

Practical Fire Safety Guidance for Existing High Rise Domestic Buildings

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Acknowledgements

This Guidance is for high rise domestic buildings in Scotland. It draws on the content of the guidance issued for England, 'Fire safety in purpose-built blocks of flats' (Local Government Association). We wish to thank the Local Government Association for permitting the use of text, diagrams and photographs from their guide.

The Grenfell Tower Inquiry is an independent public inquiry, set up to examine the circumstances leading up to and surrounding the fire at Grenfell Tower on 14 June 2017. The Phase 1 report was published on 30 October 2019. The Scottish Government will study the findings and assess if there are lessons from which to learn to further strengthen safety in buildings and update guidance accordingly. More information can be found at the website <https://www.grenfelltowerinquiry.org.uk/>

Chapter 1

Introduction: Purpose and Scope of the Guidance

What is this Guidance about?

1. This Guidance provides practical fire safety advice on how to prevent fires and reduce the risks from fires in high rise domestic buildings. It aims to assist the assessment of fire risk and the adequacy of existing fire safety measures. The focus is on communal areas and aspects of building design in private accommodation which could affect the safety of others. This Guidance applies only to Scotland and is not mandatory. Given building design varies no single guidance can provide specific solutions for all possible circumstances.
2. The Guidance aims to reduce the risk to life from fire. As such, the focus is on life safety rather than the protection of property.

Who is it for?

3. This Guidance is for those responsible for fire safety in high rise domestic buildings. This includes owners, managers, property factors, property advisors and landlords, managing agents, enforcing authorities and those assessing fire risk in high rise domestic buildings.
4. This Guidance is not specifically for residents, although it may be of interest, and Fire Safety Law does not generally apply to their individual dwellings. Building managers should engage with residents and encourage a positive fire safety culture (See Chapter 6). A leaflet containing fire safety information for residents of high rise buildings (“Keeping yourself and others safe from fire in your high rise buildings”) can be found on the SFRS website: <https://www.firescotland.gov.uk/>.
5. ‘Residents’ is used when referring to the occupants of the flats in the high rise building. This is intended to cover all those who live in the building, whether owner or tenant. Tenant is used when not referring to other residents.

What buildings are included?

6. This Guidance is for existing multi-storey high rise blocks and tenemental buildings with a storey in excess of 18 m above the ground – generally more than 6 floors – but no storey above 60 m – generally more than 20 floors. Specialist advice should be sought for buildings above this height. The Guidance applies to high rise domestic buildings of all tenures; owner-occupied, social housing and private rented sector.
7. The term ‘flat’ is used for a self-contained domestic dwelling in the high-rise building. It includes those on more than one storey, such as maisonettes (duplex apartments).
8. Premises put to specific uses that can be in high rise domestic buildings, and where fire safety law applies, are not considered further in this Guidance. Please refer to the relevant sector specific guidance (available at <https://www.gov.scot/policies/fire-and-rescue/non-domestic-fire-safety/>) for;

- any flat within a block that is a house in multiple occupation¹
- any flat used as a holiday let
- any flat used for registered childminding
- offices and similar ancillary accommodation that form part of the building.

What is the fire risk in high rise domestic buildings?

9. The vast majority of fires are contained in the room or flat in which the fire occurs. In Scotland, there have been no fire deaths beyond the dwelling of fire origin and no fatalities as a result of fires originating in a common area since 2009 (as at the date of publication).
10. Fires are usually contained because each individual flat is enclosed in fire resisting construction. The main risk from a fire is to the residents in the flat where it originated. There have been occasions where fire has spread and there can be significant loss of life in extreme cases, as two tragic fires in England show. In 2017, 72 people died in Grenfell Tower, London; and in 2009, six people died in Lakanal House, London.

Using this Guidance

11. This Guidance includes criteria for determining the level of safety; these are benchmarks to make comparisons against. These are more useful than prescriptive standards setting, which has been avoided where possible. Similarly, the methodology outlined for assessing risk is intended to assist in making comparisons. Alternative approaches to benchmarking and risk assessment may be appropriate in individual situations if an equivalent level of safety is achieved.
12. Particular knowledge and skills may be required to assess risk and determine an appropriate package of fire safety provisions in some buildings. Users should consider whether they have the necessary competence before applying this Guidance to a particular building. In some cases, it may be necessary to seek specialist help. The Scottish Government and the SFRS recommend selecting an assessor or company that is third party certificated by a United Kingdom Accreditation Service (UKAS) accredited Certification Body or an assessor registered by a Professional Registration Scheme. SFRS maintains a list of UKAS and other recommended schemes on its website.
13. Fire safety design in blocks of flats is governed by the Building (Scotland) Regulations in place at the time of construction.

“Stay Put”

This Guidance applies to buildings that have a ‘stay put’ policy in the event of fire. This is when a fire occurs within one flat (or, less likely, in the common areas), it is normally safe for other residents to remain within their own flats if unaffected by fire or smoke.

¹ In general, a flat which is the only or principal residence of three or more people, who belong to three or more families and share a toilet, bathroom or cooking facilities will be a house in multiple occupation. HMOs require to be licensed under the Housing (Scotland) Act 2006

Chapter 2: Fire Safety in High Rise Buildings

14. This Chapter explains fire safety measures in high rise domestic property. It covers fire resistant construction, escape routes, fire detection and warning, evacuation strategies and facilities for use by SFRS.

Key points

- Each flat is a fire-resisting 'box' designed on the 'stay put' principle.
- Fire resisting construction is also provided to stair enclosures, service risers, lobbies and ancillary areas.
- A principle of fire safety is that escape from a fire should not rely on external rescue by the fire service.
- Fire detection and alarm systems give early warning of fire.
- High rise blocks do not normally require a communal fire alarm system.
- Facilities are provided to assist firefighters.

Fire Separation² to Restrict Spread of Fire and Smoke

15. Each flat is built as a fire-resisting enclosure. It is bounded by non-combustible separating walls and floors that will resist the passage of fire for a period of time. There are also non-combustible separating walls and floors between flats and the common areas and those that enclose stairs and lift wells.

16. While there will be fire separation between each flat, when SFRS tackle a fire in a flat, its hose prevents doors from fully closing. This can result in smoke spreading into common areas.

Evacuation and Stay Put Policy

17. In the majority of fires in high rise buildings, most residents do not need to leave their flats. Fire separation provides fire resistance to contain a fire in the flat of fire origin. Accordingly, people in flats who are not affected by fire or smoke are normally safe to stay where they are. In some circumstances, residents might be at greater risk if they do leave their flat. This is the basis of the 'Stay Put' policy in response to fires in high rise properties. It has been in guidance since the 1960s and is the basis for high rise domestic building design. It is an appropriate strategy in the majority of high rise domestic buildings.

18. 'Stay Put' is the following approach:

- When a fire occurs within a flat, the occupants alert others in the flat, make their way out of the building and summon SFRS.
- If a fire starts in the common areas, anyone in these areas makes their way out of the building and summons SFRS.

² Fire separation is a term used in Scottish building standards. In UK guides this is often included under the general concept of 'fire compartmentation'

- All other people in the building not directly affected by the fire would be expected to 'stay put' and remain in their flat unless directed to leave by SFRS or the Police.
 - Any person not directly affected by fire or smoke can leave the building if they wish, although doing so could place them at greater risk.
19. Occupants evacuating a flat where there is fire can alert their neighbours so that they can evacuate if they feel threatened.
 20. SFRS will give initial advice over the phone to residents who dial 999. Upon arrival, firefighters will take control of the incident and may advise further, as necessary. There may be fires where, for operational reasons, SFRS decides that a partial or total evacuation of a high rise is necessary. These uncommon situations include where a fire spreads beyond the flat of origin as a result of failings in the construction. More modern high rise domestic buildings may have an evacuation alert system for SFRS use, to allow them to instigate the evacuation of a floor, multiple floors or an entire building. (This was introduced on 1 October 2019 in the Scottish Domestic Technical Handbook).
 21. The alternative to a 'stay put' policy is one involving simultaneous evacuation where all, or a number of residents, evacuate the building together. To operate in practice, this requires a system to alert all of these residents to the need to evacuate.
 22. The range of physical and mental capabilities of the residents should be taken into account when considering evacuation. It may be that simultaneous evacuation is impracticable for certain residents, for example those with mobility issues or certain disabilities.
 23. Simultaneous evacuation is sometimes advocated where there are doubts over construction, particularly fire separation. Resolving concerns and addressing deficiencies is usually more appropriate than changing the evacuation strategy. However, on rare occasions it may be necessary to temporarily adopt a simultaneous evacuation strategy until major deficiencies can be remedied (such as the use of inappropriate external cladding systems or widespread failure of fire separation). Where this is the case, specialist advice should be sought and SFRS consulted.

Means of escape

24. A principle of effective fire safety is that escape from a fire should not rely on external rescue by SFRS. Flats in high rise domestic buildings are designed on the basis that escape or rescue via windows should not be necessary. Above the third floor, rescue by SFRS ladder may not be possible. High reach appliances have limits to the height they can reach and there can be other restrictions which prevent access to the building.
25. Many high rise blocks have a single stair escape route. Even in buildings with two or more stairways, it is often necessary to travel along a single common corridor to reach a stairway.
26. Escape routes from a flat to safety outside the building rely on horizontal escape - from the flat entrance door using a corridor, lobby or an external balcony or deck (using the common areas); and then vertical escape via a stairway to a final exit. Lifts should not

be used unless they have been designed and constructed specifically for use as evacuation lifts, and appropriate management procedures are in place.

27. Once out of the flat, escape for residents depends on the common areas being suitable for use in an emergency. There needs to be adequate levels of fire protection provided to the communal escape routes so that smoke and heat from a fire in a flat or ancillary room will not prevent the corridors, lobbies, external balconies or stairways being used.

28. Design of communal means of escape in high rise blocks of flats is based on the following:

- There is fire separation between flats, between flats and the common areas, and between common areas and ancillary accommodation, to provide a barrier to fire and smoke spread.
- The materials used in the construction of the building or the protection afforded to them are such that fire is inhibited from spreading through the fabric of the building.
- The materials and construction of the building envelope resist external fire spread.
- Common areas are constructed and used in a way that any fire originating in these areas should not spread beyond the immediate vicinity.
- Corridors leading to stairways are enclosed in fire-resisting construction.
- Where there is escape in only one direction along a corridor, the distance travelled in such 'dead ends' is limited.
- Access decks and communal balconies are limited in length if escape is only possible in one direction.
- Fire-resisting construction should protect people passing flats to reach a stairway.
- Escape stairways are enclosed in fire-resisting construction.
- In a single escape stairway, the stair should have a protected lobby approach (with automatic smoke ventilation in the lobby).
- Doors opening onto communal escape corridors and stairways should be fire-resisting and self-closing (or locked shut in the case of service riser and ancillary room doors).
- Arrangements are provided for smoke control in stairways, protected corridors, and protected lobbies (often with control provision for SFRS use).
- Emergency lighting or protected circuit escape route lighting is provided.
- The building's elements of structure have sufficient fire resistance to resist fire-spread and prevent structural collapse. The means of escape also provides fire protection and space for firefighters to set up a forward control point and a bridgehead to commence firefighting.

Fire detection and alarm systems

Smoke and Heat Alarms in Flats

29. Early warning of fire in a flat is essential to ensure that residents can evacuate safely from the flat. Smoke alarms in individual flats give early warning of fire and, along with heat alarms, are basic components of fire safety. They are important in reducing the number of casualties in dwelling fires.

Communal Smoke Detection

30. The common areas may have separate smoke detection to automatically open vents to clear smoke. Such systems do not incorporate an audible warning, as the detection is part of the smoke control system, not the fire warning system.

Communal fire detection and alarm systems

31. Rarely will a communal fire detection and alarm system be appropriate for a high rise domestic building. This could be where it is impossible to upgrade other measures to enable a 'stay put' policy to be adopted and where the residents can respond to an alarm, evacuate without assistance, and where the building has capacity for simultaneous evacuation. For most high rise domestic buildings, this would not be possible.

32. There are limited circumstances when a fire detection system could be provided in the communal areas but without a simultaneous evacuation procedure. This is where the objective of the system is to compensate for a particular shortcoming in an aspect of escape route design or fire separation. In such a case, system actuation would not sound a general evacuation but notify automatically an alarm receiving centre and is passed to SFRS. These systems are only applicable in specific circumstances, and require careful consideration.

Life safety automatic fire suppression

33. Life safety automatic fire suppression systems have been required in newly built high rise domestic buildings since May 2005 under Scottish Building Regulations. Suppression systems (sprinklers and water mist mainly) may have been retrofitted into blocks built before that date. They are fitted in every flat and often in all ancillary rooms and spaces throughout the building to help suppress a fire.

34. Properly designed and maintained automatic suppression systems are effective at controlling fires and may even extinguish them in the areas protected by the system.

Other fire safety measures in the building

35. There is emergency escape lighting in high rise buildings to provide adequate illumination for escape routes in an emergency, if the mains powered lighting fails (See Chapter 5 for further information on lighting).

36. There is rarely a need for fire exit signs in a single stairway building. Fire exit signs might be needed for unfamiliar escape route (See Chapter 5 for further on signage).

37. Fire extinguishers and other fire-fighting equipment should only be used by people

trained in its use. It is not normally appropriate or practicable for residents to be expected to use these or receive training, nor provide them in common areas.

38. In addition, if a fire occurs in a flat, the provision of fire extinguishing appliances in the common areas might encourage the occupants of the flat to enter the common area to obtain an appliance and then return to their flat to fight a fire. Such action is normally inappropriate.
39. Fire-fighting equipment may be required in plant rooms and other rooms, for use by staff or contractors.
40. Residents can buy their own fire extinguishers and fire blankets for their flats if they wish.

