	**Person responsible**	**Completion date**

Continue on separate sheet if necessary.

Review the fire risk assessment if there is a reason to suspect it is no longer valid or if there has been a significant change in the matters to which it relates.			
Part 5	**Record and review**		
Review Date		Reviewed by	
Reason for review			
Outcomes of review			

Appendix 6: Matrix of Responsibilities

Aspect of Fire Safety Management	Agreed Responsibilities				
	Owner/landlord	Housing Provider	Managing Agent or Facilities Managers (if different from housing provider)	Care Provider	Commissioner of Services
Lead duty holder[12]					
Building fire risk assessment					
Person-centred fire risk assessment (where appropriate)					
Testing of fire alarm system					
Maintenance of fire alarm system					
Testing of emergency lighting					
Maintenance of emergency lighting					
Testing of sprinkler system					
Maintenance of sprinkler system					
Testing of smoke vents					
Maintenance of smoke vents					
Testing of door release mechanisms					
Maintenance of door release mechanisms					
Testing of social alarm system					
Maintenance of social alarm system					
Routine housekeeping inspections, including checking fire doors, fire exit doors and condition of fire extinguishers, etc.					
Maintenance of fire doors					
Maintenance of fire extinguishers					
Maintenance of rising mains					
Maintenance of lightning protection system					
Provision of fire safety information to new residents					
Ongoing engagement with residents regarding fire prevention					
Ongoing engagement with residents to remind them of fire procedures					
Fire drills (if applicable)					
Maintaining a record of the fire safety arrangements					
Ensuring that fire procedures are up to date					
Liaison with local fire and rescue service crews					
Training of staff					
Inspections during contractors' works					
Provision of information to outside contractors					
Recording false alarms					
Holding of relevant records re testing maintenance, training, drills, etc.					

This is not intended to represent a legal interpretation of responsibility, but should merely reflect the agreements which should be in place for overseeing fire safety.

Appendix 7: Mobility Scooter Guidance

Mobility vehicles are categorised under the Use of Invalid Carriages on the Highways Regulations 1988. Class 1 refers to manual wheelchairs that are not electrically propelled. Class 2 refers to powered wheelchairs and scooters intended for use on footpaths. Class 3 refers to powered scooters and invalid carriages intended for use on the road.

Class 3 vehicles are generally much larger, have a much wider turning circle and have potentially larger and heavier batteries, which are more difficult to remove for charging. This limits the options for internal storage, including within private dwellings. Even if this is possible, it may not be possible to proceed beyond the entrance hall, which may, in itself, present a risk to the individual resident as it blocks their means of escape if fire occurs within their flat. This removes the option for this type of scooter to be stored inside residents' own accommodation, which is why Class 3 mobility scooters are often left outside flat entrance doors in common corridors and on escape routes, which can pose a significant risk.

It is generally possible for Class 2 scooters to pass through flat entrance doors. However, the risk to individual residents as a consequence of storing and charging mobility scooters within their own accommodation needs to be considered.

BS EN 12184: 2014 applies to the manufacture of mobility scooters in the UK and Europe. The standard considers two specific aspects related to fire, namely the resistance to ignition and the risk of ignition from the power and control systems. The ignition resistance test is based on the simulated match test used for fire testing of upholstered furniture. The test for power and control systems is designed to reduce the risk from ignition of any part of a power and control system, including the battery charger.

Understanding the Risk

Mobility scooters are generally constructed around a steel frame, with plastic fairings, rubber tyres, foam seats, wiring and batteries. They are often retro fitted with vehicle registration number plates, waterproof covers and storage bags.

The type of batteries used in mobility scooters are generally lead acid (wet cell) or sealed lead acid scooter batteries. Other battery types include Gel and Absorbed Glass Mat (AGM) batteries.

The recent use of lithium iron phosphate (LiFeP04) batteries instead of lead acid batteries to power mobility scooters has increased risks due to their unpredictable and adverse reaction when subjected to fire. All batteries can give off hydrogen when charging.

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 are stored on escape routes and are involved in a fire, there is a likelihood that escape routes will become impassable due to smoke and heat, placing residents at significant risk in the event of a fire. Therefore, appropriate measures must be considered within

the building fire safety risk assessment to address the risks posed by the storage and charging of mobility scooters.

Mobility scooters are often stored externally and not in a secured compound, giving potential for deliberate ignition. This has then allowed for fire spreading through windows and doors, into buildings and internal compartments, and has led to fatalities.

