



**Northern Ireland
Fire & Rescue Service**

HMO FIRE SAFETY GUIDE

Information on Complying with Fire Safety Law in Northern Ireland

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1 INTRODUCTION

1.1 Purpose

The purpose of this guide is to help the managers of Houses in Multiple Occupation (HMOs) understand how to meet their legal obligations in respect of fire safety.

1.2 Background

In some types of HMOs the risk of death from fire is considerably greater than comparable single occupancy properties but for others there is little or no additional risk. Consequently, standards of fire precautions in HMOs should be proportionate to the perceived risk. These should take account of the building, the layout, the number and types of occupants and the condition of the property.

1.3 Application

This guide may be applied to existing HMOs or for properties being converted to an HMO. A property being converted to an HMO may require building control and/or planning approval which should be confirmed prior to conversion.

1.4 Limitations

This guide provides a summary of key performance standards and design provisions relating to the more common building layouts. It does not set prescriptive standards but provides a benchmark of appropriate standards, against which the adequacy of fire precautions may be compared.

More detailed guidance should be consulted as necessary and is referenced in the supporting guidance in Section 9, Page 57.

There are likely to be alternative ways of demonstrating compliance with the relevant requirements other than by following a design provision given in this guide. There is therefore no obligation to adopt any particular provision, should you decide to comply in some other way. However, you will have to demonstrate that your alternative solution meets the relevant requirements by those other means.

1.5 Overview

This guide has been written on the understanding that it will be used by a competent person, who is a person regarded as having sufficient training and experience or knowledge and other qualities to enable them to both fully understand the dangers involved, and to properly undertake the measures required.

It is based on the principle that all occupants of an HMO should be protected from fire and be able to leave the premises safely in the event of a fire.

This is to be achieved by a combination of measures to prevent the spread of products of combustion to occupancies or escape routes before the occupants have made good their escape, and measures such as fire warning systems to help ensure that occupants receive warning of a fire in sufficient time to make their escape before routes become impassable.

In all circumstances, the fire safety measures required should be identified by a competent person carrying out a fire safety risk assessment, the outcome of which, will be to determine the measures required, suitable for the premises.

1.6 Fire Safety Legislation

The fire safety legislation which applies in Northern Ireland is:

- The Fire and Rescue Services (Northern Ireland) Order 2006; and
- The Fire Safety Regulations (Northern Ireland) 2010.

NIFRS is the enforcing authority. A House in Multiple Occupation is defined as a relevant premises by Article 50(6) of the 2006 Order.

The legislation requires the responsible person, to undertake duties to ensure persons (whether they are employees, residents, visitors or others) are safe from harm caused by fire.

The duties fall into seven general categories:

- 1) Carrying out a fire safety risk assessment;
- 2) Identifying the fire safety measures necessary as a result of the fire safety risk assessment outcome;
- 3) Implementing these fire safety measures using risk reduction principles;
- 4) Putting in place fire safety arrangements for the on-going control and review of the fire safety measures;
- 5) Complying additionally with the specific requirements of the fire safety regulations;
- 6) Keeping the fire safety risk assessment and outcome under review; and
- 7) Record keeping.

1.7 HMO Legislation

The HMO legislation which applies in Northern Ireland is:

- Houses in Multiple Occupation Act (Northern Ireland) 2016;
- HMO Regulations 31 - The Houses in Multiple Occupation (Living Accommodation Standards) Regulations (Northern Ireland) 2019;
- HMO Regulations 32 - The Houses in Multiple Occupation (Code of Practice) Regulations (Northern Ireland) 2019;
- HMO Regulations 33 - The Houses in Multiple Occupation (Hazards) Regulations (Northern Ireland) 2019;
- HMO Regulations 34 - The Houses in Multiple Occupation (Fees) Regulations (Northern Ireland) 2019;
- HMO Regulations 36 - The Houses in Multiple Occupation (Specified Educational Establishments) Regulations (Northern Ireland) 2019;
- HMO Regulations 37 - The Houses in Multiple Occupation (Space Standard) Regulations (Northern Ireland) 2019;
- HMO Regulations 38 - The Houses in Multiple Occupation (Notice of Application) Regulations (Northern Ireland) 2019; and
- HMO Regulations 39 - The Houses in Multiple Occupation (Commencement and Transitional Provisions) Order (Northern Ireland) 2019.

Councils are the enforcing authority, co-ordinated by NI HMO Unit.

All landlords must apply for a licence for each HMO which may be made online.

When granting the licence, the local council may specify the number of persons allowed to live in the property. They will base this on the number of bedrooms, bathrooms and facilities and the intended use of the property, for example if it is intended for older people.

The landlord must make sure the number of occupants specified on the licence is complied with.

1.8 Fire Safety Risk Assessments

Before an HMO is occupied, a detailed fire safety risk assessment should be completed in accordance with Article 25 and 26 of The Fire and Rescue Services (Northern Ireland) Order 2006. This should form the foundation of all fire safety measures and should be carried out by a competent person with sufficient technical knowledge.

In carrying out the risk assessment the competent person should have regard to:

- a) the adequacy of the fire alarm system;

- b) the adequacy of the means of escape for the number and types of occupants;
- c) the adequacy of the means by which individual occupancies and the escape routes from them are protected from the spread of products of combustion, which will include an assessment of requirements for fire resisting construction of walls and floors, the location and installation of fire doors and the sealing of fire doors, ducts and services to prevent the spread of products of combustion.
- d) the travel distances to escape from each room to a final exit;
- e) the positioning of easy opening devices;
- f) the adequacy of fire fighting equipment;
- g) the adequacy of escape lighting;
- h) the adequacy of notices and signs;
- i) the capabilities of the occupants to determine if enhanced arrangements are required for anyone with impaired mobility, a disability, or for any other reason that could impact on their ability to escape in the event of fire; and
- j) the maintenance, testing and recording arrangements for the fire safety measures.

It is a legal requirement for the significant findings of the fire risk assessment to be recorded, including the measures which have been or will be taken, and any relevant person or group of relevant persons identified as being especially at risk from fire.

The NIFRS website www.nifrs.org contains a range of helpful advice which includes access to relevant technical guides and an example fire risk assessment for an HMO.

1.9 Vulnerable Persons

A vulnerable person is anyone who may require additional measures to assist them to evacuate in the event of a fire due to impaired mobility, a disability or other illness which may impact on their ability to self-evacuate. Compliance with this guide is not necessarily sufficient to address the protection of vulnerable residents from fire. The National Fire Chiefs Council (NFCC) guide titled, "Fire Safety in Specialised Housing" should be consulted for advice in this regard.

1.10 The Need for Good Management in HMOs

Adequate means of escape and other fire precautions are only sufficient if there are also adequate arrangements to ensure that the HMO is managed in such a way that the standard of fire safety is maintained. Means of escape, for instance, should be kept clear and fire precautions such as alarm systems and extinguishers need regular maintenance.

The provisions of this fire safety guide have been written on the assumption that fire safety in the building concerned will be adequately managed. NIFRS may require an increase in fire provisions if insufficient management is identified.

2 HMO DEFINITION AND CATEGORIES

2.1 HMO Definition

The meaning of House in Multiple Occupation is defined by Article 1 of the Houses in Multiple Occupation Act (Northern Ireland) 2016, which states:

- 1.—(1) A building or part of a building is a “house in multiple occupation” if—
- a) it is living accommodation (see section 2),
 - b) it is occupied by 3 or more persons as their only or main residence (see section 3),
 - c) those persons form more than two households (see section 4), and
 - d) rents are payable or other consideration is to be provided in respect of the occupation by at least one of those persons of the living accommodation.
- (2) But a building or part of a building within subsection (1) is not a house in multiple occupation if it is listed in Schedule 1 (exceptions).
- (3) The Department may by regulations amend this section, sections 2 to 4 and Schedule 1 as it considers appropriate in order to provide that any building or part of a building of a description set out in the regulations is or is not to be a house in multiple occupation for the purposes of this Act, or for such purposes of this Act as are specified in the regulations.

This meaning refers to other parts of the HMO Act: section 2, section 3, section 4, subsection (1) and Schedule 1 (exceptions). The Act should be consulted to gain an understanding of the content of those parts, which is beyond the scope of this guide.

2.2 Categories of HMO

The most common types of HMO are described as six categories as below:

Category A (Bedsits)

Bedsits are units of accommodation, where there is some exclusive occupation (usually bedroom/living room) and some sharing of amenities (bathroom and/or toilet or kitchen). Each occupant lives otherwise independently of others.

Category B (Shared Houses)

Houses occupied on a shared basis where each individual or household will normally have their own bedroom or bed/living room, although in some circumstances this may be shared. There will be general sharing of the bathroom, toilet and kitchen.

Category C (Lodgings)

Houses let in lodgings, i.e. a resident owner/occupier, catering for lodgers on a small scale but not living as part of the main household. Typified by a family or household who might take in a small number of individuals living away from their primary place of residence.

Category D (Hostels, Bed and Breakfast, Self-Catering, Hotels)

Accommodation for people with no other permanent place of residence, as distinct from an establishment which only provides accommodation for visitors to the area for a short time e.g. tourists. This category would include establishments used to house homeless families or persons who would otherwise be homeless. This also applies if there was a mix of homeless households, with that establishment as their only place of residence, and short term visitors.

Guidance for Category D premises is detailed in Building Regulations, DHSSPS Fire Safety Risk Assessment Sleeping Accommodation Guide¹, NIFRS A Practical Fire Safety Guide for Small Bed and Breakfast Premises, and NIFRS A Practical Fire Safety Guide for Small Self-Catering Premises.

Category E (Supported Living)

Accommodation in the community provided for the care and support of people with learning difficulties, mental illness, or physical disability.

Guidance for Category E premises is detailed in the National Fire Chiefs Council (NFCC) Fire Safety in Specialised Housing Guide.

Category F (Shared Flats/Maisonettes)

Flats occupied on a shared basis where each individual or household will normally have their own bedroom or bed/living room, although in some circumstances this may be shared. There will be general sharing of the bathroom, toilet and kitchen.

¹ The Department of Health, Social Services and Public Safety (DHSSPS) Fire Safety Risk Assessment Sleeping Accommodation Guide was published in March 2013. On 9 May 2016 the department was renamed the Department of Health (DoH), although the guide remains unchanged.

3 FIRE ALARM SYSTEMS

A fire detection and fire alarm system, although it can do nothing to reduce the incidence of fire, can help to lessen the resultant loss in terms of injury to occupants or damage to property.

In order to maximize the cost-benefit of a fire detection and fire alarm system, it is essential that the system design be appropriate to the fire risk. Accordingly, the design of any fire detection and fire alarm system installed needs to be based on a good understanding of fire risk in domestic premises. Generally speaking, the greater the fire risk the more sophisticated the system should be.

All smoke and heat alarms should be interlinked, so that if one alarm detects a fire, all alarms on the system will sound.

Reference should be made to BS 5839 Part 1 and BS 5839 Part 6 for the full specification for fire alarm systems and the other standards equipment should conform to. The description below in Sections 3.1 and 3.2 provides only very limited information.