Facilities for SFRS

41. There are facilities in high rise buildings for SFRS to effect rescues and fight a fire. These normally include protected stairways and lobbies, specially designed lifts for use by firefighters and rising fire mains for SFRS to obtain water. Additional requirements for: evacuation alert systems; firefighting stairs; and floor/dwelling identification signage were introduced on 1 October 2019. These apply to Building Warrants submitted on or after that date.

Chapter 3: Risk Management – Assessing the Risk to Persons

42. This Chapter sets out the purpose, practicalities and a proposed method for undertaking fire safety risk assessments. This will assist those responsible for fire safety to establish whether existing fire safety measures are adequate, or if improvements are required.
43. It is a strong recommendation that those organisations responsible for the management of high rise blocks, carry out an assessment of fire risk in the building, as part of their corporate responsibility. An example fire safety risk assessment template can be found at Annex 2.
44. A fire safety risk assessment is not, however, legally required under Part 3 of the Fire (Scotland) Act 2005, for the common areas of domestic premises.

Key points

- The purpose of assessing risk is to evaluate the risk to people from fire and determine appropriate fire safety measures.
- The assessment of risk will normally only consider the common areas and limited, specified parts of flats only.
- Concerns regarding risk to individual residents in their own flat should be referred to the SFRS for a Home Safety Visit.
- Fire spread potential on the external facade and roof of the building should be considered.
- Intrusive checks (involving exposure of construction) will only be necessary where there is justifiable concern regarding structural fire precautions.
- Risk assessors must be competent. Where external specialists are chosen, certification or registration schemes can provide some assurance.
- The findings of risk assessments need to be actioned.
- Fire safety risk assessments should be reviewed regularly, when circumstances change or after a fire or near miss.

Scope of Fire Safety Risk Assessment

45. Fire risk is a combination of the likelihood of fire occurring and the consequences to residents and others who may be affected by a fire.
46. A fire safety risk assessment involves an organised and methodical look at the premises, the potential for a fire to occur and the harm it could cause to people. The 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.
47. It is a principle in fire safety risk assessments, 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.

48. Fire safety risk assessment is concerned with the building and common areas. It does not include an assessment to protect residents from a fire starting in their own flat. Some physical fire safety measures in flats can, however, impact on the safety of the building, for example:

- Flat front doors are normally important to the safety of the common areas in the event of a fire in a flat.
- Reliance was sometimes previously placed on fire doors inside flats to protect not only the internal hallway, but also the common areas.
- Ventilation systems i.e. common kitchen or bathroom extract arrangements can be a route for fire-spread between flats.
- Suppression systems will normally contain a fire within a flat.

Extent of fire safety risk assessment

49. There should be a specific fire safety risk assessment of the premises. A generic risk assessment will not be appropriate.

50. A fire safety risk assessment will cover:

- The common escape routes and other fire safety measures.
- An examination of a sample of flat entrance doors.
- The separating construction between the flats and the common area, so far as reasonably practicable.
- The potential for spread of fire on the external envelope of the building.

51. Normally, a sample of service risers should be opened up to check there are measures to prevent vertical fire spread. Where there are demountable false ceilings in the common areas, it may be appropriate to lift a sample of ceiling tiles to check fire stopping where services or pipes pass through walls/floors.

52. Fire safety risk assessment does not routinely involve opening up construction. However, a degree of intrusive inspection might be carried out on a sample basis if serious issues in structural fire protection are suspected, such as inadequate fire separation or poor fire stopping. This is usually a one-off exercise which requires a contractor to open up construction and make good after the inspection.

53. Intrusive inspection within flats is best carried out in those that are vacant. The risk of disturbing asbestos should be considered before an intrusive inspection is carried out.

Competence of fire risk assessors

54. There is no requirement for a fire safety risk assessment to be carried out by a specialist. The building owners or management should decide whether to use external specialists to carry out a risk assessment, taking into considering whether they, or their employees, have the capability to assess fire risk. If they do not have sufficient resources or skills, they can arrange for a suitably qualified person or company to carry out an assessment.

55. It is important to know that an external fire risk assessor is competent to carry out an assessment. Judging the competence of companies and people that advertise as fire risk assessors can be difficult. 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.
56. Using registered or third-party certificated persons or third-party certificated firms to carry out fire safety risk assessments is one way to establish competence. The Scottish Government and the SFRS recommend selecting an assessor or company that is third party certificated by a United Kingdom Accreditation Service (UKAS) accredited Certification Body or an assessor registered by a Professional Registration Scheme. SFRS maintains a list of UKAS and other recommended schemes on its website. SFRS has not assessed and does not endorse any individuals or companies participating in these schemes. Assessor participation in these schemes can offer a degree of assurance that the assessor (individual or company) has met the professional requirements.
57. High rise domestic buildings are different from commercial premises, such as offices and shops. In selecting a fire risk assessor, their competence in the principles of fire safety in high rise domestic buildings should be checked.
58. 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.
 - The improvement plan will show priorities and timescales.
 - The report should differentiate between recommendations that are important to safety and those that are not essential and are a matter of good practice.
59. The conclusions from a risk assessment should be supported by reasoned judgement. The following types of conclusion from a fire risk assessor should be challenged:
- Generic recommendations that are not specific to the premises.
 - Attempts to transfer risk away from the risk assessor.
 - Decisions that appear to be precautionary and to be risk-averse.

Methodology for Assessing Fire Risk

60. Below is guidance on one approach to fire safety risk assessment (Figure 1). There is no requirement for a particular style or format for an assessment or recording the findings. There are other equally acceptable approaches and formats.

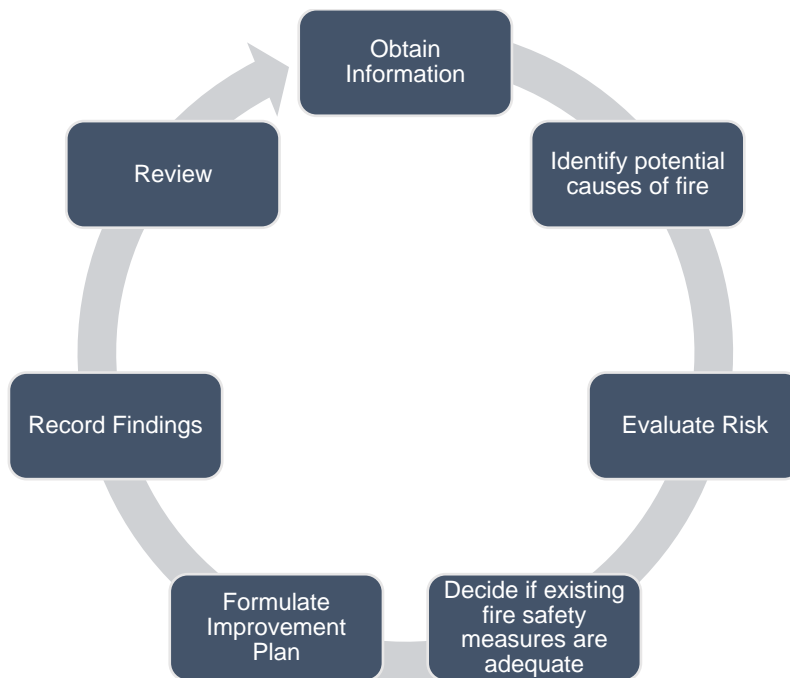


Figure 1 Fire safety risk assessment process

Step 1: Obtain information

61. The following information will be relevant for fire risk and control measures:

- The number of floors and the approximate area of each floor.
- Ancillary uses of the building, such as commercial, community activities, etc.
- The number and profile of the residents, including physical, social and known lifestyle factors relevant to fire risk.
- The presence of staff such as a caretaker or concierge.
- Previous history of fires in the block.
- The result of any previous examination of external cladding.
- How fire safety in the building is managed.
- The procedures for residents to follow in the event of fire.
- Testing and maintenance of fire safety systems and equipment.
- Arrangements for routine inspections of the building.

Step 2: Identify potential causes of fire

62. For a fire to start, three components are needed: a source of ignition; fuel; and oxygen. If any component is missing, a fire cannot start. Taking steps to avoid the three coming together will reduce the chance of a fire. Reducing the quantity of oxygen (smothering) or fuel (starvation) may restrict a fire's development.

63. The premises should be examined to identify potential ignition sources and materials that might fuel a fire and the circumstances where a fire could start.

64. The potential for a fire to occur in a flat should be considered as assessors need to

consider how a fire in a flat will impact on the safety of others in the building. Control of causes of fire within the flats is normally under the control of the residents and is outwith the scope of the assessment, other than where matters are under the control of the landlord.

65. The potential causes of fire and measures to eliminate or reduce the likelihood of each cause should be considered:

- Fire raising.
- Electrical faults (in fixed wiring and any equipment provided).
- Smoking.
- Use of portable heaters.
- Contractors' activities.
- Heating installations.
- Lightning.
- Housekeeping.

Step 3 Evaluate the risk

66. The risk in the premises should be evaluated and a judgement made on the adequacy of fire safety measures. The two components of risk should be considered: the likelihood that a fire may occur; and the potential for a fire to cause death or injury.

67. Having identified potential causes of fire, consider the chances of a fire occurring. The consequences of a fire and extent of the risk to people should also be considered. In evaluating the risk, it is necessary to consider different situations and 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.
- Fire and smoke affecting the behaviour of occupants.
- Fire and smoke spread into the premises from exterior fires.

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

69. The principal fire safety measures to consider are:

- The means of escape from fire, with consideration to;
 - The fire resistance between flats 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 flat entrance doors to the nearest stairway or final exit.
 - Smoke control within the common areas.

- Emergency escape lighting.
- Fire escape route signs.
- Fire separation, particularly the enclosure of flats within fire-resisting construction.
- Fire suppression installations provided.
- Rising fire mains and firefighters lifts.

Step 4 Decide if existing fire safety measures are adequate

70. A judgement needs to be made to determine whether the fire safety measures and fire safety arrangements are adequate or if more needs to be done to safeguard people. The level of fire safety measures in premises should be proportionate to the level of risk posed to the safety of people and will therefore vary between premises (see Chapter 5 for information). There should be verified maintenance of fire safety measures (see Chapter 6 for information).
71. Measures to assist SFRS, such as rising fire mains and firefighters lifts will normally have been required under Building Regulations at the time of construction. Maintenance is a requirement under the Fire Safety (Scotland) Regulations 2006.

Step 5: Formulate an improvement plan

72. The outcome of the risk assessment needs to be acted upon. The fire safety measures and arrangements need to be put in place to control risk in practice.
73. An improvement plan for fire safety measures considered necessary should be produced. The improvement plan should set out the physical fire safety and managerial measures that are necessary to ensure that fire risk is maintained at, or reduced to, an acceptable level. The actions should be reasonably practicable, taking cost, effort and risk into account. These should be prioritised and have timescales for the completion of the action so that the appropriate effort and urgency is clear. Where the required measures are relatively minor and can be implemented in a short time this is not required.
74. 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.
75. Where improvements involve building work, the work should be done in accordance with building regulation procedures. The improvement plan should also include specific measures and precautions that need to be taken during upgrade work.

Step 6 Record the findings

76. The significant findings from the fire safety risk assessment, and any action taken, or to be taken, should be recorded and retained. There is no specified format for this, but the attached fire safety risk assessment is provided as a useful template.
77. A copy of any completed fire safety risk assessments should be available on request to residents.

Step 7: Review

A fire safety risk assessment should be reviewed regularly with a date set at the previous assessment (see below). It should also be reviewed in instances where:

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

78. The Review of a fire safety risk assessment is not necessarily a repeat of the previous entire fire safety risk assessment process. Where a thorough fire safety risk assessment has been carried out, subsequently a shorter review exercise might be carried out regularly and with an in depth fire safety risk assessment completed less frequently.

79. As a general guide an annual review is appropriate, with a new fire safety risk assessment every three years.

80. There is benefit if reviews are carried out by suitably trained in-house staff, as the review primarily looks at progress of the improvement plan and identification of changes. This process can help reinforce staff ownership of fire safety management and assist in the development of relevant knowledge and fire safety culture.

Chapter 4: Risk Management – Fire prevention

81. Chapter 4 focuses on preventing fires and reducing their impact. It sets out the common causes and measures to control or eliminate them. There is consideration to different approaches to fire safety measures in communal areas, stairways and landings.

Key points

- Preventing fires and measures to protect people when fire occurs are equally important.
- The most likely place for fire to start is in a flat and most are caused by cooking.
- Fires in common areas can be particularly dangerous but the risk is reduced by effective housekeeping.
- Good security can reduce the incidence of deliberate fire raising.
- There should be a clear policy on whether common areas remain free from combustibles (known as 'zero tolerance') or are subject to 'managed use'.
- Electrical faults can be a cause of fire so installations should be regularly tested and inspected.

Fire Prevention

82. Prevention of fires happening is fundamental to good fire safety management. This Chapter gives guidance on fire prevention in the common areas of high rise domestic buildings.

83. It is important to note that the most likely place for a fire to start is inside a flat. Whilst the scope for landlords or factors to prevent fires in flats is limited, there are opportunities in rented flats. For example, ensuring regular gas safety checks and periodic inspections of electrical installations can reduce the potential for certain types of fires starting in flats.

84. SFRS through its community safety engagement activities, can offer advice to residents on preventing fires in their home.

85. The common causes of fire and possible measures to control or eliminate them are set out below. This is not an exhaustive list, and those managing fire safety should be vigilant for other or new hazards that might be present.

Smoking

86. Smoking in common areas presents a fire risk and should be avoided. With surreptitious smoking, people's efforts to conceal their actions can result in increased risk. Providing suitable receptacles for smokers' materials outside entrances may encourage people to put out their cigarettes before entering.