Storage and Charging

There cannot be a ‘one size’ fits all approach taken to storing or charging mobility scooters. The layout and design of each building will be different; the type, number and location of mobility scooters will also differ and the needs of individual residents should be considered as part of the overall assessment of risk. The maximum numbers of mobility scooters for the premises should be identified by the fire safety risk assessment. Residents should be aware of local arrangements which will help to future proof mobility scooter storage issues in buildings. A solution that might be appropriate in one building may not be acceptable in another. Although external storage may be an option, the vulnerability and mobility of residents may make it impracticable for them to utilise external facilities.

The options detailed below present a solutions based approach that could be applied, based on a general hierarchy of risk, but any one of which might be acceptable in the right circumstances. Where, in the following options, there is reference to fire-resisting construction and fire-resisting doors, the period of fire resistance should normally be 60 minutes, except where an area contains no more than three mobility scooters or is provided with automatic fire suppression, in which case 30 minutes’ fire resistance will normally be adequate.

Option 1: External parking with charging facilities:

The parking of mobility scooters outside premises is potentially an option. In most instances, it would be expected that a charging facility would be provided adjacent to the parking area. Security and the risk of fire-raising would need to be considered, as would the location, which should not present a risk of fire spread into the building in the event of a fire.

Option 2: External storage with charging facilities:

The provision of purpose-built secure storage and charging facilities (including individual storage units), or the conversion of existing external facilities, such as garages or storerooms, to provide storage and charging facilities, might be considered. Dependent on their location and proximity to the building, such facilities may need to be fire-resisting enclosures and may also be fitted with automatic fire detection if they can be monitored.

Option 3: Purpose-built internal storage rooms:

The provision of purpose-built rooms inside premises for the storage and charging of one or more mobility scooters might be an option. Rooms would need to be enclosed

in fire-resisting construction, and be fitted with fire-resisting, self-closing doors and automatic fire detection.

Option 4: Adapted internal storage rooms:

The provision of specially adapted rooms inside premises for the storage and charging of one or more mobility scooters might be an option. Rooms 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.

Option 5: Existing fire-resisting rooms utilised for storage:

The storage and charging inside rooms, not originally designed for this purpose but which are separated from the remainder of the premises with fire-resisting construction and self-closing fire doors, might be considered. This may include options to utilise storerooms, utility rooms, on a permanent or temporary basis. In these instances, the use of the rooms, or clearly separated areas, might need to be restricted to the storage and charging of mobility scooters and not combined with other uses.

Option 6: Storage and charging within residents' own accommodation:

Suitable storage and charging arrangements might be possible inside the accommodation of individual residents. This option removes the risk from the common areas, and it places the storage and charging of scooters within a fire-resisting enclosure beyond a fire-resisting, self-closing door. However, this potentially places individual residents at risk from a fire involving a mobility scooter in their own home. If this option is considered, the scooter should not be stored or charged in the hallway, if this is the only means of escape available. The scooter should, preferably, be stored and charged in a separate room, which is fitted with a fire-resisting or substantial door and fire detection. Residents should be provided with advice on the safe use and charging of scooters as part of a person-centred approach.

Option 7: Internal storage in other areas:

If mobility scooters are stored in any other areas not mentioned in the above options, they must be thoroughly fire risk assessed, in conjunction with the housing provider. Compensatory factors that might be considered could, for example, include some or all of the following: the provision of an automatic sprinkler or watermist system, a comprehensive fire detection and alarm system (which is automatically linked to an alarm receiving centre), adequate smoke ventilation (to keep flats smoke free), alternative means of escape available from all flats that open directly onto the escape route in question, or the use of scooters with limited flammability. The appropriate combination of measures should be determined by the fire safety risk assessment for the premises.

The charging of scooters in dead end corridors and single stairway escape routes should not be permitted in any circumstances. Even where alternative means of escape is available, the storage, and particularly the charging, of mobility scooters in

common corridors and escape routes is not generally recommended and all other alternatives should be considered.

Consent/Permissions and Insurance

No mobility scooters should be stored in premises where permission or consent has not been given or where any policies or legislation is breached. Managers should also reserve the right to refuse storage where none of the options in this guidance are suitable and/or this would breach legislation or impact on the health, safety or welfare of other occupants within the premises.

Expectations should also be appropriately identified and supported within tenancy agreements and communicated to tenants.

Appropriate insurance cover should be in place by tenants that covers liability for damage or injury to others. Contents insurance alone is not sufficient to provide third party cover (should any damage occur to the premises or to another person). Permission should not be given if appropriate insurance cover is not in place for the equipment being used.