3.1 BS 5839 Part 1 Systems

Two different categories of life protection systems are described as appropriate for this guide.

Both require control and indicating equipment with manual call points on all final exits, entrances to stairwells and corridors where persons are not expected to walk more than 45m to operate a call point.

Heat detectors should be installed in every kitchen. A smoke alarm should be installed in any living room. Where there is a potential for false alarms, a heat detector may be installed in a living room, but not in any bedroom, or escape route.

- L1** - Systems installed throughout all areas of the building. This should include detectors in all rooms and areas of the building, including roof voids, but not bathrooms, shower rooms or toilets, small cupboards or shallow voids.
- L2** - Systems installed only in defined parts of the building. This should include detectors in all stairways, corridors or any room used as part of the escape route, bedrooms, kitchens and living rooms, but not bathrooms, shower rooms or toilets. Manual call points on all final exits, entrances to stairwells and corridors where persons are not expected to walk more than 45m to operate a call point.

3.2 BS 5839 Part 6 Systems

Two different grades of fire detection systems are described as appropriate for this guide:

Grade A - An automatic fire detection system designed for dwellings and based on a BS 5839 Part 1 system, consisting of separate detectors, sounders, manual call points, central control and indicating equipment, back-up power supply and 30 minute standard fire-resisting cables. Detectors should be sited in accordance with the recommendations of BS 5839 Part 1 for a Category L2 system.

Grade D1 - An automatic fire detection system designed for dwellings consisting of one or more mains powered detectors, each with a tamper-proof standby supply consisting of a battery or batteries. The mains supply to the detectors should take the form of either: 1) an independent circuit at the dwellings consumer unit, or; 2) a separately electrically protected, regularly used lighting circuit, in which case there should be a means for isolation of the smoke alarms from the lighting circuit. Cabling should be suitable for domestic mains wiring, and conductors for interconnecting alarms should be readily distinguishable from those supplying power (e.g. by colour coding).

Two different categories of life protection systems are described.

Heat detectors should be installed in every kitchen. A smoke alarm should be installed in any living room. Where there is a potential for false alarms, a heat detector may be installed in a living room, but not in any bedroom, or escape route.

LD1 - Detectors in all areas where a fire might start. This will include hallways, landings, living rooms, kitchens, bedrooms, loft spaces where photovoltaic power systems or other plant (eg boilers) are installed, airing cupboards and meter cupboards, but not within toilets, bathrooms, or shower rooms.

LD2 - Detectors in escape routes and high fire risk areas². This will include hallways, landings, living rooms and kitchens, but not within bedrooms, toilets, bathrooms, or shower rooms.

² High fire risk areas include kitchens, living rooms and loft spaces where photovoltaic power systems or other plant (eg boilers) are installed. The fire risk assessment should consider other rooms to determine if detection is appropriate, such as boiler rooms, storage rooms and walk-in cupboards.

3.3 Minimum Fire Alarm System Requirements

Tables 1 and 2 specify the minimum fire alarm system requirements by size and type of HMO property.

Table 1 - HMO properties occupied by no more than 6 persons and with no floor area greater than 200m²

HMO Category	Number of Storeys			
	1	2	3	4 and above
A (Bedsits)	BS 5839 Part 6, Grade D1, Category LD2.	BS 5839 Part 6, Grade D1, Category LD2.	BS 5839 Part 6, Grade D1, Category LD1.	BS 5839 Part 6, Grade A, Category LD1.
B (Shared Houses)	BS 5839 Part 6, Grade D1, Category LD2.	BS 5839 Part 6, Grade D1, Category LD2. (See Note 1)	BS 5839 Part 6, Grade D1, Category LD1.	BS 5839 Part 6, Grade A, Category LD1.
C (Lodgings)	BS 5839 Part 6, Grade D1, Category LD2.	BS 5839 Part 6, Grade D1, Category LD2.	BS 5839 Part 6, Grade D1, Category LD1.	BS 5839 Part 6, Grade A, Category LD1.
D (Hostels, Bed and Breakfast, Self-Catering, Hotels)	Consult additional guidance. (see Section 2.2, Page 11)			
E (Supported Living)	Consult additional guidance. (see Section 2.2, Page 11)			
F (Shared Flats/ Maisonettes)	Mixed System: BS 5839 Part 6, Grade D1, Category LD2, within the Flat, and BS 5839 Part 6, Grade A, Category LD2, in the communal areas. (See Note 2)			

Notes:

- 1) A BS 5839 Part 6, Grade D1, Category LD1, should be provided where a protected route is not required, or where escape windows have not been provided to all habitable rooms.
- 2) In the communal area serving Category F premises, detectors to be sited in accordance with BS 5839 Part 1, Category L2 system. The communal alarm system may be excluded if it can be demonstrated that the building is capable of employing a “Stay Put” fire strategy.

Table 2 - HMO properties occupied by more than 6 persons, or with floor area greater than 200m², or if occupied by 1 or more vulnerable persons

HMO Category	Number of Storeys			
	1	2	3	4 and above
A (Bedsits)	BS 5839 Part 6, Grade A, Category LD1.	BS 5839 Part 6, Grade A, Category LD1.	BS 5839 Part 6, Grade A, Category LD1.	BS 5839 Part 1, Category L2.
B (Shared Houses)	BS 5839 Part 6, Grade A, Category LD1.	BS 5839 Part 6, Grade A, Category LD1.	BS 5839 Part 6, Grade A, Category LD1.	BS 5839 Part 1, Category L2.
C (Lodgings)	BS 5839 Part 6, Grade D1, Category LD2.	BS 5839 Part 6, Grade D1, Category LD2.	BS 5839 Part 6, Grade D1, Category LD1.	BS 5839 Part 6 Grade A, Category LD1.
D (Hostels, Bed and Breakfast, Self-Catering, Hotels)	Consult additional guidance. (see Section 2.2, Page 11)			
E (Supported Living)	Consult additional guidance. (see Section 2.2, Page 11)			
F (Shared Flats/ Maisonettes)	Mixed System: BS 5839 Part 6, Grade D1, Category LD1 within the Flat, and BS 5839 Part 6, Grade A, Category LD2 in the communal areas. (See Note 1)			

Notes:

- 1) Within the communal area, detectors to be sited in accordance with BS 5839 Part 1, Category L2 system. The communal alarm system may be excluded if it can be demonstrated that the building is capable of employing a “Stay Put” fire strategy.

3.4 Types of Fire Detector and Their Selection

Reference should be made to BS 5839 Part 6, Clause 10, and to BS 5839 Part 1, Clause 21, as applicable for the grade and category of the system.

3.5 Location and Siting of Fire Detectors

Reference should be made to BS 5839 Part 6, Clause 11, and to BS 5839 Part 1, Clause 22, as applicable for the grade and category of the system.

3.6 Limitation of False Alarms

The manager of the HMO should set in place procedures to limit false alarms.

Guidance on limiting false alarms is detailed in BS 5839 Part 6, Clause 12, and in BS 5839 Part 1, Section 3, Clauses 30 to 35.

It should be noted that NIFRS will not silence or reset fire alarm systems (see Sections 6.1 and 6.2, Page 46).

3.7 Fire Alarms Audibility

A fire detection and fire alarm system only provides satisfactory protection of life if it is capable of rousing sleeping occupants. The criteria set down in BS 5839 Part 6, Clause 13, or in BS 5839 Part 1, Clause 16, must be adhered to.

Additional guidance in relation to fire alarm devices for people who are deaf or hard of hearing is contained within of BS 5839 Part 6, Clause 14, or in BS 5839 Part 1, Clause 18, and must also be adopted subject to the carrying out of a personal emergency evacuation plan for any impacted individual.

3.8 Power Supply

Fire detection and alarm systems are reliant on electrical power for their operation. No source of electrical power is totally reliable; every source will fail at some time, even if only for a limited period. Therefore, to attain higher reliability all of the grades of systems specified in this guide require a tamper-proof standby supply consisting of a battery or batteries which is connected automatically in the event of mains failure.

In BS 5839 Part 6, Grade A Systems, and in BS 5839 Part 1, Category L Systems, the mains supply should not be connected via a card-operated meter or similar.

In BS 5839 Part 6, Grade D Systems, where the accommodation of each resident is served by a separate key or card-operated meter, Grade D smoke and heat alarms in common parts should not be supplied via the meter of any resident.

In an HMO with a permanent landlord's supply in the common parts, but prepayment meters in individual flats or bedsits, a supply to any smoke alarms in the dwelling unit should be derived from the landlord's permanent supply in the common parts.

Where this applies, permanent notices should be displayed on or adjacent to the meter, as well as on or adjacent to any secondary consumer unit in the dwelling, which states:

CAUTION. SMOKE ALARMS ARE NOT CONNECTED TO THIS CONSUMER UNIT. ISOLATION OF THIS UNIT, OR HAVING NO CREDIT ON THE METER, DOES NOT ISOLATE THE ELECTRICAL SUPPLY TO THE SMOKE ALARM.

3.9 Testing and Servicing

Testing and servicing should be in accordance with the requirements of BS 5839 Part 1, or BS 5839 Part 6, as appropriate.

L1, L2 and Grade A systems designed should be tested weekly and be serviced by a competent person every 6 months.

All other Grades should be tested monthly and be serviced by a competent person every 12 months.

A record of testing and servicing should be maintained.

4 TRAVEL DISTANCES

Travel distances should be measured from all parts of the premises to the nearest place of reasonable safety which is:

- a protected stairway enclosure (storey exit);
- a separate fire compartment from which there is a final exit to a place of total safety; or
- the nearest available final exit.

Maximum travel distances should be in accordance with Building Regulations Technical Booklet E which are detailed in Table 3 below.