Fire raising

87. Deliberate ignition was the cause of 21% of fires in high rise buildings (of 10 or more floors) attended by the SFRS in 2017/18.

88. There are measures that can be used to reduce fire raising, including, for example:

- Good physical security and access control.
- Effective lighting, both externally and internally in the common areas.
- CCTV on entrances and external facades where appropriate.
- Maintaining common areas free from combustible material.
- A caretaker or concierge present where possible.

89. There can be conflict between security and fire safety. Any measures taken to restrict access for security must not prevent people from escaping easily in a fire or interfere with the operation of fire safety measures. Equally, home security measures should not hinder evacuation or access by SFRS.

90. Advice on crime prevention in the home is available from the police.

Housekeeping

91. Good housekeeping is fundamental to reducing risk in common areas.

92. Common areas are sometimes used to dry clothes or store items such as bicycles, furniture and seasonal decorations. In addition, unwanted belongings and rubbish are sometimes dumped in common areas.

93. The ignition of combustible material in the common corridors, stairways and landings will give rise to smoke in escape routes and the possibility of fire-spread into flats.

94. Controlling the presence of combustible materials and ignition sources reduces the potential for accidental fires. It also reduces the potential for deliberate fires. Keeping escape routes clear of obstructions ensures evacuation of residents or access for firefighters is not impeded. This is particularly important for single stairway buildings or 'dead end' corridors which offer no alternative means of escape. Residents have a duty to keep common areas free from dangerously combustible items and obstructions under The Civic Government (Scotland) Act 1982 (see Chapter 7). A framework to aid in the management of combustible items left in common areas can be found at Annex 3

95. Ancillary rooms that adjoin escape routes should be kept free of combustible material as there is a risk that any resultant fire could eventually threaten the escape of occupants.

96. The potential for significant smoke production and fire development when combustible materials are ignited varies enormously, depending on the inherent properties of the material. This includes its ease of ignition, the quantity present and its configuration. Not all of the items commonly found in common areas are either easily ignitable or likely to give rise to a serious risk if ignited in isolation.

97. This may suggest that some items can be present in common areas without unduly increasing fire risk. It can be difficult for landlords and others responsible for the common areas to manage use of the common areas where some types of items may be permitted and some not. To deal with this it is necessary to adopt either 'zero tolerance' policy or a 'managed use' policy.

98. In a 'zero tolerance' approach, 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. The benefits of a zero tolerance approach are:

- It is a simple policy to adopt.
- It removes the risk from accidental fires, involving items in the common areas, and fuel for fire raising.
- There is no ambiguity on items allowed and therefore residents know exactly what to do.
- It is easier to 'police' when carrying out inspections.

99. There are disadvantages to the Zero Tolerance, including:

- It does not take into account the specific circumstances of residents so may not be risk proportionate.
- It unduly penalises people that manage their common areas effectively
- It prevents residents from personalising their living environment.

100. A 'zero tolerance' policy should:

- Apply when there is doubt about the ability of residents to apply a 'managed use' policy.
- Be adopted where flats open directly onto stairways and/or where deliberate ignition is a significant concern.

101. The alternative is a 'managed use' approach. This allows strictly defined use of common areas with limited items allowed to control fire risk and ease of ignition. There are strict conditions on where permitted items can be kept, for example, pot plants and door mats outside front doors or framed pictures and notice boards on walls may be acceptable.

102. The 'managed use' approach benefits include:

- More homely common areas can foster a sense of pride and value in the building, which can impact positively on resident's behaviour.
- Benefits for older and disabled people able to store mobility aids at the point of access.
- The specific risk factors can be taken into account.

103. The main disadvantage is that it is more difficult to apply and requires a clearly defined policy with clear 'dos and don'ts'.

104. When adopting a 'managed use' policy:

- Ensure there are clearly defined 'dos and don'ts' that residents can follow.
- Communicate and educate residents on the policy given there is more scope for misunderstanding.
- Recognise it is likely to require more frequent inspections to ensure compliance.
- Apply it to buildings which have effective access control.
- Never allow items to be left awaiting disposal, even short term (including in chute rooms).
- Do not allow upholstered seating.
- Never allow motorcycles and other equipment containing petrol and other fuels.
- Never allow charging of mobility scooters, batteries or other electrical equipment in common areas. There should be consideration to providing dedicated rooms for storage and charging, suitably fire separated from the rest of the block. Further guidance on mobility scooters can be found in the Scottish Government publication, "Practical Fire Safety Guidance for Existing Specialised Housing" (available online).
- Only allow scooters, bicycles and prams, if there are suitable storage areas, where they will not pose an obstruction.
- Ensure the legal requirement to keep common areas clear of combustibles and obstruction is achieved (see Chapter 7)

105. The 'zero tolerance' approach may appear more straightforward but where residents are inconvenienced, they may not abide by the policy. Engaging with residents and encouraging them to follow the policy can be worthwhile. Regular inspection is key to maintaining good housekeeping. Landlords should monitor the situation to check compliance with the policy.

Recycling

106. Recycling initiatives encourage residents to avoid waste and use resources sustainably. Collection schemes might involve materials being set out in corridors, lobbies and stairways, giving rise to a potentially serious fire risk and being in contravention of the duty to keep common areas clear.

107. Bags of clothes for charity and boxes and bags of newspapers and plastic containers represent a significant fire risk. The material is in a form in which it can be easily ignited and lead to fire-spread and smoke production.

108. Landlords should put in place alternative arrangements for recycling that do not rely on collection from the common areas.

Electrical

109. Faults develop in wiring or in appliances resulting in ignition of combustible materials through overheating or arcing. These faults are often evident before a fire

occurs and risk of fires can be prevented so those responsible for buildings can take action.

110. Landlords should have the electrical installations in the flats inspected and tested regularly. This should happen every 10 years where there is a long term tenant. Inspections every five years might be more appropriate for shorter tenancies. For private rented flats, it may be more appropriate to have a requirement for electrical installations to be inspected and tested every 5 years.
111. Where tenant turnover is high, it is advisable to have a visual inspection of the accessible parts of the electrical installations after each tenancy.
112. The electrical installations supplying the flats and the common areas of the block should also be inspected and tested every five years. Portable electrical appliances in the areas under the control of the management should be inspected and tested on a regular basis. The Institution of Engineering and Technology Code of Practice for In-Service Inspection and Testing of Electrical Equipment provides guidance on the nature and frequency.
113. The following are measures to reduce the likelihood of an electrical fire:
 - Electrical distribution boards are located in secure cupboards or rooms, with no items of rubbish stored.
 - Prevent residents from wiring decorative lights or other equipment in the common areas from their flat.
 - Prevent residents using sockets in the common areas to charge their appliances or equipment in their flats
114. The White Goods Campaign aims to increase public awareness of the dangers from unsafe use of white goods to reduce the number and impact of fires. The advice is to not use washing machines, tumble driers and dishwashers when sleeping or out of the house; register white goods online to be contacted if safety issues are discovered and check the electrical safety first website for product recalls (www.electricalsafetyfirst.org.uk/product-recalls/).

Solar Panels

115. Photovoltaic (solar) panels that are above the roof covering or form part of the roof covering can be a source of fire. Panels which form part of the roof covering should be fire-stopped on the line of any separating wall or compartment wall.

Heating systems

116. Residents should be encouraged to have their heating systems serviced regularly and gas heating checked every year. Landlords are required to arrange annual gas safety checks for rented properties.

Lightning

117. Lightning is a source of ignition in only a small proportion of fires. The risk depends on factors such as the location, size and construction of the building; the proximity of the building to other structures; and the local topography. A risk assessment tool for determining the need for lightning protection on a block of flats can be found in BS EN 62305-2, but normally needs a specialist to apply it.
118. Retrospective installation of lightning protection is rarely likely to be essential. Any existing lightning protection systems should be subject to regular inspection and testing. Guidance on this is available in BS EN 62305-3.

Other causes of fire

119. Vehicles, temporary structures, and materials should not be sited close to the exterior of the building to prevent a fire affecting the building's external facade.
120. Building works and contractors operations can be a source of fire. This is considered in Chapter 6.

Chapter 5: Risk Management – Physical Fire Safety Measures

121. Benchmarks are useful for assessing whether existing fire safety measures are appropriate. This Chapter discusses how these can be used and offers benchmarks for measures such as fire separation, escape routes, smoke control, stairways and travel distance. There are also specifications for fire resisting doors and fire detection systems and facilities and assistance of firefighters.

Key points

- Benchmarks are used to assess the standard of existing fire safety measures.
- Upgrading buildings to meet current benchmarks may sometimes be appropriate where 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.

Methodology for using benchmarks

122. This Chapter is concerned with the physical fire safety measures necessary for a satisfactory standard of fire safety. The principles behind these measures are discussed in Chapter 2. The aim of these measures is to ensure people's safety escaping a fire and those remaining in their flats. The Guidance sets out:

- The standards recommended by design codes and guides for the design of high rise domestic buildings.
- The commonly found differences between newly built and existing high rise domestic buildings designed to comply with the standards at the time.
- Possible solutions where the standards have not been maintained in line with the original design intent, or falls far short of the standard considered acceptable today.

123. It is important to compare the standard found in a particular high rise domestic building against appropriate benchmarks before making judgements about the adequacy of the fire safety measures when carrying out a fire safety risk assessment, or otherwise reviewing fire safety design.

124. Benchmarks allow the standard of safety in a particular block to be assessed, by allowing comparisons. They should not be seen as prescriptive standards. Fire risk assessors and others, need to make judgements when assessing fire safety.

125. The objective is to establish whether the 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.

126. When assessing the adequacy of fire safety measures in existing high rise domestic buildings, the standards that applied when it was built should be established. These should be used to determine how far removed the original standards are to what is acceptable today, and if this gives rise to an unacceptable level of risk.

127. While many of the principles have not changed, there have been variations in the design of high rise domestic buildings over time and changes to some of the approaches to applying these principles. For example, since May 2005, automatic fire suppression systems, 60-minute fire resisting self-closing flat entrance doors and strict requirements regarding external wall cladding systems have been introduced through Building Regulations.
128. With older high rise domestic buildings, it may be difficult to discern the original design intent and whether it has been preserved or altered subsequently. Similarly, it can be difficult to determine the fire separation standard achieved, given that elements of structure are often hidden and inaccessible.
129. Retrospectively upgrading existing buildings to meet current benchmarks should only be done where the level of fire risk justifies it, taking into account the time, cost and disruption involved.

Consideration for Assessment

The following sets out main aspects for assessing physical fire safety measures.

Third-party certification

130. All fire safety measures, fire protection products and related services should be fit for purpose, properly installed and maintained in accordance with the manufacturer's instructions or a relevant standard.
131. Third-party certification schemes for fire protection products and related services provide assurance of quality, reliability and safety. Goods and services that are not third-party approved are not necessarily less reliable, but there is no obvious way in which this can be demonstrated.

Fire separation

132. Fire separation provides fire resistance between individual flats, between flats and the common areas, and to enclose lift wells. Design guidance recommends the following:
- Separating floors and separating walls to be non-combustible.
 - Separating floor to have a minimum fire resistance of 120-minutes.
 - Separating wall between a flat and any other part of the building to have a minimum fire resistance of 60-minutes.
 - Separating wall enclosing a lift well to have a minimum fire resistance of 60-minutes.
 - Self-closing fire doors in separating walls to have a minimum fire resistance of 60-minutes.
133. The standard of fire separation recommended in design guidance has changed over time and as a result, there are variations in the construction and in the periods of fire resistance in buildings. Previous design standards permitted a lower level of fire resistance.

134. Separating floors and walls need to be in good condition and with no openings, whether intentional or unintentional, that would permit the uncontrolled spread of fire and smoke.
135. The fire-resisting enclosure of flats should include:
- flat entrance and other doors,
 - internal windows into an access corridor,
 - glazing above or around the flat entrance door doorways, or
 - hatches in walls for access to read meters or for deliveries.
136. Obvious openings between floors, and in walls between flats and other ancillary accommodation and the common areas, should be considered in a risk assessment. Particular attention should be paid to service ducts or service risers and any common heating or ventilation systems.
137. Where balconies have been infilled and incorporated into flats, the adequacy of fire separation and fire stopping between flats should be considered.
138. 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.
139. The adequacy of fire stopping around any openings in walls and floors for services such as; gas, water, electricity, telecommunications and drainage should be considered. These may be present where such services enter from the common areas or pass between flats. In some cases, the extent of openings and fire stopping can only be ascertained through intrusive inspections and by opening up panels in kitchens, bathrooms and other areas.
140. Small bore pipes, typically less than 40 mm in diameter, are not normally considered to be of concern. Larger pipes, especially if made of a combustible material, could allow significant fire and smoke-spread. Proprietary fire seals, including externally mounted collars, or fire-resisting enclosures are used in new buildings and could be used in older buildings. However, the difficulties of retrofitting such seals in occupied flats may mean that it is only practicable to undertake this on a long-term basis when flats become vacant.
141. In some high rise domestic buildings, common ventilation ducts are used to provide extract from bathrooms and, less commonly, kitchens. These ducts can run the full height of the building, serving a large number of flats and terminate at roof level.
142. It has been the practice for many years for the common extract from bathrooms to incorporate shunt ducts to link each flat to the common shaft, to reduce the likelihood of fire and smoke-spread between flats (Figure 2). Some early designs used the same arrangement for kitchen extract. There may be buildings that do not incorporate shunt ducts and have no adequate means of preventing fire and smoke-spread between flats via ventilation ducts. The absence of such measures to prevent fire and smoke-spread via common ventilation systems is far removed from what is acceptable today and action should be taken to reduce the risk it poses.