Maintenance and Testing

Tenants should ensure that mobility scooters are maintained in line with manufacturer recommendations; this should include mobility scooter usage and charging. Those responsible for the premises should ensure that appropriate maintenance and testing regimes are in place to ensure any designated storage areas are fit for purpose and offer effective fire protection, including:

- Fixed wiring installation testing
- Portable appliance testing of equipment
- Fire detection maintenance and testing
- Fire doors and fire door furniture
- Emergency lighting
- Ventilation
- Inspection of floors, walls or ceilings

The above guidance includes information taken from the NFCC publication “Mobility Scooter Guidance for Residential Buildings” (2018). The full, unedited guidance can be found at https://www.nationalfirechiefs.org.uk

Glossary

Definitions to assist readers in understanding some of the technical terms used in this guidance. In some cases, the definitions relate specifically to this Guidance and may therefore differ from other definitions.

AOV (automatically opening vent)	A vent provided for smoke control in common areas, which opens automatically when smoke is detected by smoke detectors.
Cavity barrier	A construction provided to close a concealed space against penetration of smoke or flame, or provided to restrict the movement of smoke or flame within such a space.
Common areas	Those parts (whether in blocks of flats or houses), used by occupants of more than one dwelling unit for access and egress.
Competent person	A person with enough training and experience or knowledge and other qualities to enable them properly to assist in undertaking the fire safety measures recommended in this Guidance.
Emergency escape lighting	Lighting that provides illumination for the safety of people leaving the building when the normal lighting fails.
Escape route	Route forming part of the means of escape from any point in a building to the final exit.
Evacuation Lift	A lift that may be used for the evacuation of people with disabilities, or others, in a fire.
Extra Care Housing	For the purpose of this Guidance, any housing of a similar nature to sheltered housing (though sometimes including residents with disabilities that are not age related), but with managed on-site care and support service, commonly on a 24-hour basis. This includes premises described as very sheltered housing, “housing with care”, “assisted living” and “integrated care and housing (ICH)” or, where support is linked to a care home, “close care housing”.
Fire damper	Mechanical or intumescent device within a duct or ventilation opening, which is operated automatically in the event of fire, to prevent the passage of fire. Where there is a need to prevent the passage of smoke, the fire damper needs to satisfy additional criteria.
Fire-fighting lift	A lift, designed to have additional protection, with controls that enable it to be used under the direct control of the SFRS.
Fire-fighting shaft	A fire-resisting enclosure containing a fire-fighting stair, fire mains, fire-fighting lobbies and a fire-fighting lift.
Fire main	A water supply pipe installed for fire-fighting purposes, fitted with landing valves at specific points. The main may be ‘dry’, in which case it is fitted with inlet connections so that it can be charged with water from a fire service pumping appliance. In taller blocks, the main is ‘wet’ and is permanently charged with water from a pressurised supply.

Fire resistance	The ability of a component or construction of a building to satisfy, for a stated period of time, some or all of the appropriate criteria of relevant fire test standards.
Fire stopping	A seal provided to close an imperfection of fit or design tolerance between elements or components, to restrict the passage of fire and smoke.
Fire-resisting door	A door which, with its frame and furniture, and when closed, is intended to restrict the passage of fire and smoke to a specified level of performance **Fire-resisting door – Notional FD30 door** A door assembly that satisfied the current specification, or fire resistance test, for 30 minutes at the time of construction of a block of flats or manufacture of the door. **Fire-resisting door – Upgraded FD30S door** A 'notional FD30' door, fitted with intumescent strips and smoke seals, and with any other necessary work carried out, such that it may reasonably be anticipated that it would satisfy the relevant test requirements for the 30 minutes integrity and control of the passage of smoke at ambient temperature. **Fire-resisting door – Replacement FD30S door** A door assembly that has been independently certificated by a UKAS-accredited fire test laboratory as satisfying the relevant test requirements for the 30 minutes integrity and control of the passage of smoke at ambient temperature.
General needs housing	Accommodation intended for occupation by members of the general public and not those of a specific demographic or vulnerability.
Inner Room	A room from which escape is possible only by passing through another room (the access room).
Means of escape	A route or routes provided to ensure safe egress from the premises to a place of total safety.
Mixed System	A fire alarm arrangement whereby two different Grades of fire detection and alarm system are provided within the same premises for the purpose of satisfying two different fire safety objectives (e.g. in sheltered housing, a Grade D system within each flat to give a warning to residents of a fire in their own flat, in conjunction with a Grade A communal fire alarm system to give a warning of fire within common areas).
OV (Openable vent)	A vent provided for smoke control in the common areas, that can be opened by the SFRS by means of hardware or a control (which may be located remotely) provided for the purpose.
Person-centred fire safety risk assessment	An assessment of the risk from fire focussed on a specific resident, carried out with the involvement of the resident, taking into account the physical and cognitive characteristics of the resident, their lifestyle, preferences and a contextualised consideration of relevant behavioural history. The outcome is a proportionate person-centred action plan that takes into account