Table 3 - Maximum Travel Distances

Use of the building or part of the building	Maximum travel distance ⁽¹⁾ where travel is possible in:	
	Escape in one direction (m)	Escape in more than one direction (m)
In Bedrooms ⁽²⁾	9	18
In Bedroom Corridors	9	35
Elsewhere ⁽³⁾	18	35

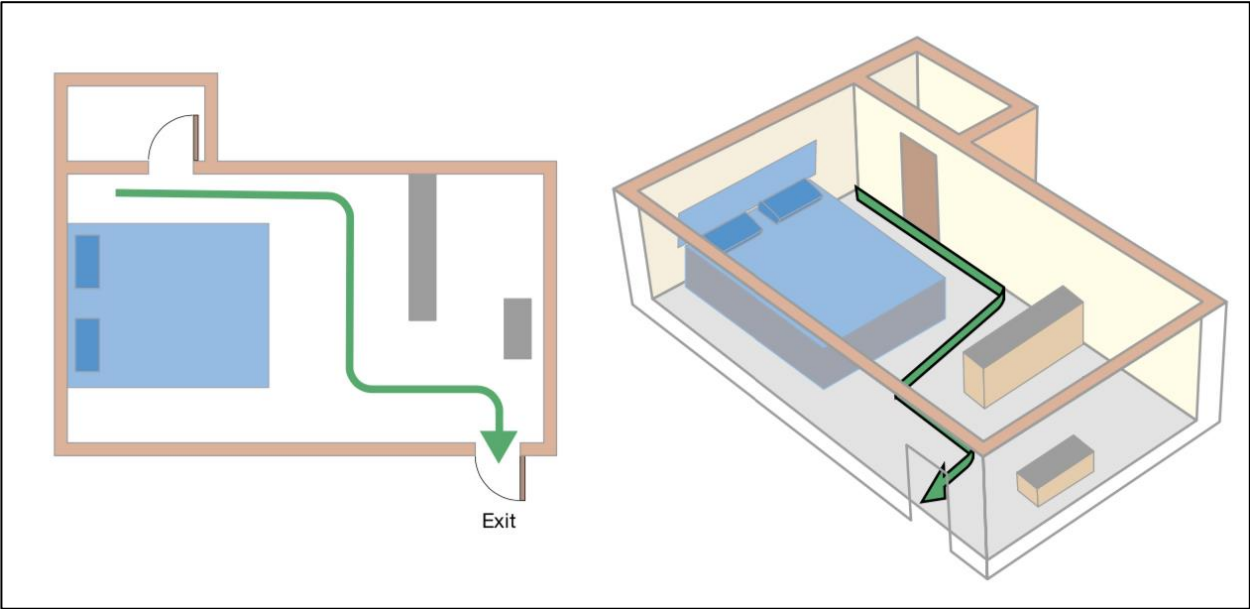
Notes:

- 1) The dimensions in the Table are travel distances. If the internal layout of partitions, fittings, etc. is not known when plans are deposited, direct distances may be used for assessment. The direct distance should be taken as two-thirds of the travel distance.
- 2) Maximum part of travel distance within the room.
- 3) Maximum total travel distance.

4.1 Measuring Travel Distances

The route taken through the room or space will be determined by the layout of the contents (see Figure 1, Page 20). It is good practice to ensure the routes to the room exits are kept as direct and as short as possible, especially in accommodation where sleeping will occur, thus reducing the time taken to exit the room.

Figure 1 - Measuring Travel Distance (Source DHSSPS Fire Risk Assessment Sleeping Accommodation)



Notes:

- 1) The maximum part of the travel distance within a bedroom is 9m.

5 MEANS OF ESCAPE

5.1 Single Storey HMO

For a single storey HMO, consisting of a ground floor, the following conditions will be generally acceptable:

- The occupancy shall be no more than that specified by, or suitable for, an HMO Licence.
- The farthest point on all of the floor to the storey exit is within the overall suggested travel distance in accordance with Section 4, Page 19.
- A Fire Alarm System shall be installed in accordance with Section 3.3, Page 15.
- Single storey properties which do not have alternative escape routes leading to their own exits should have an escape window in accordance with Section 5.18, Page 40.
- A protected corridor is not required where doors from all habitable rooms open directly onto a hallway which leads to a final exit without passing through any room (except a porch), or where the habitable room has either:
 - a) an alternative escape route; or
 - b) an escape window in accordance with Section 5.18, Page 40.
- Where a protected route has not been provided, doors should be close fitting doors (see Note 1) with self-closing devices fitted to kitchen and living room doors.
- Where a protected route is provided, it should be constructed in accordance with Section 5.14, Page 37 and all doors on the protected route should be FD30S and be fitted with a self-closing device, except for a bathroom, WC, hot press or cupboard.

Note:

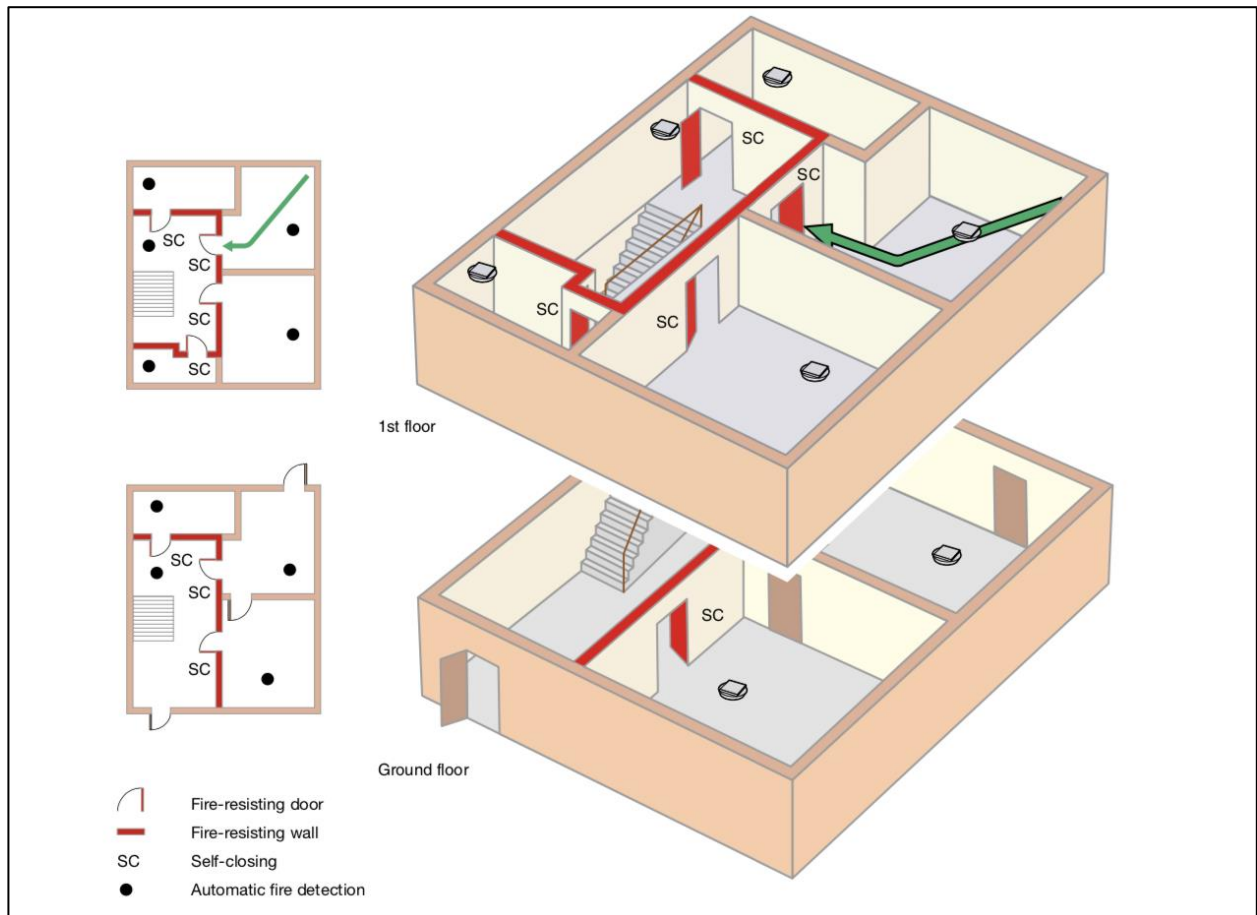
- 1) **Close fitting doors** - a door between a room (other than a bathroom or toilet) and any corridor, hall or stair which would be the route out in the case of a fire need not be a fire door but should be a solid timber door and be close fitting to their frame with gaps of no more than 3mm. Doors should have no sizeable splits, gaps or cracks and should not be warped. Hollow egg-box type doors are not acceptable. The glazing in doors, or onto escape routes, must be half-hour fire-resistant. Door frames may be improved to have 25mm door stops which the doors should close onto. The benefit of doing this is that it covers minor irregularities of fit, often found when working on existing door openings. Alternatively, if purpose-made doors are used which have integral intumescent strips then standard door stops can remain. Doors should be closed at night to inhibit the spread of smoke. This arrangement is estimated to provide a door with 20 minutes fire resistance.

5.2 Two Storey HMO

For a two storey HMO, consisting of a ground and first floor, served by a single stairway (see Figure 2, Page 23), the following conditions will be generally acceptable:

- The occupancy shall be no more than that specified by, or suitable for, an HMO Licence.
- The farthest point on all of the floor to the storey exit is within the overall suggested travel distance in accordance with Section 4, Page 19.
- The upper floor is less than 4.5m above ground level.
- A Fire Alarm System shall be installed in accordance with Section 3.3, Page 15.
- Ground and first floor storeys which do not have alternative escape routes leading to their own exits should have an escape window in accordance with Section 5.18, Page 40.
- A protected route is required if:
 - a) the suggested travel distance is exceeded, or
 - b) the upper floor is more than 4.5m above ground level, or
 - c) if occupied by more than 6 persons, or 1 or more vulnerable persons, or
 - d) with floor area greater than 200m².
- Where a protected route is provided, it should be constructed in accordance with Section 5.14, Page 37 and all doors on the protected route should be FD30S and be fitted with a self-closing device, except for a bathroom, WC, hot press or cupboard.
- In a Category B (Shared House), where a protected route is not required, or where escape windows have not been provided to all habitable rooms, the fire alarm system should be upgraded to a BS 5839 Part 6, Grade D1, Category LD1 and doors should be close fitting doors (see Section 5.1, Page 21, Note 1) with self-closing devices fitted to kitchen and living room doors.

Figure 2 - Two storey HMO (Ground and first floor) with Category LD1 Fire Alarm System (Source DHSSPS Fire Risk Assessment Sleeping Accommodation)



5.3 Three Storey HMO

For a three storey HMO, consisting of a ground, first and second floor, served by a single stairway (see Figure 3, Page 24), the following conditions will be generally acceptable:

- The occupancy shall be no more than that specified by, or suitable for, an HMO Licence.
- A Fire Alarm System shall be installed in accordance with Section 3.3, Page 15.
- The farthest point on all of the floors to the storey exit is within the suggested travel distance in accordance with Section 4, Page 19.
- The upper floor is less than 7.5m above ground level.
- Every stairway and corridor serving a habitable room should be enclosed in fire-resisting construction (protected route) in accordance with Section 5.14, Page 37. A protected stair is not required, if the second floor contains only a bathroom.
- All doors to habitable rooms on the protected route should be FD30S and be fitted with self-closing devices.

- Ground and first floor storeys which do not have an alternative escape route leading to their own exit should have an escape window in accordance with Section 5.18, Page 40.

A typical three storey HMO layout is shown in Figure 4, Page 25.

If the above conditions cannot be met, an alternative means of escape may be required.