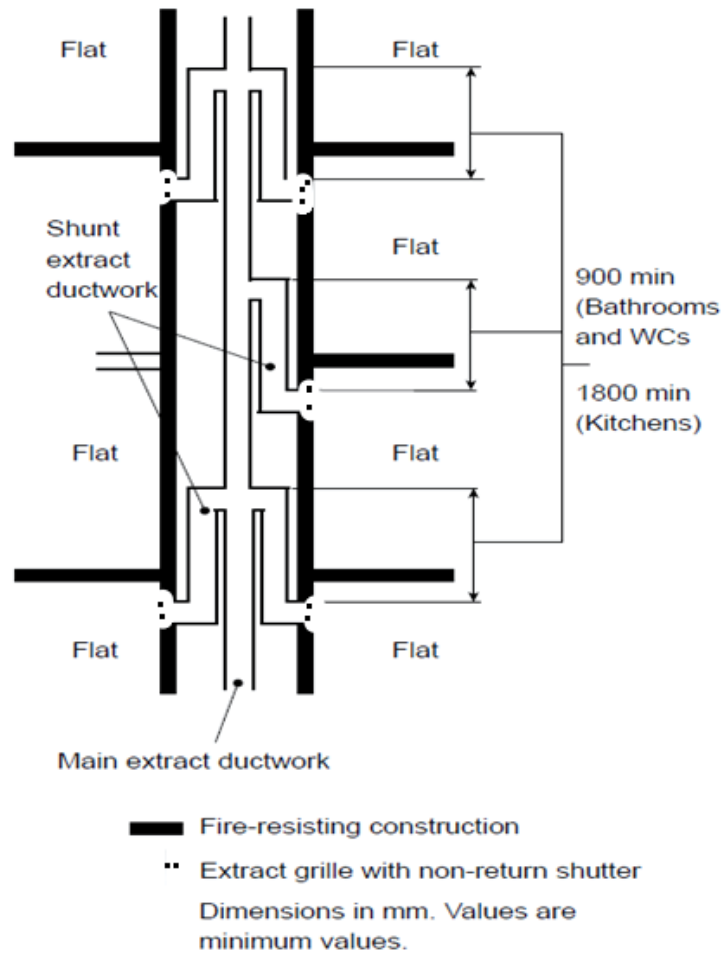


Figure 2 – Shunt duct arrangement

143. It will rarely be practicable to retrospectively introduce mechanical fire and smoke dampers into the ventilation ducts in flats. One option to reduce the potential for fire spread between flats is 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 not for kitchens, where there is the potential for a serious fire. A possible solution would be to rearrange the ventilation to discharge directly to outside and not via a common duct.

Escape routes within the common areas

Buildings where flats are served by a single escape stairway.

144. The design guidance for flats with a single escape route from a flat entrance door to the stairway is:

- Every flat is separated from the common escape stairway by a protected corridor or protected lobby.
- The travel distance between the flat entrance door and the door to a lobby or stairway is limited to 10m.

- smoke control is provided by natural or mechanical ventilation in each lobby or corridor adjacent to the stairway
- the stair has a vent at the head

Buildings where flats are served by more than one escape stairway

145. The design guidance for buildings with more than one escape stairway and alternative routes from the flat entrance door to a stairway is as follows:

- 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 30m.
- 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 10m.
- Smoke control by natural or mechanical ventilation is provided in each lobby or the corridor adjacent to the stairway to protect the stairway.
- There is a vent at the stair head

146. Figures 3 and 4 show these arrangements.

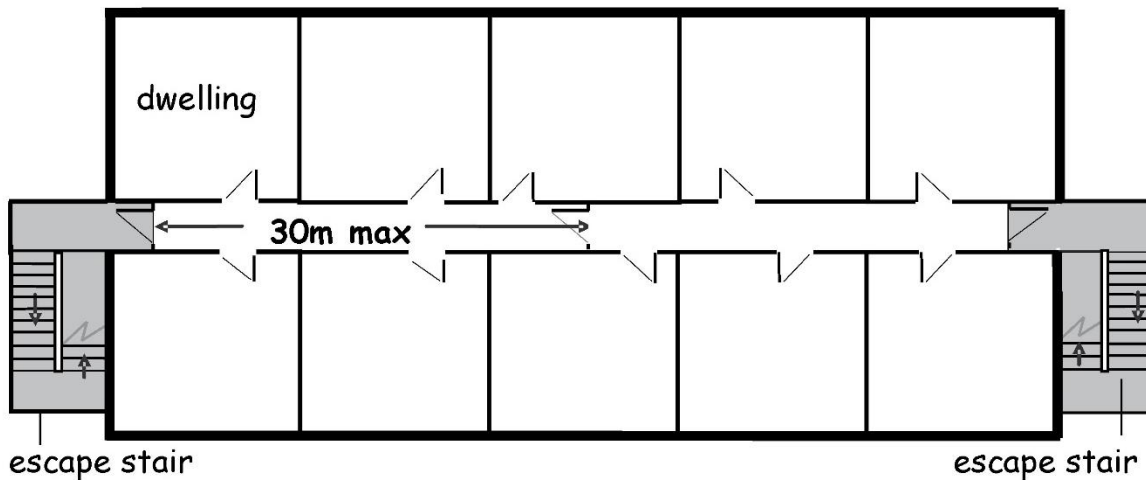


Figure 3 – Upper floor arrangement where flats are served by more than one escape stairway

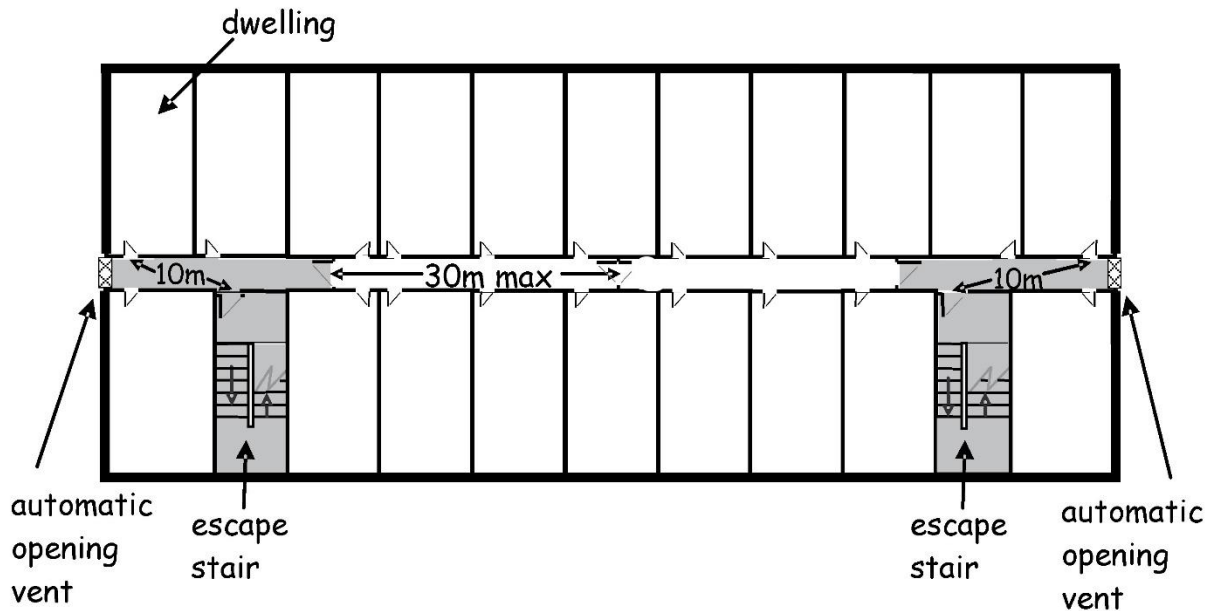


Figure 4 – Upper floor arrangement where flats are served by more than one escape stairway and there are dead ends

Flats with communal external balcony or access deck approach

147. If the width of the access balconies or decks are less than 2m, there is deemed to be 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.
148. Ideally, there should be no stores or other ancillary rooms, located off the balcony or deck.
149. The maximum travel distance for a common access balcony or deck is 40m. For flats with external balcony or deck approach and the balcony or deck provides two directions of escape, there are no limitations on travel distance in the common escape routes. The distances specified for fire-fighting access do apply.
150. For flats with a single direction of escape to a single escape stairway, the separating walls between the flats and the balcony or deck should be fire-resisting up to a height of 1.1 m from balcony or deck level. The flat entrance doors in these situations should be 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.
151. 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.

Travel distance

152. Small increases in travel distance can be accepted in most situations without any additional measures. Where there are significant increases in travel distance additional measures may need to be considered and may include:

- Additional cross-corridor doors to restrict smoke-spread.
- Improvements to the smoke control arrangements.

Protected corridors or lobbies

153. The corridors and lobbies used for escape are protected routes enclosed in construction with at least 60-minutes fire resistance.

154. Ancillary rooms, risers and other areas opening onto corridors and lobbies also need to provide this level of protection. Doors from ancillary rooms should be fire-resisting. The benchmark for doors opening into corridors and lobbies is a minimum of 60-minutes fire resistance and – with the exception of risers and ancillary rooms – the doors should be self-closing.

Stairways

155. Stairways are enclosed in fire-resisting construction to protect the escape route from fire and smoke. The benchmark for stairs which also provide a fire-fighting shaft is a minimum fire resistance of 120-minutes. Self-closing fire doors in the structure are a minimum fire resistance of 60-minutes.

156. Stairways should lead directly to a final exit. The stairways should not contain any significant fire hazards nor, ideally, anything other than lifts or protected electrical meter cupboards. Ideally, gas installations should not be located within protected stairways.

157. A stairway width of 1m would normally be considered 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.

158. In single stairway buildings the stairway should not continue down to serve 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.

159. 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.

Smoke control

160. Measures are provided for smoke control in protected lobbies, protected corridors, fire-fighting lobbies (see Chapter 2) and escape stairs. Smoke control 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.

161. With natural ventilation, lobbies and corridors are ventilated where they join a stairway, at a high level, by 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 m². A smoke shaft rises up through the building and is usually found where the lobby or corridor does not have an external wall to allow direct ventilation to open air. It has a minimum 1.5 m² opening at roof level and AOVs in each lobby into the shaft should have a minimum 1 m² 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 ventilators on the fire floor, 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.
162. Protected stairways should have means to ventilate smoke from the stairway. A vent of at least 1 m² is normally provided at the head of the stairway. This vent is usually operated manually even if electrically powered. Where an AOV is required as part of a smoke shaft arrangement, the vent should be 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.
163. It is important that firefighters 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. If ventilators are not easily accessible they should be operated by a mechanism positioned at the SFRS access point in the building. 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 firefighters flexibility in their operations.
164. Electromagnetic holding devices for ventilators have been known to fail under fire conditions due to a loss of power or weakening magnetic fields as temperatures in and around the smoke shaft increase. In light of this, fire safety risk assessments should be reviewed and consideration given to replacing them with more robust vent actuators.
165. 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 m² at the top storey. 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.
166. 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.
167. When assessing existing smoke control systems, it is appropriate to review the arrangements according to the standards in place at the time the building was built, and to determine whether it functions as originally intended. Existing arrangements may be able to be left in place, and maintained as originally designed. It may not be

appropriate to commit expenditure to restore older, non-functioning systems to their original design if effective smoke control could be installed in line with modern standards.

168. Corridor smoke control design has changed over time. Previous design guidance included a smoke dispersal strategy, with reliance on cross-ventilation of corridors, uninterrupted by cross-corridor doors. The cross-ventilation could be provided by permanently open vents (PV), manually operated vents (OV) or automatically opening vents (AOV) operated by smoke detectors.
169. Smoke dispersal using PVs is no longer seen as an acceptable method of smoke control. It has been shown to be vulnerable to failure as a result of wind direction or being undermined by residents blocking the permanent vents because of discomfort. In high rise domestic buildings 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.

Surface finishes in common escape routes

170. It is important to control the fire performance of linings within the common areas since the surface finishes of walls and ceilings can significantly affect the rate of fire-spread and contribute to the development of a fire. Combustible surface finishes should not be permitted in escape corridors, lobbies or stairways. Products and materials that will afford at least European class B-s3, d2 performance (BS EN 13501-1) are normally necessary for use in the common areas.
171. 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.
172. It is often difficult to identify existing surface finishes. Surface finishes normally considered acceptable may have been subject to many instances of over-painting that can affect their performance when exposed to fire. Multiple layers of paint applied to walls and ceilings in the common areas can give rise to rapid fire spread. In these situations, where the risk is considered significant, action should be taken to remove or treat the paint. Proprietary products are available to treat the surfaces to provide a protective outer coating that will reduce the extent of fire-spread.
173. Any false ceilings in common corridors and lobbies should preferably be non-combustible (A1 or A2).

Fire-resisting doors

174. A 'fire door' is a fire-resisting door which is rated by performance to fire under test conditions. Fire doors are used to prevent fire spread and for the protection of means of escape. A self-closing device is a normal feature of a fire door, though there are some exceptions such as doors to small cupboards which are kept locked shut.
175. A fire door rated to 30 minutes is described as FD30 (tested to BS 476: Part 22) or E30 (tested to BS EN 1634: Part 1). A suffix is added to denote that the door has a

smoke seal function giving FD30S and E30Sa respectively. A 60 minutes fire door with smoke seal is designated FD60S or E60Sa. The door rating is an indication of test performance and is not necessarily how a door will perform in a real fire.