	informed decision making and dignity of the resident, while resulting in tolerable risk from fire.
Personal protection system (PPS) or Personal protection watermist system	Automatic fire suppression system, fitted with one or more watermist nozzles and intended to suppress a fire in a defined area of a dwelling.
Protected corridor or lobby	A corridor or lobby that is protected from fire in adjoining accommodation by fire-resisting construction.
Protected route	An escape route that is protected from the rest of the building by fire-resisting construction.
PV (Permanent vent)	A permanently open vent provided for smoke control in the common areas.
Self-closing device	A device that is capable of closing a door from any angle and against any latch fitted to the door.
Separation	Sub-division of a building by fire-resisting walls and floors for the purpose of limiting fire spread between different occupancies.
SFRS	Scottish Fire and Rescue Service
Sheltered Housing	For the purpose of this Guidance, any housing in which each dwelling is designed and constructed for the purpose of providing self-contained residential accommodation for older people, and where some form of assistance is available at all times, though not necessarily from persons on the premises. This includes premises sometimes described as retirement housing and similar blocks of flats, regardless of whether flats are rented or are owned.
Simultaneous evacuation	A procedure in which all parts of a building are evacuated after the actuation of a common alarm of fire.
Smoke Containment	A method of smoke control involving physical barriers to the spread of smoke, usually in combination with vents, primarily to prevent the passage of smoke into escape stairways.
Smoke dispersal	A method of smoke control used in older blocks of flats (now deprecated). Vents are sited to achieve uninterrupted natural cross-ventilation of corridors and lobbies in an endeavour to dilute and disperse smoke in these areas.
Social Alarm System	A system that provides facilities for alarm initiation, signal transmission, alarm reception, reassurance and assistance, for use by older and other persons considered to be living at risk. These are commonly described as “Telecare” systems, but other terms, such as community alarm systems, are also sometimes used.
Specialised Housing	Accommodation for occupants who live independently, or with an element of support, and who are wholly or mainly limited to a specific section of the population and are likely to require additional measures to secure their safety in the event of fire, including, but not limited to, accommodation provided for older people, physically disabled people, people with cognitive difficulties and people with mental health problems.
Stay put	An evacuation strategy based on the principle that only the residents of the flat of fire origin need to escape

	initially, while other residents may remain in their own flats.
Structural Element	Part of a building which is part of the structural frame (beams and columns), loadbearing (other than a part which is only self-loadbearing), a floor, or supports a floor.
Supported Housing	Housing (excluding sheltered housing and extra care housing) designed for vulnerable people with common characteristics, living as part of a community with support that is normally, but not necessarily, provided on a 24 -hour basis. For the purpose of this Guidance, this includes small, domestic care homes and housing for groups of people with learning or physical disabilities and mental health issues, but not “hostel”-type accommodation for groups such as homeless people, victims of domestic violence or ex-offenders. Residents may live independently or as a single group.
Travel distance	The distance to be travelled by a person from any point within a specified area, to the nearest exit leading to a place of relative safety.
Very Sheltered Housing	See “Extra Care Housing”
Visual Alarm Device	A component of a fire detection and alarm system, not incorporated in the control equipment, which incorporates a flashing light that is used to give a warning of fire.
Voice Sounder	An audible fire alarm device that contains all the necessary components, except normally a power supply, to generate and broadcast recorded voice messages. Voice sounders cannot normally be used to broadcast live speech.

References

Guidance document

BS 9991: 2015 Fire safety in the design, management and use of residential buildings. Code of practice

Other British Standards referenced

BS EN 1154: 1997 Building hardware. Controlled door closing devices. Requirements and test methods

BS EN 1155: 1997 Building hardware. Electrically powered hold-open devices for swing doors. Requirements and test methods

BS EN 1634-1:2014 Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware. Fire resistance test for door and shutter assemblies and openable windows

BS EN 1634-2:2008 Fire resistance and smoke control tests for door, shutter and openable window assemblies and elements of building hardware. Fire resistance characterisation test for elements of building hardware

BS EN 1634-3:2004 Fire resistance and smoke control tests for door and shutter assemblies, openable window and elements of building hardware. Smoke control test for door and shutter assemblies

BS EN 12184: 2014 Electrically powered wheelchairs, scooters and their chargers. Requirements and test methods

BS EN 12845: 2015 Fixed fire-fighting systems. Automatic sprinkler systems. Design, installation and maintenance

BS EN 62305-2:2012 Protection against lightning. Risk management

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