Figure 3 - Three storey HMO (Ground, first and second floor) with Category LD1 Fire Alarm System (Source DHSSPS Fire Risk Assessment Sleeping Accommodation)

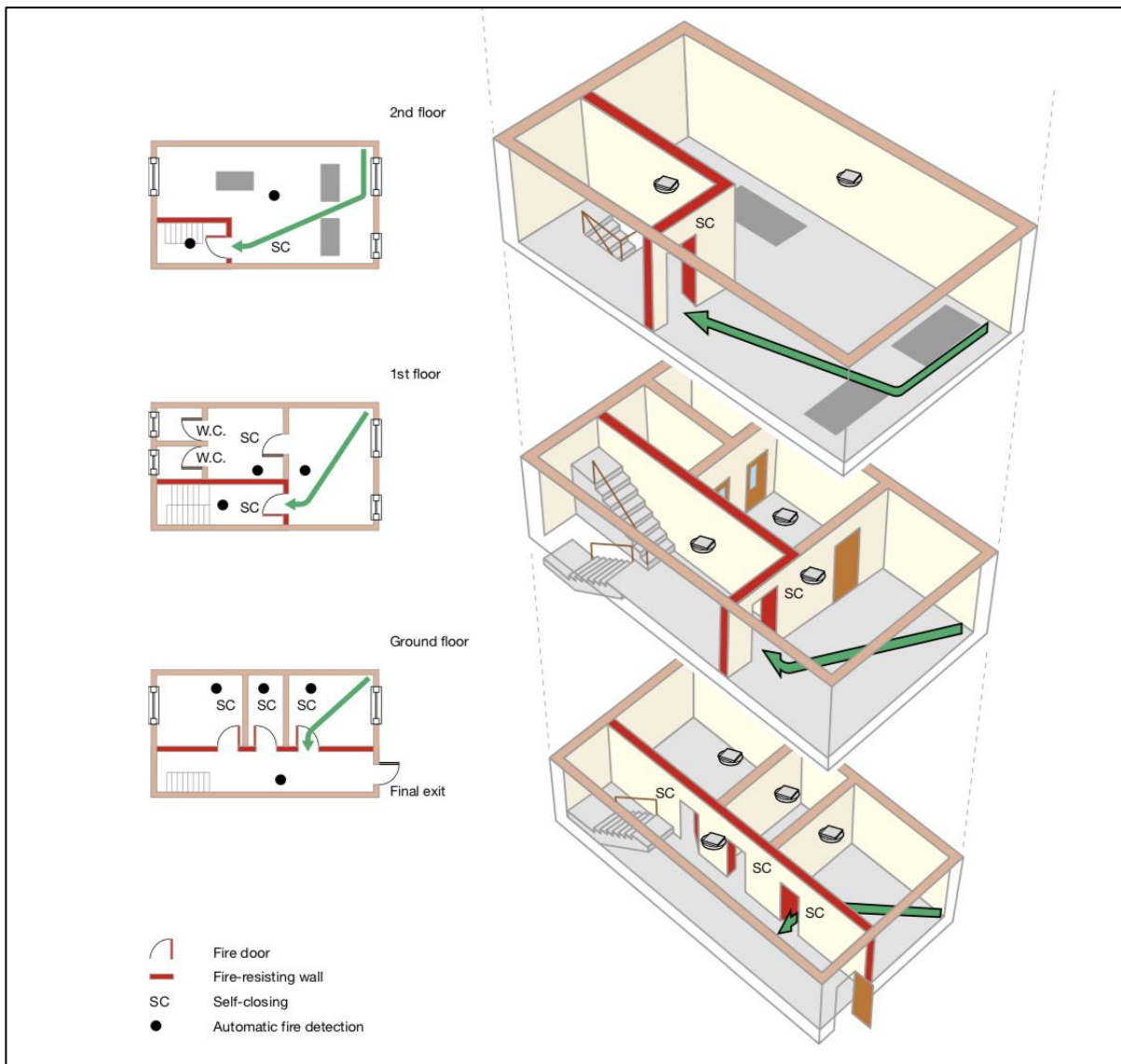
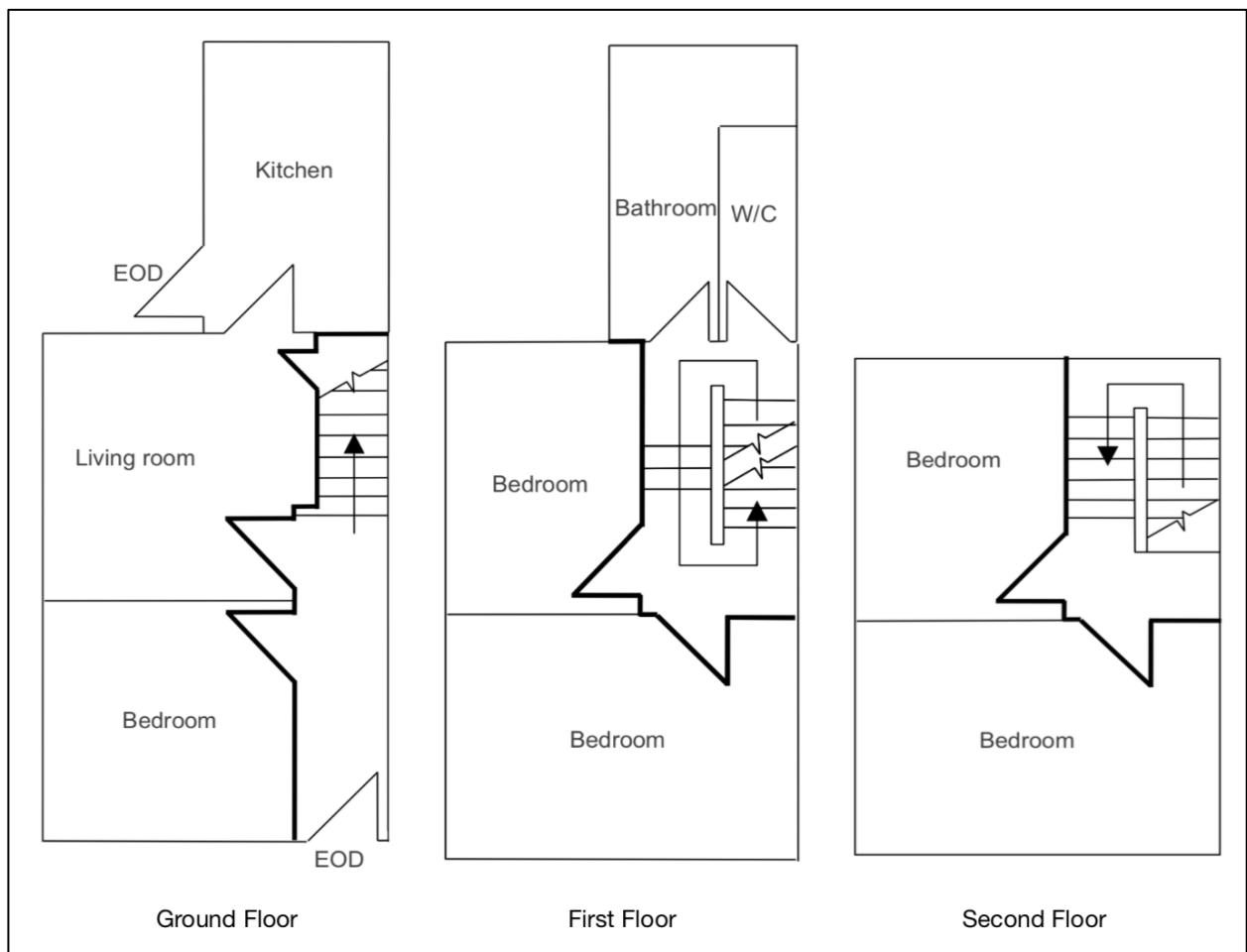


Figure 4 - Typical three storey HMO layout



Key: **—** 30 minutes fire-resisting construction

5.4 Four Storey HMO

A four storey HMO consists of a ground, first, second and third floor.

A four storey premises with a single stairway presents a higher risk due to the increased distance and time it would take a person to exit the building from a bedroom on the top floor. To reduce the risk and prevent smoke from entering the stairway, a protected lobby or corridor approach between the stairway and all floors, except for the top floor, should be provided (see Figure 5, Page 27). If protected lobbies cannot be provided due to the layout of the premises, an alternative means of escape would be required.

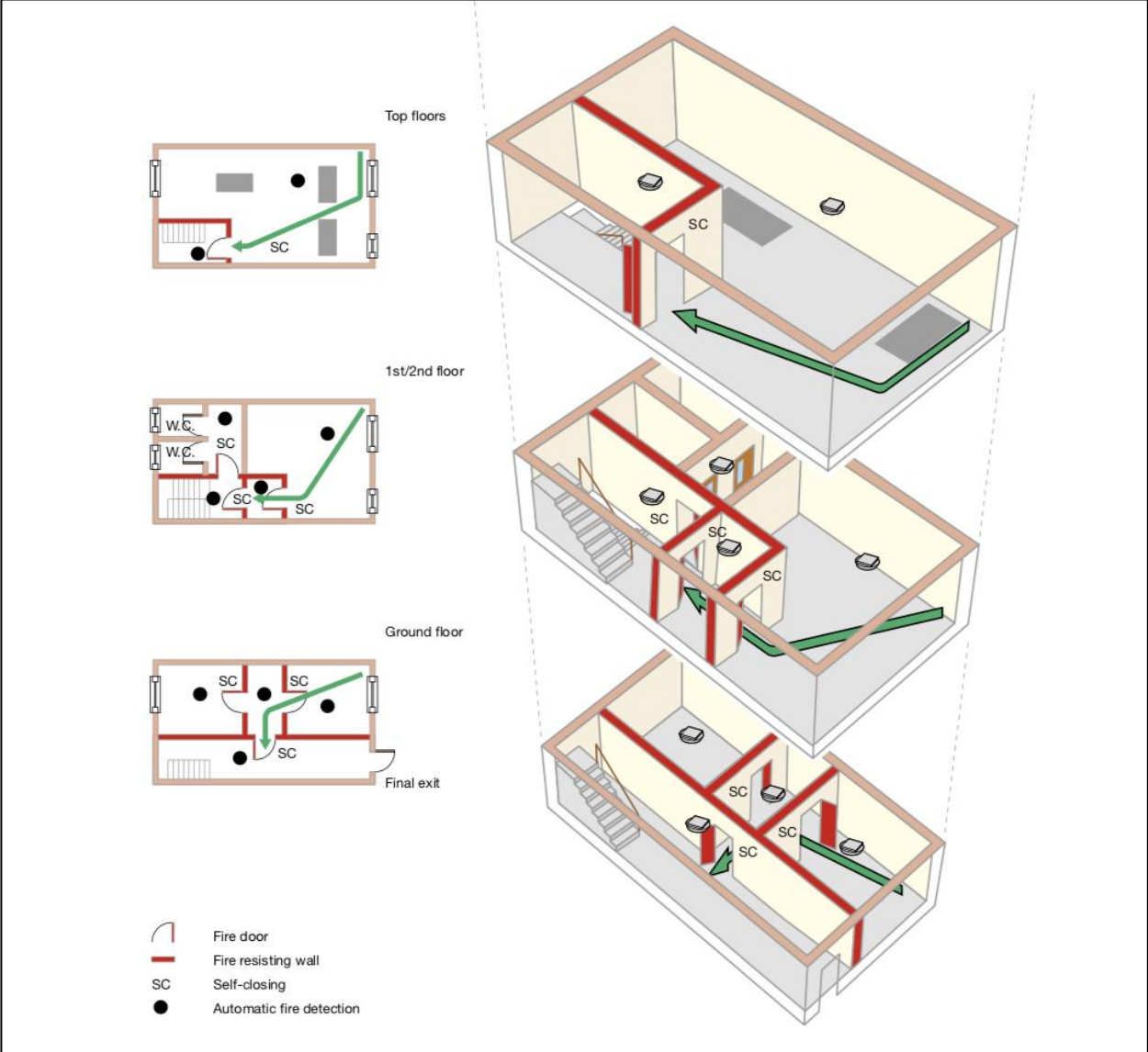
The following conditions will be generally acceptable:

- The occupancy shall be no more than that specified by, or suitable for, an HMO Licence.
- A Fire Alarm System shall be installed in accordance with Section 3.3, Page 15.