176. The level of protection provided by a fire door is determined by the time taken for a fire to breach the integrity of the door assembly, together with its resistance to the passage of smoke, hot gases and flame. The gap between the door leaf and the frame is normally fitted with intumescent strips, in either the door or the frame (but not at the bottom of the door). The strips expand in response to heat from a fire, to seal the gap between the door leaf and the frame. Smoke seals fitted to the door leaf gap prevent the spread of smoke at ambient temperatures, before an intumescent strip expands.
177. In determining the performance of a door in fire, it is necessary to consider the whole door assembly including the frame, glazing, side-panels, transoms and ironmongery. Manufacturer's installation instructions should be followed for a new door assembly.
178. Doors protecting the common escape route between a flat and the escape stair, including flat entrance doors, are specified as minimum 60-minute fire-resisting self-closing doors (designated FD60S). Letter boxes would incorporate intumescent material which seals the opening when exposed to the heat from a fire. Current design guidance requires that fire doors forming part of the stair enclosure should also be a minimum of 60-minute fire resisting and self-closing.
179. Older doors should have complied with the test standard or specification of the day for 30-minute fire-resisting doors. They may lack intumescent strips and cold smoke seals and rely on 25 mm door stops. Flat entrance doors may not have protected letterboxes. Where older doors were self-closing, this was sometimes achieved by using rising butt hinges (Figure 5). Many of these older doors may have performed satisfactorily in a fire situation and are likely to continue to do so, providing they remain in good condition and are effectively self-closing from any angle.
180. 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. It will normally be acceptable, taking into account the fire risk, to accept existing fire-resisting doors and not replace the doors as a matter of course. It may be appropriate to consider door replacement as part of refurbishment work.
181. Upgrading existing letterboxes in flat entrance doors to meet current standards is not always necessary and will depend on the location of the flat in the building, and the location and construction of the letterbox in the door.
182. Fire-resisting flat entrance doors, and doors 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. Rising butt hinges (Figure 5) are unreliable and should not be used. The fitting of suitable self-closing devices – whether to replace rising butt hinges or because the doors are not fitted with self-



Figure 5 Rising Butt Hinge

closing devices – should be a priority.

183. There are three options for original fire-resisting doors that do not meet current standards:

- 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 FD60S door.

184. A flat door that opens directly onto a single stairway should always be FD60S. A flat entry door on an external balcony or deck access does not require a fire-resisting letterbox.

185. Where a fire-resisting flat entrance door has been inappropriately replaced with a non-fire-resisting type, the non-fire-resisting door should be replaced with a new FD60S door.

186. Testing of fire doors in 2018 by the UK Government's Ministry for Housing, Communities and Local Government (MHCLG) identified that some existing glass reinforced plastic composite fire doors failed to demonstrate the claimed period of fire resistance duration. Composite fire doors may have been used as flat entrance doors. Where doors that have failed tests are installed, building owners should review their building fire safety risk assessments and consider how quickly these doors should be replaced. Test evidence should indicate that both sides of the door have been tested and meet the criteria required. Further information can be found at <https://www.gov.uk/guidance/fire-door-investigation>.

Flat internal arrangements

187. In older high rise domestic buildings where flats open directly onto stairways, the protection of the internal hallway may have been a safeguard for the communal escape route. 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.

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

189. Where flats open directly onto stairways with no protected corridor or lobby, and where the provision of common lobbies is not a realistic proposition, additional fire safety measures may be required. They will be determined by the fire safety risk assessment process and may involve one or more of the following: enhanced levels of fire detection and warning, FD60S self-closing fire doors, protected enclosures within flats, the provision of smoke control facilities or automatic suppression systems. What is appropriate will ultimately depend on the level of risk.

Fire safety signs

190. High rise domestic buildings with a single staircase should not usually require any fire exit signage. In buildings where there are alternative exit routes or where there is any potential for confusion, fire exit signage may be required.
191. 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.
 - Ancillary rooms located within the common areas.
192. '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, but then close on operation of smoke detectors (unusual in high rise blocks), the signs should read 'Automatic Fire Door Keep Clear'. New safety signs should comply with BS EN ISO 7010.

Lighting on escape routes

193. Adequate artificial lighting and emergency escape lighting should be provided in common escape routes, such as corridors, lobbies and stairways, to enable safe use.
194. 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.
195. 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.

Refuse and chute rooms

196. There should be access to a chute room directly from the open air or by way of a protected lobby with permanent ventilation. It should be separated from other parts of the building by at least 60-minute fire-resisting construction.
197. Where chute rooms are in stairways or corridors they should be enclosed in fire resisting construction and have permanent ventilation direct to open air and designed so it does not prejudice any escape route in the event of fire.
198. Refuse chutes and access hatches which open directly onto protected corridors, lobbies and stairs have the potential for the spread of fire and smoke to the common escape routes. In these situations, an automatic fire-resisting shutter should be fitted at the base of the refuse chute to restrict the spread of fire and smoke from a fire in the refuse room. The shutter should be operated on a fixed temperature fusible link. A suppression system located over the bins should be considered where access hatches open into protected stairways or lobbies serving flat entrance doors.

Fire detection and alarm systems

Individual flats

199. Individual flats should have smoke and heat alarms to give an early warning of fire.

200. The benchmarks in this Guidance take account of the introduction of the new Tolerable Standard for Housing, which will apply to all tenure of housing, from February 2021. Smoke and heat alarms should be installed in accordance with BS 5839-6, in the following areas:

- One smoke alarm in the circulation space (on each storey in the case of maisonettes).
- One smoke alarm in the living room.
- One heat alarm in the kitchen.

201. Alarms should either be mains-powered and with an integral stand-by supply, or powered by tamper-proof long-life lithium battery. They should be ceiling mounted and interconnected to maximise the audibility of the fire alarm signal. Models interlinked by wiring or radio are available. It is preferable that smoke alarms incorporate an alarm silence control, so that false alarms do not cause unnecessary or prolonged disruption to residents.

202. Generally, new smoke alarms installed in flats should be the optical type. These are less prone to false alarms from kitchens, and they respond better to slow smouldering fires. In a circulation area close to a bathroom or shower room, a multi-sensor type should be used.

203. Where a resident has significant hearing impairment and is likely to be alone within a flat, smoke alarm equipment complying with BS 5446-3 should be used. These incorporate one or more flashing beacons to alert when awake, and vibrating pads to wake when asleep. A vibrating pager can also be incorporated.

204. Existing smoke alarms may fail to meet benchmarks in a number of areas. They may be ionisation chamber type, removable-battery operated, mains only with no stand-by supply, and will often be only provided in circulation areas, and not be interconnected.

205. When any major electrical wiring takes place in flats, smoke alarms with accessible batteries (and mains-operated smoke alarms without a standby supply) should be replaced with alarms that meet current benchmarks. The introduction of a new Tolerable Standard will make this provision mandatory.

In the common areas

206. There is no requirement in Building Regulations to install a communal fire alarm in high rise flats. Fire detection and alarm systems are not normally provided in the common areas of high rise domestic blocks and this has been the position for many years.

207. It is usually undesirable to provide a communal fire alarm system and domestic smoke alarms are not appropriate for the common areas of blocks of flats. This is because should fire detection activate in a common area, residents may be placed at

increased risk should they be alerted and choose to leave their flat to investigate or evacuate.

208. Only in very limited circumstances would it be necessary to consider the installation of a communal fire alarm system (see Chapter 2).
209. Smoke detectors may be installed to automatically operate smoke vents serving the common areas. No fire alarm sounders should be connected to these detectors.

Locks and access systems

210. Locks fitted to flat entrance doors and alternative exit doors from flats should be easily operable by the residents from the inside without the use of a removable key.
211. Flat entrance doors should, where possible, be fitted with a suitable lock that can only be locked on the outside with a key operated deadlock, but can still be opened from the inside by a handle or lever without a key. As flat entrance doors are required to be self-closing, there is a risk that self-locking security devices on the doors could accidentally lock residents outside their flats. As well as being a general nuisance for residents, there is a risk during a fire if residents leave their flat and dependent family members are inside.
212. Residents may fit additional locks, and, in some cases, security grilles and gates to entrance doors and secondary exits. Residents should be advised of the risks these may present to their safety in the event of a fire in their own flat. Any security locks, grilles or gates should be easily openable without a need for a key. The fitting of these should not impair the effective self-closing of flat entrance doors.
213. External grilles or gates should not be used where they present a risk to the residents, impinge on the safety of others, or pose difficulty for the fire and rescue service.
214. All 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 is preferred. Any exits fitted with electronic locking mechanisms must fail-safe on power failure and have a standby power supply. In some situations, it might be necessary to consider the provision of override controls in accordance with BS 7273-4.
215. When void flats are secured, it is important that the flat entrance door remains of a type that is fire-resisting and self-closing.

Facilities and assistance for firefighters

Fire-fighting facilities

216. Fire-fighting facilities are provided in high rise domestic buildings to assist the Scottish Fire and Rescue Service. The current design guidance for fire-fighting facilities is:

- Provision of a fire-fighting shaft, consisting of a fire-fighting stairway (at least 1m wide) with fire-fighting lobbies (at least 5m²); a rising fire main; and a firefighters lift.

- The fire-fighting shaft should have an overall enclosing structure at least 120-minutes fire resistance. Self-closing fire doors in the enclosing structure should be at least 60-minutes fire resistance.
- A fire-fighting lobby is not needed where access to the flats is from an open access balcony.
- An escape stair can also be a fire-fighting stair if it meets the relevant criteria.
- A wall separating a fire-fighting stair from a fire-fighting lobby should have at least 60-minutes fire resistance and the self-closing fire door should have at least a 30-minutes fire resistance.
- The firefighters lift allows firefighters to take control. It should be located in a protected area and constructed in its own compartment with at least 60-minutes fire resistance. The lift landing doors need achieve 30-minutes fire resistance. The firefighters lift should only be entered from a fire-fighting lobby with not more than one door to the room or storey it serves, or an open access balcony.
- Rising fire mains with outlets located in a protected lobby, protected corridor or open access balcony.
- If the block has a storey above 50 m height, the rising fire main should be a wet main (the threshold for a wet rising main in previous guidance was 60 m). No point on the storey should be more than 45 m from the rising fire main outlet. If the building is fitted with an automatic fire suppression system, no point on the storey should be more than 60 m from the outlet.
- A parking space for a fire appliance located no farther than 18 m from each rising fire main inlet.
- An evacuation alert system for SFRS use. This enables SFRS to activate fire alarm sounders within each dwelling on any single floor, multiple floors or the entire building, according to circumstances (introduced 1 October 2019).
- Signs identifying the storey by “Floor Number” and flat number indicators should be located on every landing of a fire-fighting stairway and every fire-fighting lobby (or open access balcony) served by a firefighters lift (introduced 1 October 2019).
- Ventilation should be provided to every escape stair, fire-fighting stair, fire-fighting lobby and to every protected lobby. A natural or mechanical smoke ventilation system used to protect the means of escape may be used to satisfy the requirement for ventilation for fire-fighting.
- Ventilators should be fitted with a simple handle or lock that can be easily operated by firefighters including where automatic opening ventilators are provided. If ventilators are not easily accessible they should be operated by a mechanism in the building at the fire and rescue service access point. In the case of an escape stair and fire-fighting stair, a local control should also be provided at the topmost storey.
- Ventilation to every escape stair and every fire-fighting stair should be by:
 - a ventilator of at least 1 m² at the top of the stair, or
 - a ventilator of at least 0.5 m² at each storey on an external wall, or
 - smoke shafts.

- Ventilation in protected lobbies, protected corridors and fire-fighting lobbies should be by:
 - a ventilator of at least 1.5 m² at each storey on an external wall, or
 - smoke shafts.

217. Figures 6 and 7 show typical floor arrangements with firefighting facilities. Figure 8 shows fire resistance rating.

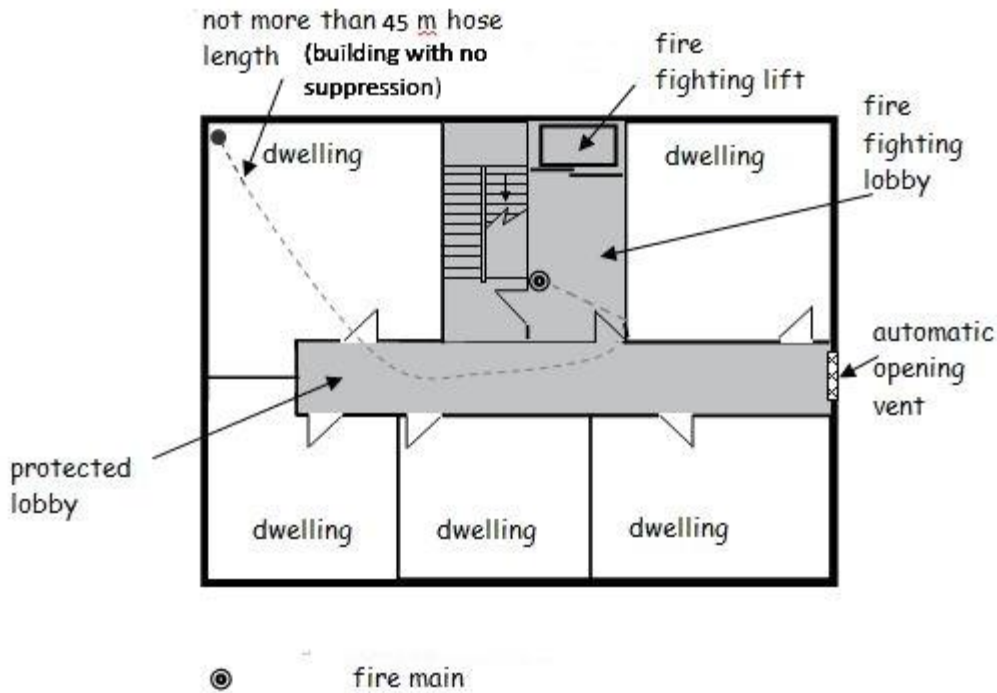


Figure 6 Ground floor arrangement showing firefighting facilities where single stair