- The farthest point on all of the floors to the storey exit is within the suggested travel distance in accordance with Section 4, Page 19.
- A protected lobby or corridor to the stairway will be required to all floors except for the top floor. The travel distance is measured to the storey exit and not the door to the lobby or corridor.
- The upper floor is less than 11m above ground level.
- Where a protected lobby or corridor to the stairway cannot be provided, an alternative escape route leading to its own exit will be required from any floor with a storey height above 7.5m. Where access to the alternative escape route is through the protected stairway, the protected stairway shall be subdivided by 30 minutes fire resisting construction at or about 7.5m above ground level, including the floor at or about 7.5m above ground level.
- Every stairway and corridor serving a habitable room should be enclosed in fire-resisting construction in accordance with Section 5.14, Page 37.
- All doors to habitable rooms on the protected route should be FD30S and be fitted with self-closing devices.
- Ground and first floor storeys which do not have an alternative escape route leading to their own exit should have an escape window in accordance with Section 5.18, Page 40.

If the above conditions cannot be met, the property may not be suitable for use as an HMO.

Figure 5 - Four storey (ground and three upper floors) with Category LD1 Fire Alarm System and a Protected Lobby on each floor below the top floor (Source DHSSPS Fire Risk Assessment Sleeping Accommodation)



5.5 Category F (Flats/Maisonettes)

For a flat/maisonette, the following conditions will be generally acceptable:

- The occupancy shall be no more than that specified by, or suitable for, an HMO Licence.
- The farthest point on all of the floors to the storey exit is within the suggested travel distance in accordance with Section 4, Page 19.
- A Fire Alarm System shall be installed in accordance with Section 3.3, Page 15.
- The conditions as below are met.

Flats/Maisonettes with a storey height not more than 4.5m above ground or access level

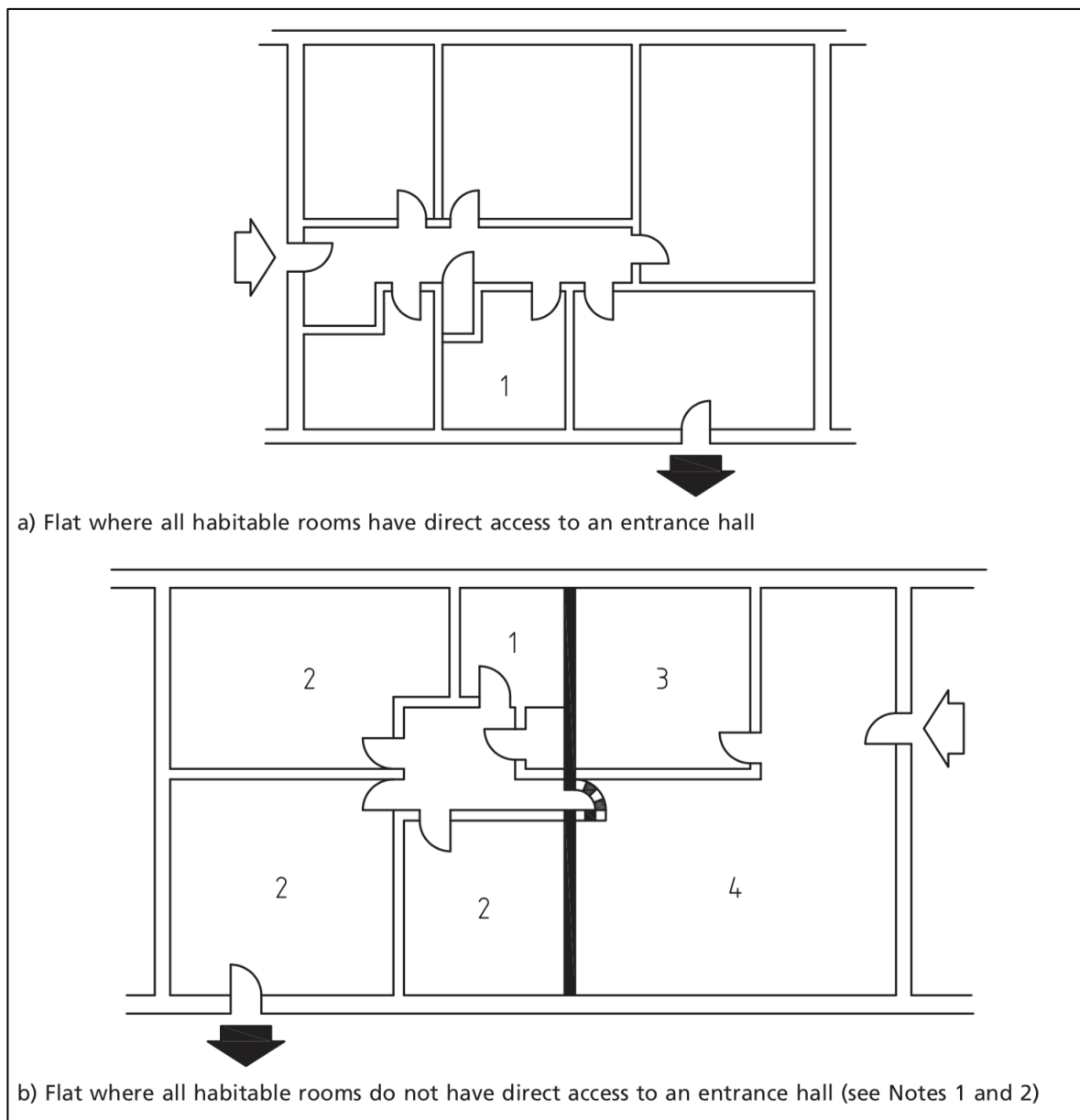
A flat/maisonette should be so planned that any habitable room is not an inner room unless that room is provided with an escape window in accordance with Section 5.18, Page 40.

Flats/Maisonettes with a storey height of more than 4.5m (typically more than 2 storeys) above ground or access level

- 1) A flat/maisonette with a storey height of more than 4.5m should be planned so that:
 - a) the flat or maisonette has a secondary exit from within the unit of accommodation (see Figure 6, Page 30); or
 - b) all habitable rooms must be entered through a protected lobby/circulation area enclosed in 30 minute fire resisting construction (integrity and insulation) and any door should be FD30 and the flat entrance door should be FD30S. Furthermore the maximum permissible distance of travel from any door of any living room or bedroom to the exit is not more than 9m (see Figure 7, Page 31); or
 - c) the distance to be travelled from the flat entrance door to any point in any habitable room is not more than 9m and the direction of travel is away from cooking facilities (see Figure 8, Page 32); or
 - d) sleeping accommodation, and that part of the circulation area which serves the sleeping accommodation and the exit to the flat, is separated from any other living room or kitchen by a construction providing at least 30 minutes fire resistance (integrity and insulation); and
 - i) any door in this construction should be FD30 and the flat entrance door should be FD30S; and
 - ii) if that HMO has a storey at a height of more than 11m and the distance to be travelled within the flat from any point to the exit is more than 15m, there is an exit through a door other than its main entrance from the living accommodation.

- 2) A flat/maisonette with a single escape route which relies upon a common stair, should have a protected lobby/corridor approach. Doors within the protected lobby/corridor should be FD30.
- i) A wall with an adequate degree of fire resistance should be provided between the flat/maisonette and any other part of the same building. An adequate degree of fire resistance is 60 minutes (integrity and insulation).
 - ii) If the property has a storey height over 5m, a floor between flat/maisonettes should be 60 minutes fire resisting.
 - iii) Where the escape route from the front door of the flat/maisonette is within the building it should lead by way of circulation space or stairway directly to the outside.
 - iv) Any part of an escape route from the front door of the flat/maisonette which is within the building should be provided with artificial lighting.
 - v) If the HMO is a maisonette which has more than two storeys and one of them is a height of more than 4.5m additional safety measures should be taken as detailed in Section 5.6, Page 32.

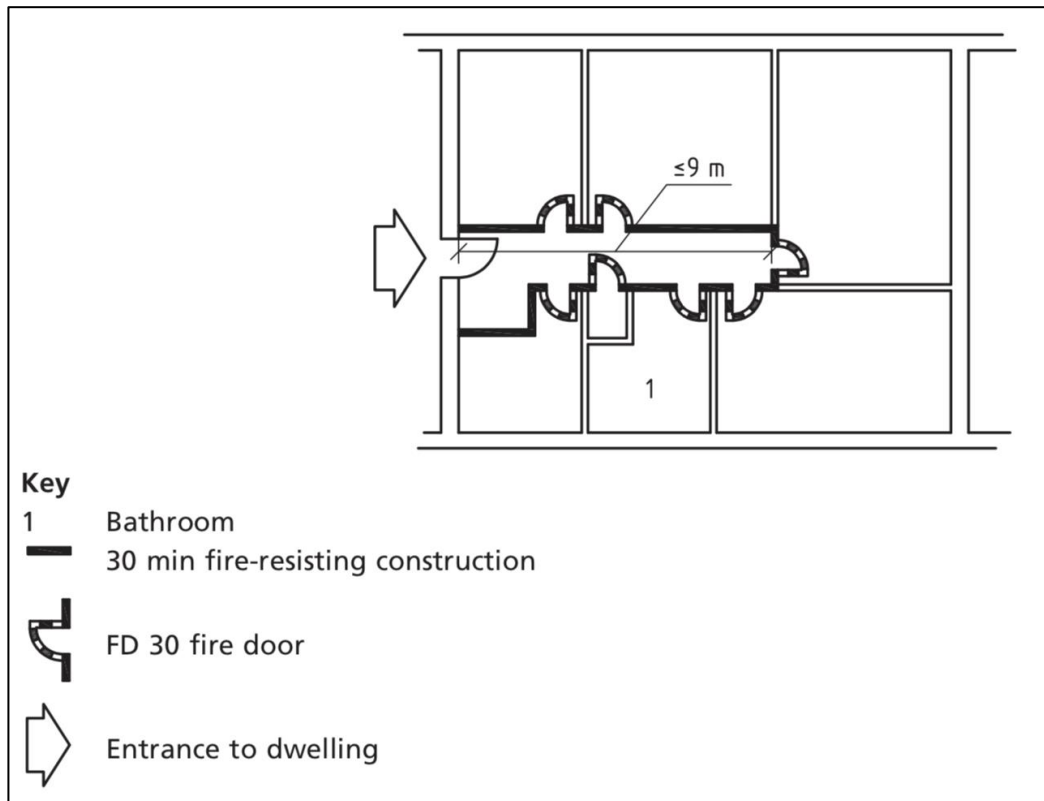
Figure 6 - Flat with an alternative exit (Source BS 9991)



Notes:

- 1) The fire-resisting partition separates living and sleeping accommodation.
- 2) The bedrooms are not classed as inner rooms because escape is possible in two directions.
- 3) The entrance and alternative exit doors might need to be fire doors.
- 4) Compartment walls need to be fire-resisting.
- 5) The door to the room containing the alternative exit must be readily accessible at all times.

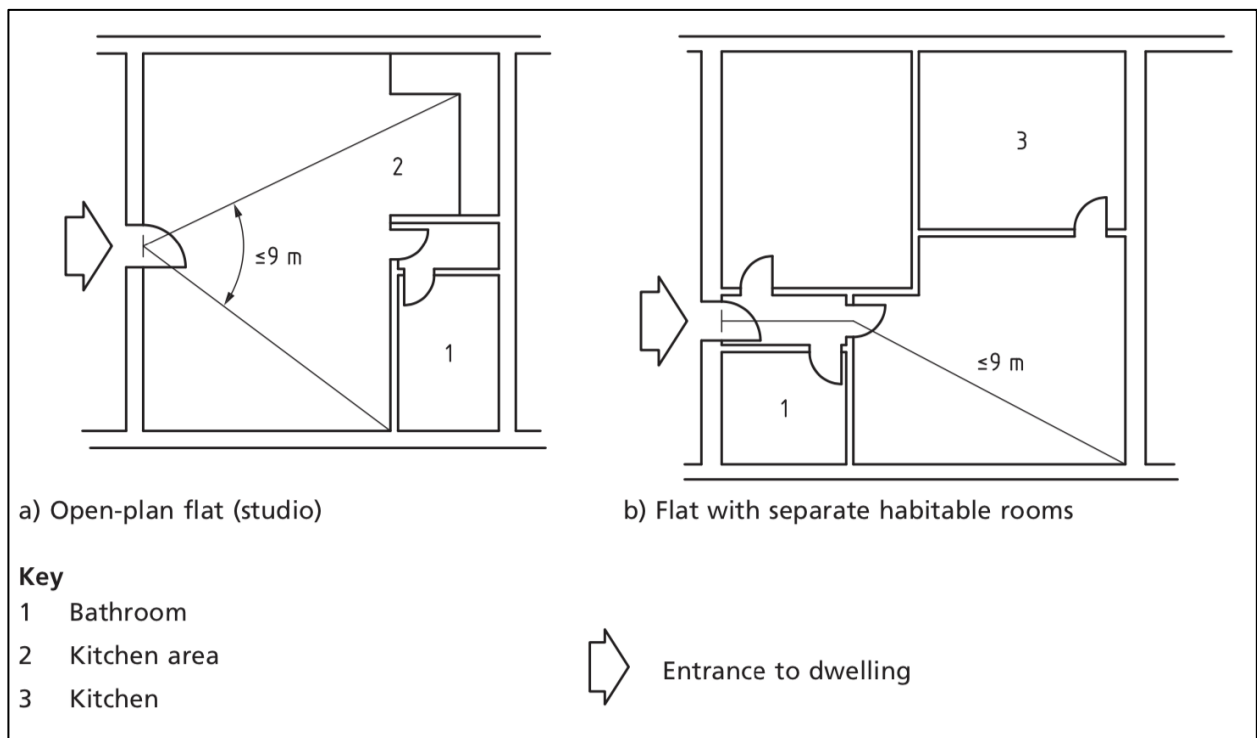
Figure 7 - Flat or maisonette with a protected entrance hall and restricted travel distance (Source BS 9991)



Notes:

- 1) The entrance door might need to be a fire door.
- 2) If the partitions between the bathroom and adjacent rooms have a 30 minutes fire resistance then the partition between the bathroom and the hall need not be fire-resisting and the bathroom need not be a fire door.
- 3) The cupboard door (in the corner of the bathroom) need not be self-closing.
- 4) Compartment walls need to be fire-resisting.

Figure 8 - Flat with restricted travel distance (Source BS 9991)



Notes:

- 1) Compartment walls need to be fire-resisting.
- 2) The entrance door will need to be fire-resisting and self-closing.

5.6 Additional means of Escape from maisonettes

For a maisonette with two or more storeys, of which one is at a height of more than 4.5m, then additional means of escape are required as follows:

- 1) If there is accommodation on more than one level, it should be planned so that:
 - a) all living rooms or bedrooms are entered directly from a circulation space enclosed in fire resisting construction having 30 minutes fire resistance (integrity and insulation) and any door in the enclosures should be a fire door with 30 minutes fire resistance (integrity); and
 - b) where any storey is at a height of more than 11m there is:
 - i) an exit through a door other than its main entrance from each storey other than the entrance storey; or
 - ii) an exit through a door other than its main entrance from each bedroom.
- 2) If there is accommodation on only one level, but the property is entered from a storey below the level of the accommodation, it should be planned so that:

- a) an exit through a door other than its main entrance is provided; or
 - b) all living rooms or bedrooms are entered directly from a circulation space enclosed in fire resisting construction having 30 minutes fire resistance (integrity and insulation) and any door in the enclosures should be a fire door with 30 minutes fire resistance (integrity) and the distance to be travelled from any door of a living room or bedroom to the head of the internal stair is not more than 9m; or
 - c) the distance to be travelled from any point within the property to the head of the internal stair is not more than 9m, and the direction of travel is away from cooking facilities.
- 3) If there is accommodation on only one level, but the property is entered from a storey above the level of the accommodation, it should be planned so that an exit through a door other than its main entrance is provided from the lower storey.

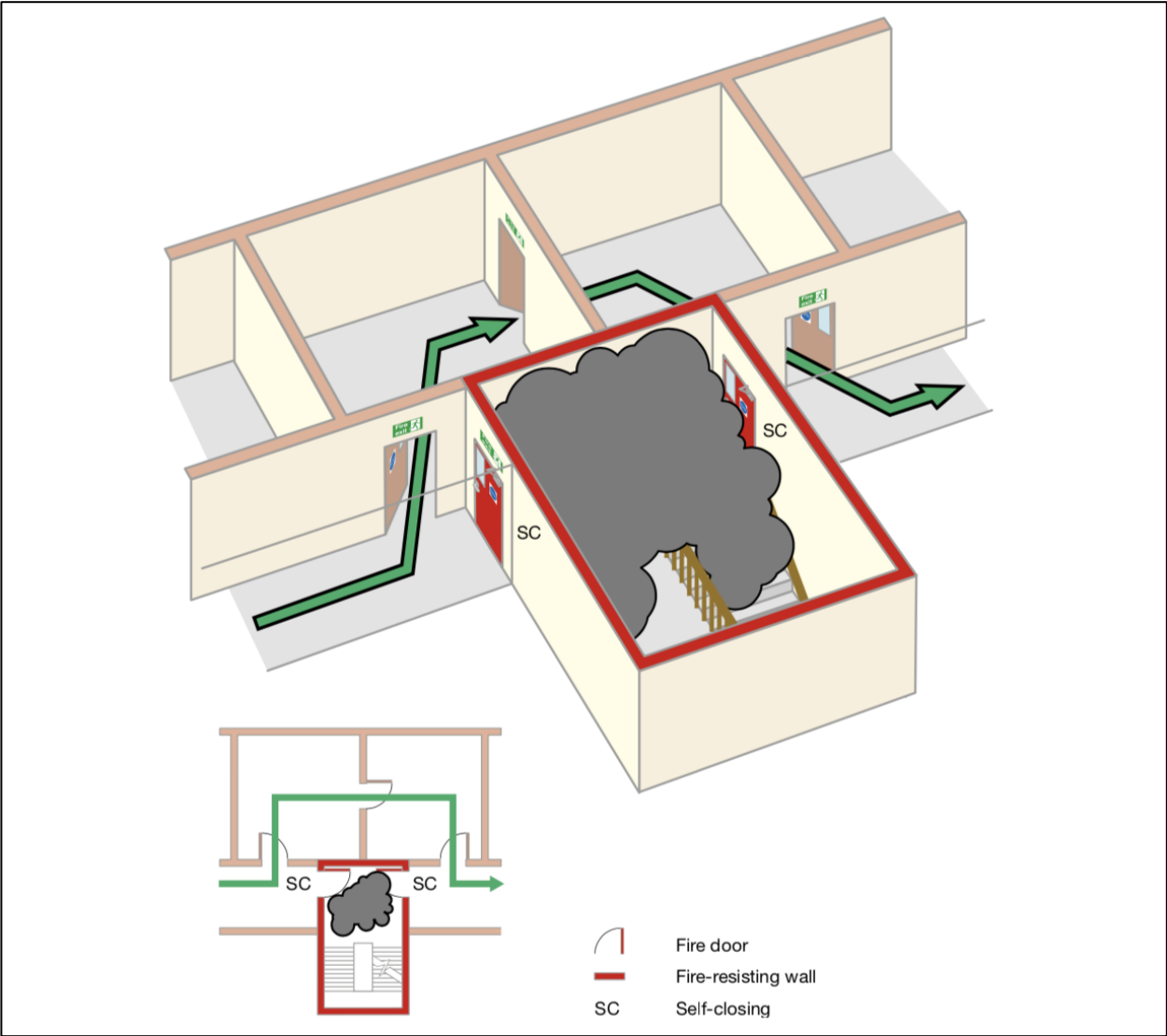
5.7 Creating a stairway bypass route

No one should have to pass through a protected stairway to reach another stairway. Options to avoid this include:

- using intercommunicating doors between rooms adjacent to the stairway, such doors must be available at all times when the building is occupied (see Figure 9, Page 34);
- using balconies and other features to bypass the stairway; and
- as long as there is enough space, create a bypass corridor around the stairway enclosure.

A bypass route should not be provided through a bedroom.