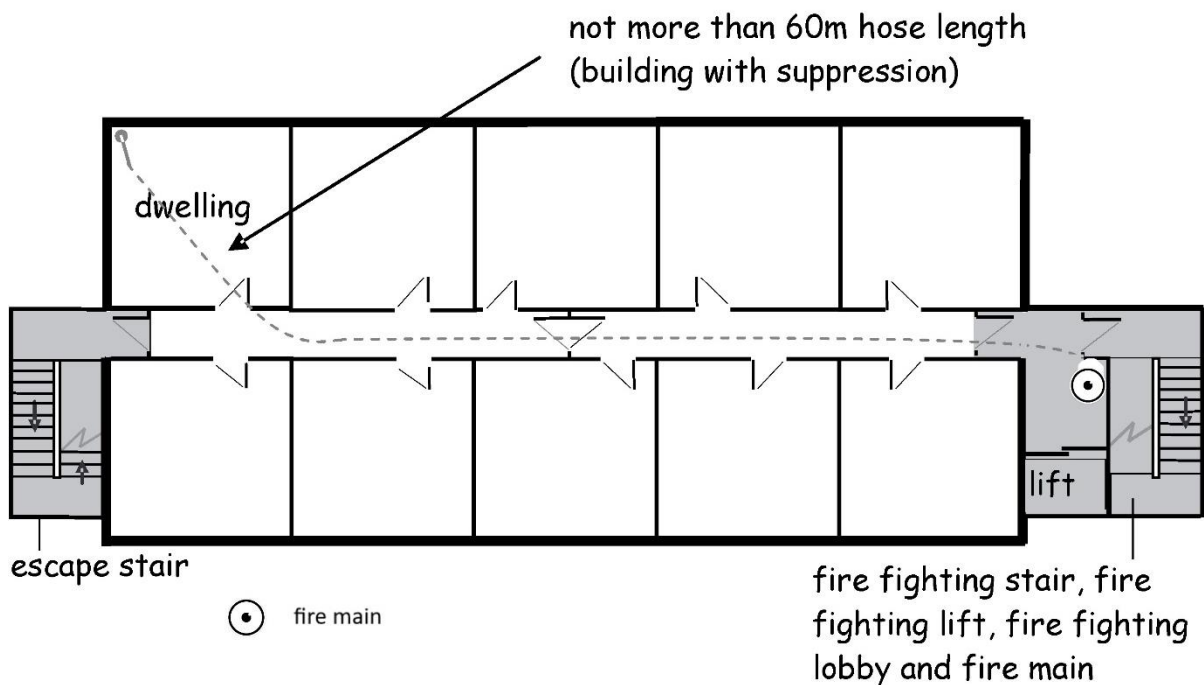


Figure 7 Upper floor arrangement showing firefighting facilities where two stairs

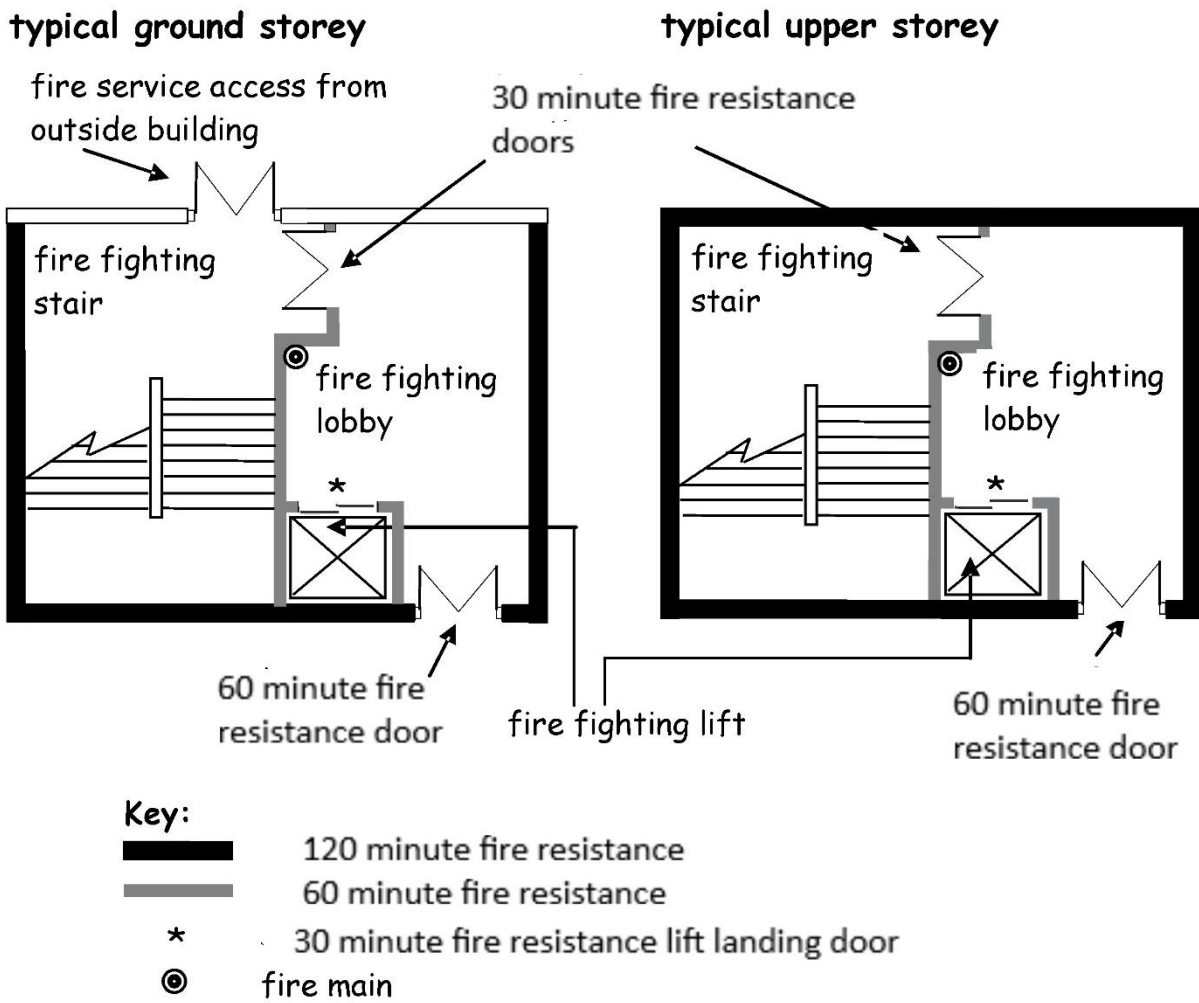


Figure 8 Fire-fighting shaft arrangement showing fire resistance ratings

218. The facilities provided to assist firefighters should, at least, meet the standard when the building was designed and should be maintained in efficient working order. Where the fire-fighting facilities are not in accordance with current standards, the advice of the fire and rescue service may be needed. It may not be possible, or even appropriate, to consider upgrades to meet current benchmarks.

Entrapment risk

219. The entrapment of firefighters in cabling that has fallen or become displaced due to exposure to heat is a contributory factor in firefighter injury and fatalities. This is often the result of plastic products or fastenings for installation (securing) of cabling. In high rise domestic buildings this is most commonly plastic trunking or conduit and underslung cable trays secured with plastic cable ties.

220. Most common plastics will fail at an early stage in a fire. Where this happens there can be a 'spider's web' of cables hanging to ensnare firefighters. Firefighters often work in reduced or zero visibility and this can be compounded by their complex and restrictive clothing and breathing apparatus.

221. BS 7671 requires that existing plastic cable management solutions need to be supplemented by metal fixings to ensure they are not the 'sole means of supporting' cables to avoid premature collapse in a fire.

Information

222. A standard external plate should be displayed for the assistance of the SFRS at an incident. These plates display relevant information on the layout of the building, its services and firefighting facilities (Figure 9).

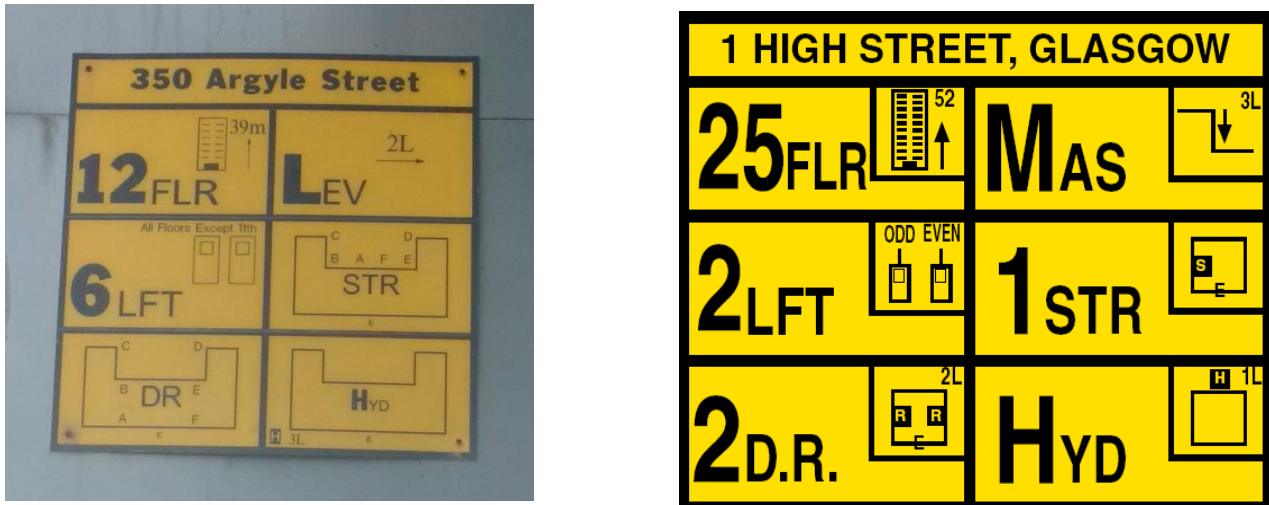


Figure 9 High rise external information plates

223. Firefighters tackling a fire in a high rise building will access the fire via the stairs – even where part of the journey may be via the firefighters lift. Floor levels and flats should be clearly numbered so that firefighters can identify them in a fire.

224. SFRS may hold information on the provision and operation of smoke control systems in its risk database. There should also be information displayed at the control panel explaining the system operation.

External fire-spread

225. The external facades of high rise flats should not provide potential for fire spread. Particular attention should be given to wooden balconies, balcony infills, spandrel panels and rain-screen or other external cladding systems.

226. The use of combustible cladding materials and extensive cavities can present a risk in high-rise buildings. Restrictions are normally applied to the nature of materials and their fire propagation and surface spread of flame characteristics. Cavity barriers are also required. Since May 2005, building regulations have required external wall cladding to be non-combustible or meet the test performance specified in BR 135.

227. There may be assistance from specialists required to determine if the construction and materials are satisfactory and whether there is adequate provision of cavity barriers.

Chapter 6: Risk management – ongoing control

228. Chapter 6 covers the responsibility for fire safety in the building and the fire safety messages for residents. There are important reminders of controlling building work and alterations (including resident's DIY) and ongoing inspection, testing and maintenance of fire safety systems and equipment.

Key points

229. Arrangements for managing fire safety should include:

- Developing a fire policy and appointing someone in the organisation to take overall responsibility for fire safety.
- Using residents' handbooks and other media to engage with residents and communicate fire safety information, and to have a channel for receiving concerns from residents.
- Providing generic training to ensure housing officers and others visiting blocks of flats have fire safety awareness.
- 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.
- Carrying out fire safety risk assessment reviews.
- Liaising with SFRS and encouraging residents to take up the offer of Home Safety Visits.

Responsibility for fire safety in the building

230. Those responsible for fire safety in high rise domestic buildings are owners; local authorities, housing associations and factors operating on behalf of residents as the housing providers and managing agents.

231. There should be a fire safety policy for the high rise domestic building which includes the roles and responsibilities of all organisations who contribute to the management of fire safety.

232. It is important that an individual in the organisation has overall responsibility for fire safety, even though they may not be on site to manage fire safety on a day to day basis. There should be routine fire safety inspections carried out where possible.

233. It is common in larger housing management organisations to split responsibilities. Estates maintenance teams may deal with repairs, routine testing and inspection of fire safety measures, and the letting department may be responsible for ensuring residents understand the conditions applying to alterations to their flats, and have fire safety information. Where responsibility is shared, one department should have

overall control and authority to ensure that activities are coordinated.

234. Where there are commercial occupiers in the building, there should be coordination and cooperation on fire safety issues, between all parties.

Engaging with residents

235. Residents are integral to effective fire safety to keep themselves and others safe. It is important they know and understand the fundamentals of fire safety in the building and how they can contribute to it. Those responsible for fire safety have a significant role in engaging with residents and to share fire safety messages. This should support them to prevent fires in their own home and in the common areas, including:

- Basic advice for residents (A leaflet containing fire safety information for residents of high rise buildings (“Keeping yourself and others safe from fire in your high rise buildings”) can be found on the SFRS website: <https://www.firescotland.gov.uk/>).
- Maintaining the building security by making sure doors close behind them when they enter or leave.
- Never storing or using petrol, bottled gas, paraffin heaters or other flammable materials in their flats, on their balcony or in shared areas.
- General policy on what common areas can and cannot be used for.
- The importance of the self-closing and fire resistance features of their flat entry door to slow spread of fire.
- Safeguarding communal escape routes, making sure fire doors self-close and are never wedged, tied or otherwise held open.
- How to raise building fire safety concerns and need for repairs.

236. The information should also inform people about action to take if they discover a fire.

237. The “Stay Put” advice applies when there is a fire elsewhere in the building (Annex 1 contains a fire action notice for where ‘Stay Put’ applies). Basic fire action notices are a simple, effective way to tell residents the actions they should take in the event of a fire.

238. A Residents’ Handbook is a useful place to put basic fire safety advice for new residents and for their future reference. Providing regular information and campaigns to promote fire safety maintains awareness.

Instruction and information for non-residents

239. Caretakers, housing officers and others working in, or visiting, blocks of flats need to have awareness of the fire safety measures in the building and the procedures in the event of fire.

240. In-house staff should have appropriate training to monitor fire safety as part of routine visits and inspections.

Preparing for emergencies

241. There should be a suitable emergency plan (usually a fire action notice) for the premises. Only on rare instances in high rise blocks of flats, will a more elaborate emergency plan be necessary.
242. When displaying a fire action notice it is good practice to place it where it is seen routinely by people entering the building. This can be by the main entrance or by the controls inside a lift.
243. Fire action notices must be relevant to the building, so most fire action notices designed for commercial buildings are likely to be inappropriate.
244. It is neither practical nor necessary to carry out fire drills and practice evacuations in domestic high rise properties.
245. It is likely that there will be residents with mobility difficulties, physical disability and mental health issues that impact on their ability to evacuate. It is not usually expected that those responsible for fire safety in the building to plan or put special arrangements in place.

Controlling building work and alterations

246. There should be processes in place to scrutinise alterations and building work in common areas that could affect fire safety. Building Regulation approval should be obtained where relevant.
247. There is the potential for fires to start or fire safety measures to be impaired during building and engineering works for alterations or repairs. Examples of impairments to fire safety measures include:
- Holes made in separating walls and floors.
 - Stairway doors removed for easier access.
 - Parts of the structure opened without providing suitable fire-resisting hoarding to separate work areas from occupied areas.
 - Site huts placed too close to the building.
 - Gas cylinders left in the building overnight.
 - Combustible building materials left in common areas.
 - Access to a rising fire main inlet blocked.
 - Parking over fire hydrants.
248. There should be clear, strict obligations from those responsible for the high rise domestic building for those undertaking works. These are to implement precautions when carrying out works to prevent issues arising. Incorporating conditions in contracts is commonly used to set out and agree the obligations. These should be reinforced by scrutinising method statements and with checks during the course of the works. Advice on fire safety during construction work is available from the Health and Safety Executive (HSE) and the Fire Protection Association (FPA).

249. Control should be applied to small works and maintenance and major projects since both can potentially create difficulties.

250. There should be control exercised over 'hot work'. Usually, this is by a 'permit to work' system that requires those carrying out the work to inspect the areas in which work is taking place, before and after the work, and to take all necessary precautions, including the temporary provision of fire extinguishers.

251. Residents should understand that work they might undertake should not be detrimental to fire safety, as in these examples:

- Changing the flat entrance door to one that is not fire-resisting and self-closing.
- Installing a new bathroom suite, without ensuring that fire separation to the common riser for fire stopping is maintained at the end of the job where there were breaches of riser walls created for new drains.
- New gas supplies to flats requiring ventilation to gas meters from unprotected openings into common corridors and stairways (Figure 10).
- Smoke vent windows which are replaced with sealed units.
- A new false ceiling installed without transfer grilles to allow smoke to reach existing permanent vents.



Figure 10 breach of fire-resisting enclosure

Fire safety systems and equipment - Inspection, Testing and Maintenance

252. Fire safety systems and equipment needs to be maintained in effective working order. This is achieved by having arrangements for routine inspection, testing, servicing and maintenance in place. British Standards apply to some systems and equipment maintenance and testing. The advice given on frequency of testing and maintenance should be followed. Minor deviations for practical reasons may be appropriate but this should be based on an assessment of risk. Appropriately

competent in-house staff can inspect and test some measures; other work should be carried out by competent contractors. There are third party certification and approval schemes for assurance of quality, reliability and safety against a recognised standard.

- 253. If systems are tested by in-house staff, contractors need to be available through a call-out arrangement for required repairs.
- 254. It is good practice to keep records on the inspection, testing and maintenance.
- 255. The following are the basic requirements for routine testing and maintenance of fire safety systems.

Emergency escape lighting

- 256. Test each fitting periodically, except where the emergency lighting is a self-testing type. In most cases, the testing comprises monthly functional test to check that the luminaire has not failed. This is a simple test that can easily be undertaken in-house. An annual full duration discharge test is important to confirm that the batteries can supply the fitting for its duration. (Care should be taken not to leave a building entirely without escape lighting while batteries recharge after a test). Further guidance on testing and servicing emergency escape lighting systems can be found in BS 5266-8.

Smoke ventilation

- 257. AOVs and electrically operated OVVs 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.
- 258. Testing and maintenance of the interface between smoke detection and the controls associated with AOVs should take place at least twice a year, and in accordance with the manufacturer's instructions. Further guidance can be found in BS 7273-6.
- 259. 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.
- 260. Further guidance on testing and servicing of smoke control systems can be found in BS 9999.

Smoke and heat alarms in flats

- 261. Smoke and heat alarms should be tested at least every month (preferably each week). It is usually the responsibility of residents to test smoke alarms in their own flat.
- 262. Landlords should use opportunities to check on the general condition of smoke alarms they have provided. For example, signs that a tenant has interfered with or disabled a smoke alarm is easily checked when visiting the property. A contractor can also test a smoke alarm while undertaking a routine visit to carry out a repair or at an annual gas safety check.

263. Further guidance on testing smoke alarms can be found in BS 5839-6. Alarms should be replaced at the end of their lifespan in line with manufacturer's recommendations.

Fire dampers

264. Fire dampers in communal ductwork or rubbish chutes, should be inspected and tested 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

265. Sprinkler systems and water mist systems should be inspected annually. It is unlikely that a landlord will have staff with appropriate specialist knowledge in-house. Contractors may need to be employed. Guidance on maintenance of domestic sprinkler systems can be found in BS 9251.

Rising Fire mains

266. Rising fire mains should be inspected every six months and tested every 12 months. Inspections are primarily 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.

267. Guidance on testing and maintenance of rising fire mains can be found in BS 9990.

Firefighters lifts

268. Lifts used for fire-fighting should be subject to monthly inspections, annual testing and regular maintenance. Guidance on testing and servicing of firefighters lifts can be found in BS EN 81-72.

Evacuation Alert Systems

269. Evacuation alert systems for use by SFRS should be tested and maintained in accordance with BS 8629.

Fire-resisting doors

270. Fire-resisting doorsets should be inspected every six months to check for 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.

271. Checks of flat entrance doors could be combined with routine repairs or annual gas safety checks. Further advice on routine inspection and maintenance of fire-resisting doors can be found in BS 8214.

Fire-resisting construction

272. Damage to walls or signs of unauthorised work in common corridors, lobbies and stairways – including DIY by residents – are likely to be obvious. Fire safety checks offer opportunities to inspect other areas such as riser cupboards, plant rooms and so forth.

273. Other opportunities, such as when flats become vacant or change tenancy, should be used to inspect the condition of fire separation.

Smoke vents

274. Windows and other non-electrical means provided for venting smoke should be opened on a regular basis, at least once a year, to ensure they open freely.

Checking fire safety standards

275. It is good practice to undertake regular fire safety inspections as part of housing stock management. A fire safety inspection of high rise domestic buildings is a way to identify fire prevention and maintenance issues. The frequency of fire safety inspections may vary, depending on how successfully standards are being maintained. Frequent inspections are likely to be necessary in high rise domestic buildings where there are concerns about anti-social behaviour and a consequent threat of fire raising, or where a 'managed use' policy applies to the common areas.

Fire Safety Inspection - Checklist

The following should be checked:

- Monitor common areas and check they meet the policy.
- Doors to residents' store rooms, electrical cupboards, plant rooms, bin stores and other ancillary rooms are not left or held open.
- Entrance and exit doors are closing properly.
- Signs of damage to fire-resisting walls, doors and glazing.
- Smoke control vents have not been tampered with or obstructed.
- Fire exit signs or fire action notices are not missing or defaced.
- Fire detectors are in place and have not been damaged, covered over or interfered with.
- Rising fire main outlets are not damaged or obstructed.
- Entrance doors are closing effectively and security lights are working.

- Plant rooms and electrical cupboards are locked shut and bin rooms are secure.
- There are no materials sited or vehicles parked, close to the external façade.

276. Day-to-day activities that take place in a block of flats also provide opportunity to monitor fire safety in the common areas. Housing officers, repair teams, cleaners and any other staff or regular contractors can significantly impact on the standard in a particular building by being aware of what to look out for.

Being alert to the possibility of improving fire safety standards

277. Planned alterations and improvements to high rise domestic buildings can provide an opportunity to upgrade the fire safety measures. For example, a lift replacement can be upgraded to firefighters lift standard, particularly in relation to power supplies and will improve the protection afforded to firefighters. Where a block of flats is due for extensive refurbishment, careful consideration should be made when deciding what safety features should be upgraded.

Liaising with the Scottish Fire and Rescue Service

278. The SFRS undertakes visits to high-rise domestic buildings 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 firefighters lifts and rising fire mains.

279. The high rise domestic buildings that should be visited is at the discretion of the SFRS. These visits are invaluable as pre-planning for an emergency and should be welcomed by those responsible for the premises.

280. The SFRS may also carry out an enforcement visit to check on whether the obligations to maintain the property and maintain the facilities for firefighters are met.

281. Home Safety Visits are a key component of the SFRS's community safety engagement and are available to residents. These can be highlighted to residents, particularly those who are known to need fire safety assistance.

Chapter 7: The Law on Fire Safety

282. Chapter 7 gives an overview of the legislation in place in relation to Building Regulations, the Fire (Scotland) Act 2005 and the Civic Government (Scotland) Act 1982.

Building Regulations

283. Building Regulations apply to new building work, such as the erection of a new block of flats, extension of an existing block, buildings being converted to flats or alterations to the building. 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 fire and rescue service.

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

285. 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 fire and rescue service – 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.

286. 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.

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

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

289. Anyone in doubt about the application of building regulations should contact the local authority building standards.

Housing (Scotland) Acts

290. At the time of writing, 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.

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 dwellings, 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

291. All alarms should be ceiling mounted and interlinked. They can be either mains-wired or have tamper-proof long-life lithium batteries. 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.

292. The Housing (Scotland) Act 2006 also requires inspection and testing of electrical installations in private rented housing.

293. 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 quality standard includes requirement for at least one smoke alarm in any social rented property and for thumb-turn locks to allow escape in event of fire. The Scottish Housing Regulator has power to intervene in relation to the Scottish Social Housing Charter. Again, the proposed changes will supersede this alarm provision standard.

Fire (Scotland) Act 2005

294. Part 3 of this Act is the legislation which applies to fire safety in non-domestic premises. However it does not generally apply to individual flats, or to the common areas of blocks of flats. However, the Act may apply to some parts of a high rise building, including those listed in paragraph 8.

295. The Fire Safety (Scotland) Regulations 2006 apply to non-domestic premises in tandem with Part 3 and also generally do not apply to individual flats, or to the common areas of blocks of flats. However, one provision of the regulations does apply to the common areas of high rise domestic buildings. This is the requirement to ensure that the common areas and any facilities, equipment and devices provided for the use by or protection of firefighters, are maintained in an efficient state, efficient working order and in good repair. This provision is imposed on the persons who have control of the common areas (dutyholders).

296. 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.

297. 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.

The Civic Government (Scotland) Act 1982

298. 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.

299. 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.

Annex 1

Example of fire action notice

For use in blocks with a 'stay put' policy

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
- Alert neighbours on the same floor if safe to do so
- Do not use the 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 you are directly affected by smoke or heat from the fire, or if you are told to by the emergency services

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
-

Annex 2 - Fire Safety Risk Assessment Template

Record of Fire Safety Risk Assessment in High Rise Domestic Buildings

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? If yes, please detail below.			
Is there a staff presence, such as a caretaker or a concierge? If yes, please detail below.	Yes	No	
Does the building have any ancillary uses such as 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	

--	--	--

Are testing and maintenance records available and complete?	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 5	YES	NO
		<input type="checkbox"/>	<input type="checkbox"/>

Are there any sources of fuel present?		
--	--	--

--	--	--

	Action required (Please tick) If you answered yes, record action at PART 5	YES	NO
		<input type="checkbox"/>	<input type="checkbox"/>

Are there any sources of oxygen present e.g. ventilation			
	Action required (Please tick) If you answered yes, record action at PART 5	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 5	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 5	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 5	YES	NO
Is there potential for fire or smoke spread through routes such as open doors, vertical shafts, service ducts, service penetrations, ventilation systems, cavities, voids, external wall cladding systems?			
	Action required (Please tick) If you answered yes, record action at PART 5	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 5	YES	NO

Are the flat entrance doors sufficiently fire resisting and self-closing?
Please see Chapter 5: Risk Management – Physical Fire Safety Measures in Fire Safety in Existing High Rise Domestic Buildings Guidance.

--	--	--	--

	Action required (Please tick) If you answered yes, record action at PART 5	YES	NO

Is there protection of the stairways from fire in adjacent areas? i.e. 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 5	YES	NO

Is the travel distance from flat entrance doors to the nearest stairway or final exit acceptable?

Please see Chapter 5: Risk Management – Physical Fire Safety Measures in Fire Safety in Existing High Rise Domestic Buildings Guidance.

--	--	--	--

	Action required (Please tick) If you answered yes, record action at PART 5	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 5	YES	NO

Are there fire escape route signs? Are they required if not?