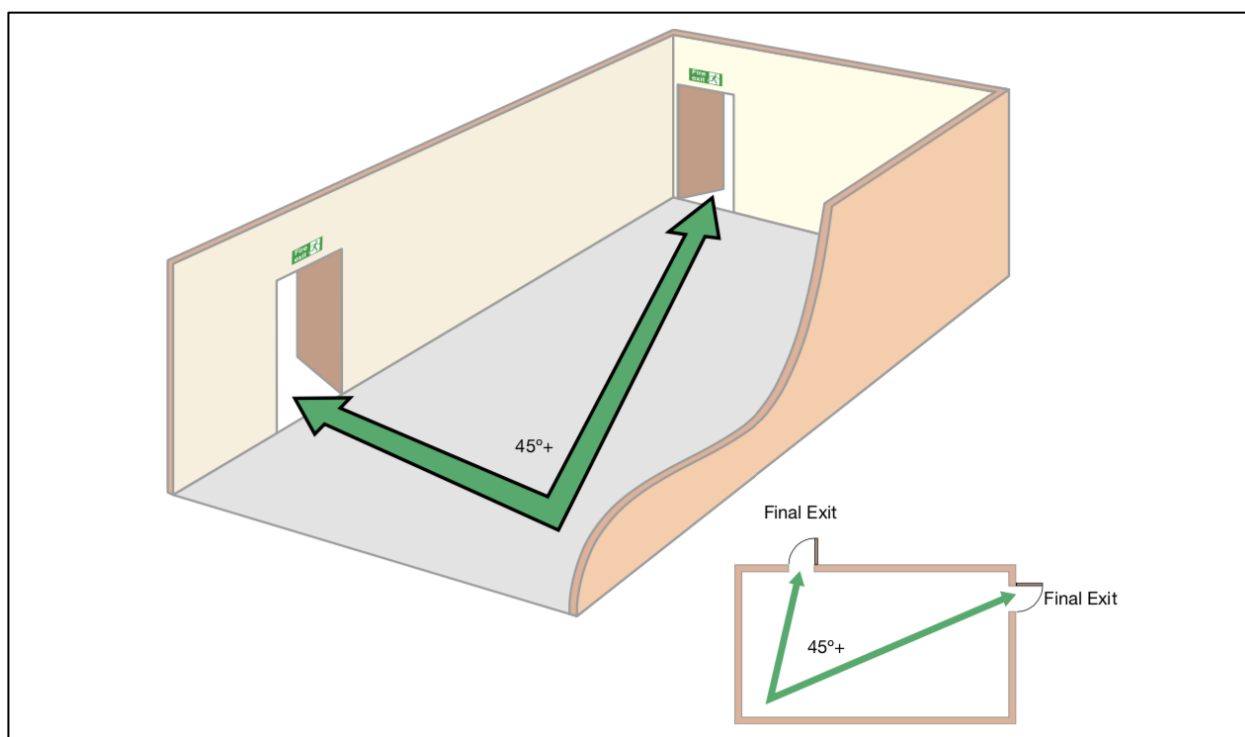
Figure 9 - A stairway bypass route (Source DHSSPS Fire Risk Assessment Sleeping Accommodation)



5.8 Alternative Exits

Where alternative exits from a space or room are necessary they should wherever possible be located at least 45° apart (see Figure 10 below) unless the routes to them are separated by fire-resisting construction.

Figure 10 - Alternative Exits (Source DHSSPS Fire Risk Assessment Sleeping Accommodation)

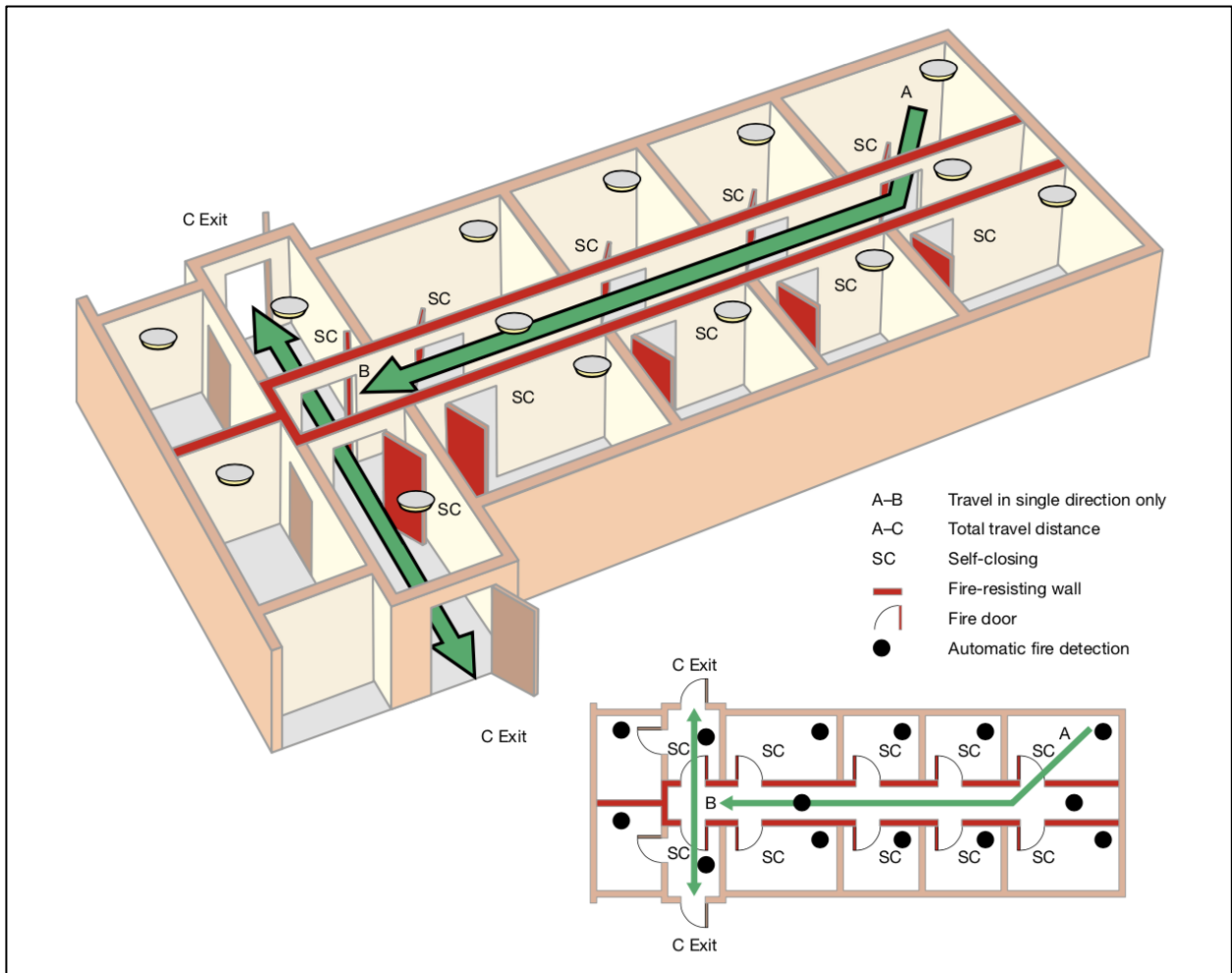


5.9 Escape routes with dead end conditions

If your premises has escape routes from which escape can be made in one direction only (a dead end), then an undetected fire in that area could affect people trying to escape. To overcome this problem, the travel distance should be limited to that of a single escape route (see Table 3, Page 19).

In sleeping areas, the layout shown in Figure 11, Page 36 will generally be acceptable.

Figure 11 - Dead end condition with fire resisting construction and automatic fire detection in sleeping areas (Source DHSSPS Fire Risk Assessment Sleeping Accommodation)



Notes:

- 1) The maximum travel distance from A to B is 18m.
- 2) The maximum travel distance from A to C is 35m.

5.10 Width of Escape Routes

The effective usable width of an escape route is the narrowest point, normally a door or other restriction such as narrowing of a corridor due to fixtures and fittings.

The width of an escape route or storey exit should be not less than 750mm for an occupancy of up to 50 persons, and the width of an escape stair should be not less than 1000mm.

Building Regulations Technical Booklet E should be consulted for more detail.

5.11 Number of Common Stairways

A minimum of one common stair should be available from each storey.

Where necessary, additional common stairs should be provided to enable the property to conform to travel distance recommendations.

Additional common stairs should be sited such that they provide effective alternative directions of travel from any dwelling or bedroom served by those stairs other than accepted dead ends.

An HMO with more than four floors must include a second common stairway.

5.12 Fire-fighting Stairs

In buildings exceeding 18m in height, one or more common stairs should be designed as fire-fighting stairs, designed in accordance with Building Regulations Technical Booklet E.

5.13 Width of Common Stairs

The unobstructed width (measured between the walls and/or balustrades) of each common stair should be not less than 750mm; a common stair which is a fire-fighting stair should have an unobstructed width (measured between the walls and/or balustrades) of 1.1m. The width should be kept clear for a vertical distance of 2.0m.

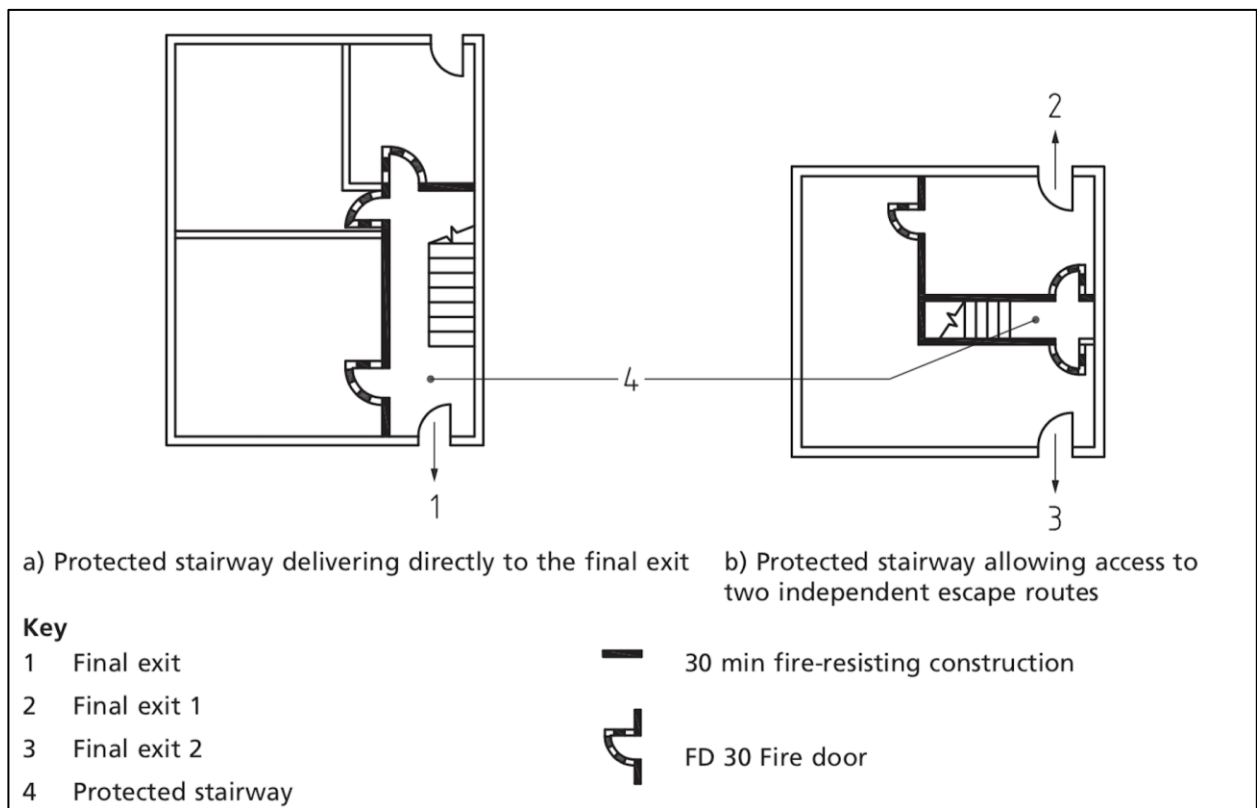
5.14 Enclosure of Stairways and Corridors

Where a protected route is required, every stairway and corridor serving a habitable room should be enclosed in fire-resisting construction having 30 minutes fire resistance (integrity and insulation) and any door in the enclosure should be a fire door with 30 minutes fire resistance (integrity), excluding bathrooms, toilet or shower compartments, provided that such compartments have no fire risk and fire or fire products cannot spread from an adjacent compartment via the bathroom, toilet or shower compartment to the escape route.