--	--	--	--

	Action required (Please tick)	YES	NO

	If you answered yes, record action at PART 5		
<p>Is there adequate fire separation evident, particularly the enclosure of flats within fire resisting construction? Please see Chapter 2: Fire safety design in High Rise Domestic Buildings in Fire Safety in Existing High Rise Domestic Buildings Guidance..</p>			
	Action required (Please tick) If you answered yes, record action at PART 5	YES	NO
<p>Where provided, are rising fire mains, firefighters lifts, suppression systems and smoke ventilation systems properly maintained?</p>			
	Action required (Please tick) If you answered yes, record action at PART 5	YES	NO
<p>Are there any fire suppression installations provided or required?</p>			

	Action required (Please tick) If you answered yes, record action at PART 5	YES	NO

PART 4 Improvement plan (where required)

Detail any improvements to fire safety measures which are considered necessary. Please also detail if the outcome is that there are no improvements necessary.

Review the fire safety 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 6 Record and review			
Review Date		Reviewed by	
Reason for review			
Outcomes of review			



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Annex 3 Framework to Support the storage, removal and enforced prohibition of materials left in common areas of high rise domestic buildings that constitute a fire risk

Introduction

This Framework is to support consistent, proportionate approaches to deal with material left in the common areas of high rise domestic buildings. The Framework is a guide to support improved fire safety and is not a requirement.

Areas should continue to operate existing agreed ways to deal with such material, where they are already in place and operating effectively.

Background

This Framework has been produced following a recommendation from the post-Grenfell Ministerial Working Group (MWG) Review of the Fire Safety Regime to ensure the effective control and removal of combustible materials left in common areas.

Who is the Framework for?

This Framework is aimed at those responsible for fire safety in high rise domestic buildings. Typically this would be the building owner, which may include, or receive support from other groups and organisation such as: Local Authorities, housing associations, letting agents, private tenants, factors and private landlords.

How to use this Framework

The purpose of this Framework is to help to improve fire safety by stopping materials being left in common areas to reduce the chance of fires starting; and by keeping access and egress routes clear.

Those responsible for Fire Safety in high rise buildings are encouraged to use this Framework and work in partnership to develop a system to deal with materials left in common areas of high rise domestic buildings. It may be most useful to use this guidance on a building by building basis, as the approach needed through partnership working may differ from area to area.

The partner organisations should involve relevant organisations, including Scottish Fire and Rescue Service, Local Authorities, private landlords, factors and Housing Associations. This Framework allows for appropriate flexibility in approach, to address the particular circumstances of each organisation.

Scope

This Framework is intended for high rise domestic buildings, however the principles of partnership working could be applied in other building types. High rise domestic buildings are classed as buildings that have a floor above 18m in height, where the primary purpose is for living in.

Current Position on Combustibles in Common Areas

The current legal position is:

*It shall be the duty of the **occupier** to keep the common property free of any combustible substances; and anything which might obstruct egress from and access to the property in the event of fire. (Civic Government (Scotland) Act (CGA) 1982, Section 93 (subsection 2))*

A Combustible substance is:

“anything which is dangerously combustible in normal conditions and includes any container holding the combustible substance including any such container forming part of a motor vehicle but does not include anything forming part of any common property.”

Occupier is defined in section 92 of the Act and, in relation to common property, means: *“the occupier or occupiers of lands or premises having a right of access by, or a right in common to the common property”*.

The penalty for non-compliance by an occupier can be a fine not exceeding level 3 on the [standard scale](#), a maximum of £1000.

Potential Contribution by Partner organisations

Partner organisations may be able to contribute practical support to operating the Framework, for example local authorities can aid in the uplift and storage of materials. It will be helpful to develop a Partnership Agreement with relevant organisations that sets out roles and parameters. An example template partnership agreement is included towards the end of this Annex.

The Scottish Fire and Rescue Service Enforcement Team can be contacted for general support and advice on fire safety issues. This may be particularly helpful where it is unclear whether materials are a fire risk. Contact details can be found on the SFRS website: <https://www.firescotland.gov.uk/your-safety/for-businesses/contact-your-local-fire-safety-enforcement-office.aspx>.

For all aspects of this Framework, and particularly before agreeing individual partnership arrangements or processes, partners may wish to consider taking legal advice.

Framework regarding the storage, removal and enforced prohibition of materials left in common areas of high rise domestic buildings that constitute a fire risk

It is the occupiers that are responsible for keeping common areas clear of materials that could constitute a fire risk. They should be made aware that this is the position and encouraged to keep common areas clear at all times.

Below is a Framework for managing materials left in common areas.

1) Develop a partnership agreement on how best to manage items left in common areas with relevant groups, which may include Local Authorities, Police, and SFRS enforcement teams.

A template for a partnership agreement can be found on at the end of this Annex.

2) Those responsible for fire safety in the building need to be alerted to combustible material being left in a common area, or materials that will significantly affect access to or escape in the event of fire. The materials can be identified by a routine inspection by a caretaker or those responsible for the building; a routine operational assurance visit by SFRS; or by occupiers who notice any issues.

People living in high rise buildings need to be provided with information on how to raise their concerns and be given a clear contact number or email address for this purpose. It may be helpful to also ensure this information is available in a public place, such as an appropriate noticeboard.

3) Those responsible for the building should assess the material for fire risk as soon as possible.

The assessment should consider whether the:

- area is common property
- materials are combustible
- materials could potentially block access to, or escape from, a flat in the event of fire

The assessment should be a straightforward process, giving consideration to the level of security provided to the block, the prevalence of fire-raising in the area and the nature of the items. High risk items are those which can be ignited with ease for example upholstered furniture, bags of rubbish, motorbikes or petrol lawnmowers. Lower risk items may include prams, broken household appliances or small wooden tables etc. This list is not exhaustive and consideration should be given to any items on a case by case basis.

Consideration should also be given to whether the items present an obstruction which would hinder access or egress in the event of fire, for example a restriction of width to less than 700mm or material stored in such a way as to clearly present the potential to collapse and thereby cause an obstruction. Chapter 4 of Scottish Government Guidance 'Fire safety in existing high rise domestic buildings' which provides advice on fire prevention and housekeeping, may also be of use.

4) Response to varying degrees of risk

High Risk - Follow the process set out any partnership agreement you have developed, to ensure high risk materials are appropriately dealt with as soon as possible.

Low Risk - If the material is assessed as low risk, it may be most appropriate to try and identify the owner and ask them, in person or by writing, to remove the material in a reasonable time frame.

If an owner cannot be identified, one course of action is to place a notice on the material requesting it be moved in a reasonable timeframe. This notice should give information on action to be taken if the material is not removed (namely, it may be uplifted and stored). An example template notice can be found at the end of this Annex.

5) Action taken

High Risk – Via your partnership agreement the item should have been uplifted and stored/disposed of as appropriate

Low Risk – If after a set period the low risk item hasn't been collected or removed by the owner, follow the process set out any partnership agreement you have developed, to ensure these materials are appropriately dealt with.

6) Next Steps

You may wish to circulate letters/Notices to all occupiers reminding them of the importance of keeping the common areas clear.

Consideration should be given as to how best to recover any costs incurred through any partnership agreements you develop.

[Name of partnership]

Partnership Agreement

[Ratification date]

Contents

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1 Background

- 1.1 [Organisation A, Organisation B, and... Organisation Z] have formed this partnership to [text on reason for forming partnership] across [locality].
- 1.2 It is an equal partnership for the mutual benefit of all organisations involved.
- 1.3 [If appropriate, what is the problem/issue/opportunity that led to the establishment of this partnership]

2 Partnership aims and objectives

- 2.1 The overarching aim of this partnership is to [text].
- 2.2 Specific objectives are:
 - 2.2.1 [objective]
 - 2.2.2 [objective]

3 Partnership activities

- 3.1 Activities to be delivered by the partnership are:
 - 3.1.1 [Activity]
 - 3.1.2 [Activity]

3.2 The initial timeframe for partnership activities will be [X] years, commencing in 20XX/20XX.

3.2.1 [Specific activity timeframe/s if necessary]

3.3 Activities will be reviewed [every 6 months/annually, etc.] to ensure that they are being delivered as agreed, and that they are having the intended impact.

4 Monitoring

4.1 All partners commit to ongoing monitoring and evaluation how the agreement is operating to help to improve fire safety by stopping materials being left in common areas and effective use of public resources.

4.2 The [name of body responsible for monitoring] will co-ordinate the monitoring and report back to senior teams and governing boards as appropriate.

5 Designated partnership leads

6.1 Each partner will appoint a senior member of staff to lead on the work of the partnership.

6.2 The designated lead member of staff for each partner will:

6.2.1 [Text]

6.2.2 [Text]

6.3 [Text about how designated leads will report back]

6.4 [Text to ensure that vacant partnership lead positions are not left unfilled]

6 Financial contributions

8.1 [If applicable, detail financial contributions to be made]

8.1.1 [Detail where the fund will sit and how it will be managed]

7 Disclaimer

9.1 It should be noted that by signing this document or by participating in the [name of partnership], the partners are not committing to legally binding obligations. It is intended that the partners remain independent of each other and that their collaboration and use of the term

'partner' does not constitute the creation of a legal entity, nor authorise the entry into a commitment for or on behalf of each other.

Signed on behalf of [partner A]

..... Date
.....
[NAME, POSITION]

Signed on behalf of [partner B]

..... Date [NAME,
POSITION]

Signed on behalf of [partner C]

..... Date [NAME,
POSITION]

Removal Request

DESCRIPTION OF MATERIAL/S	
LOCATION OF MATERIAL/S	
DATE	

This material has been left in a common area of the building. It is necessary to ensure that common areas are kept clear for fire safety purposes therefore this material must be removed within ___ hours/days.

Failure to adhere to this removal request will result in this material being removed.

Under current legislation (Civic Government (Scotland) Act 1982, Section 93 (subsection 2)), it is the duty of the occupiers to keep the common property free of combustible substances and obstructions. A notice may be served by the Scottish Fire and Rescue Service on the person responsible for this item. Non-compliance with said notice can lead to a fine of up to £1000.

Please use the below details if you have any queries regarding this removal request.

Contact Name: _____

Contact Number: _____

Annex 4 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 of a block of flats used by occupants of more than one flat for access and egress.
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.
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.)
Firefighters lift	A lift, designed to have additional protection, with controls that enable it to be used under the direct control of the fire and rescue service.
Fire-fighting shaft	A fire-resisting enclosure containing a fire-fighting stair, rising fire mains, fire-fighting lobbies and a firefighters lift.
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.
Means of escape	A route or routes provided to ensure safe egress from the premises to a place of total safety.
OV (Openable vent)	A vent provided for smoke control in the common areas, that can be opened by the fire and rescue service by means of hardware or a control (which may be located remotely) provided for the purpose.

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.
Rising 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.
Self-closing device	A device that is capable of closing a door from any angle and against any latch fitted to the door.
SFRS	Scottish Fire and Rescue Service.
Simultaneous evacuation	A procedure in which all parts of a block of flats 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.
Spandrel panel	An external wall panel between window openings.
Stay put	The principle on which high rise building design is based. It is an evacuation strategy where only the residents of the flat of fire origin need to escape initially, while other residents may remain in their own flats if unaffected by fire or smoke.
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.

Guidance documents

CP3 Chapter IV-1:1962 Code of basic data for the design of buildings. Precautions against fire. Fire precautions in flats and maisonettes over 80 ft in height (superseded)

CP3 Chapter IV-1: 1971 Code of basic data for the design of buildings. Precautions against fire. Flats and maisonettes (in blocks over two storeys) (superseded)

BS 5588-1:1990 Fire precautions in the design, construction and use of buildings. Code of practice for residential buildings (superseded)

BS 9991:2011 Fire safety in the design, management and use of residential buildings. Code of practice (superseded)

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

Other British Standards referenced

BS EN 81-72: 2015 Safety rules for the construction and installation of lifts - Particular applications for passenger and goods passenger lifts Part 72: Firefighters lifts

BS 5266-1:2016 Emergency lighting. Code of practice for the emergency lighting of premises'

BS 5266-8: Emergency escape lighting systems (BS EN 50172: 2004)

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 13501-1:2018 Fire classification of construction products and building elements. Classification using data from reaction to fire tests

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

BS EN 62305-3:2011 Protection against lightning, physical damage to structures and life hazard

BS 476-22:1987 Fire tests on building materials and structures. Method for determination of the fire resistance of non-loadbearing elements of construction

BS 5446-3:2015 Detection and alarm devices for dwellings. Specification for fire alarm and carbon monoxide alarm systems for deaf and hard of hearing people

BS 5839-6:2013 Fire detection and fire alarm systems for buildings. Code of practice for the design, commissioning and maintenance of fire detection and fire alarm systems in domestic premises

BS EN ISO 7010:2017 Graphical symbols. Safety colours and safety signs. Registered safety signs

BS 7273-4:2015 Code of practice for the operation of fire protection measures. Actuation of release mechanisms for doors

BS 7273-6:2019 Code of practice for the operation of fire protection measures. Fire detection and fire alarm systems. Interface with ancillary systems and equipment

BS 8214:2016 Timber-based fire door assemblies. Code of practice

BS 8629 (under development at time of print) Code of practice for the design, installation, commissioning and maintenance of evacuation systems for use by fire and rescue services in buildings containing flats or maisonettes

BS 9251:2014 Fire sprinkler systems for domestic and residential occupancies. Code of practice

BS 9990:2015 Non-automatic fire-fighting systems in buildings. Code of practice

BS 9999:2017 Fire safety in the design, management and use of buildings. Code of practice

Other guidance

'Code of practice for the in-service inspection and testing of electrical equipment', third edition, Institution of Engineering and Technology, 2008.

'Requirements for electrical installations: IEE wiring regulations', 18th edition (BS 7671: 2018). Institution of Engineering and Technology 2018

'BR 135 Fire performance of external thermal insulation for walls of multi-storey buildings'

'Code of practice: Refurbishment of communal buildings and the fire risk of multi-layer paints', Warringtonfire, 2005



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