A fire resisting stair shall either:

- extend to a final exit as shown in Figure 12(a), Page 38; or
- lead to at least two escape routes at ground level, each delivering to a final exit and separated from each other by fire resisting construction and self-closing fire doors as shown in Figure 12(b), Page 38.

Figure 12 - Alternative arrangements for Final Exits (Source BS 9991)



5.15 Ventilation of Stairways

In residential buildings designed with a stay put strategy, additional protection to the staircase should be provided in the form of a smoke control system. Detailed advice is provided in BS 9991.

5.16 Inner Rooms

A room where the only escape route is through another room is termed an ‘inner room’.

An inner room poses a risk to its occupier if a fire starts unnoticed in the outer room (termed an ‘access room’). This arrangement should be avoided wherever possible. However, where unavoidable it may be accepted where the inner room is a kitchen, laundry or utility room, a dressing room, bathroom, WC or shower room.

Where the inner room is any other type of habitable room (for example: a living room, sleeping room, workroom or study) it should only be accepted if:

- a) the inner room has access to a suitable door opening onto an alternative safe route of escape, or it is situated on a floor which is not more than 4.5m above ground level and has an escape window leading directly to a place of ultimate safety;

- b) an adequate automatic fire detection and warning system is in place (see Section 3.3, Page 15); and
- c) a fire-resisting door of an appropriate standard is fitted between the inner and outer rooms (typically FD30S standard for non-high-risk outer rooms).

Escape windows are only acceptable if they meet the requirements of Section 5.18, Page 40.

In addition to the precautions outlined above, in all cases the following additional requirements must apply for the arrangement to be acceptable:

- outer rooms should be under the control of the same person as the inner room;
- nobody should have to pass through more than one outer room while making their escape; and
- ideally the outer room should not be an area of high fire risk, but if this is impracticable and there is no other option it could be accepted in this situation as exit via an escape window provides an alternative.

5.17 Habitable Rooms

A habitable room is any room in a dwelling other than a kitchen, utility room, bathroom, dressing room or WC.

A habitable room should open directly onto a hallway (including a corridor or landing leading to the hallway) which leads to the entrance without passing through any room (except a porch), other than where the habitable room:

- a) has an alternative escape route; and
- b) is on a storey not more than 4.5m above ground level and the habitable room has an escape window complying with Section 5.18, Page 40 (see Figure 14 on Page 42); or
- c) is part of a roof space conversion which complies with Building Regulations Technical Booklet E, Paragraphs 2.17 to 2.22.

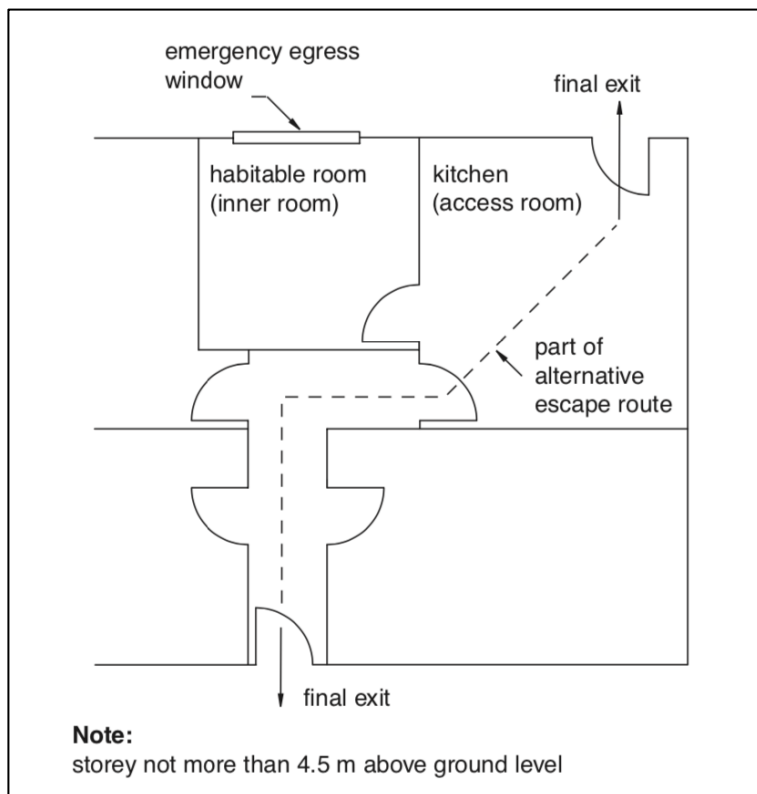
A habitable room may be an access room to any inner room. A kitchen should not be an access room to an inner room other than:

- to a utility room or conservatory which has an escape window complying with paragraph 2.9; or
- where the kitchen and the inner room are on the same storey and the kitchen is part of an alternative escape route leading to its own final exit. (see Figure 13, Page 40).

Where a habitable room, by virtue of a stairway discharging into it, is an access room to a habitable room on the storey above:

- 1) the upper storey should be not more than 4.5m above ground level; and
- 2) the foot of the stairway should be not more than 3m from:
 - i) a final exit; or
 - ii) a door opening directly into a hallway (including a corridor leading to the hallway).

Figure 13 - Kitchen as access room (Source Building Regulations Technical Booklet E)



5.18 Escape Windows

The term 'escape window' is used in this guide, though the term 'emergency egress window' is used by Building Regulations Technical Booklet E.

An internal or external escape route is the preferred solution to permit persons to safely exit a building in the event of fire. Escape windows should only be considered if satisfied that it would be safe to use them in an emergency.

Escape windows are generally only suitable if the occupiers are able-bodied individuals with no specific high-risk characteristics and who can reasonably be expected to exit via the window unaided.

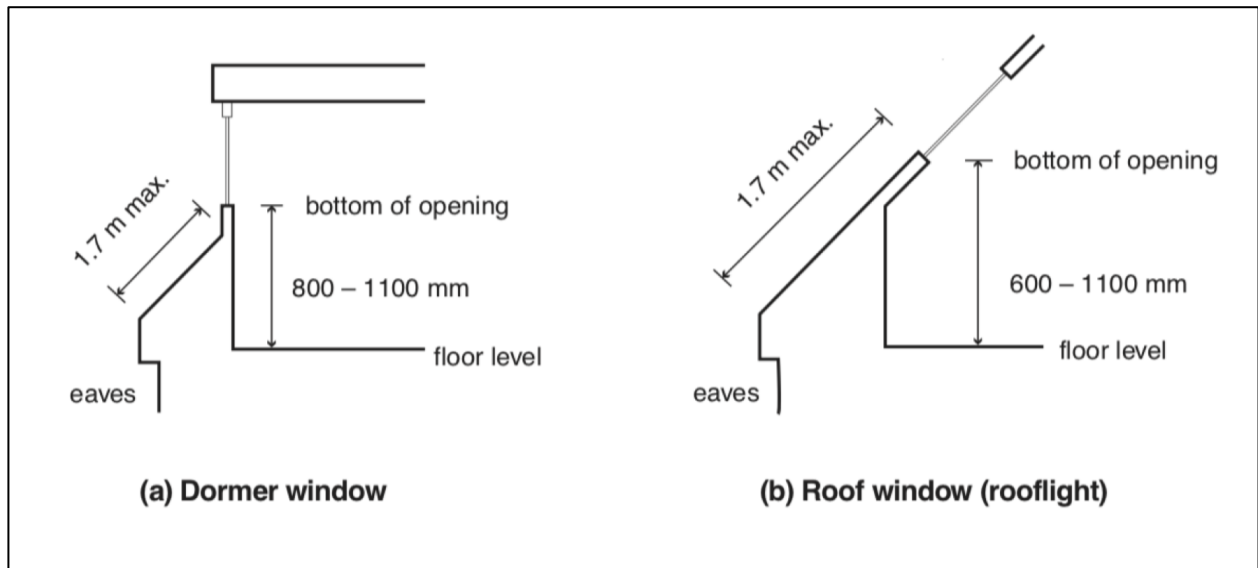
If escape windows are provided in full compliance with Building Regulations Technical Booklet E and with direct access from each habitable room then there will be no need to require additional protection to the internal escape route.

Escape windows should meet the following criteria:

- they serve rooms whose floor level is no more than 4.5m from the ground (typically only ground and first floor premises);
- for an upper storey be located to facilitate rescue by ladder from the ground;
- where it is a dormer or roof window, be positioned as shown in Figure 14, Page 42;
- have a clear opening that is not less than 0.33m² in area, and have a clear opening that is at least 450 mm high and at least 450 mm wide. The lower edge of the window opening shall be not less than 800 mm and not more than 1100 mm above the floor except in the case of a roof window where the lower edge of the window opening may be not less than 600 mm above the floor (see Figure 14, Page 42). For the purposes of this paragraph an escape window shall be taken to include a door which leads to an area (e.g. a balcony) from which a person could escape or be rescued. The minimum height to the lower edge of the opening shall not apply to such a door;
- every room served by the escape window has access to it without entering another habitable room with a lockable door (unless of a type that can be overridden from outside the room without the use of a key, tool or numerical code) and any tenancy agreement should ideally prohibit the fitting of alternative or additional locks. (This will usually be achievable in single household occupancies and most shared houses, but is unlikely in a bedsit-type HMO);
- if it is necessary to pass through the common escape route to reach the escape door or window, consideration should be had to the travel distance involved. Where the common escape route is not a protected route, unusually long travel distances may be unacceptable and other fire precautions may be necessary.
- any doors (including a French window or a patio window) should be guarded with a protective barrier in accordance with BS 6180.
- the ground beneath the window or balcony should be clear of any obstructions (such as iron railings or horizontally hung windows) and should be of a size and material that is suitable and safe for supporting a ladder.
- there is no basement well or other encumbrance beneath the window such as railings or a conservatory;
- the escape window is openable from the inside without the use of a removable key; and
- the window or door should lead to a place of ultimate safety, clear of the building. However, if there is no practical way of avoiding escape into a courtyard or back garden from where there is no exit, it should be at least as deep as the building is high.

If any of the above requirements cannot be met, the use of the escape window is not acceptable.

Figure 14 - Escape windows from roof space conversions of 2 storey dwelling houses (Source Building Regulations Technical Booklet E)



Notes:

- 1) Clear window opening not less than 0.33m^2 in area and at least 450mm high and at least 450mm wide.
- 2) Window located to facilitate rescue by ladder from the ground.
- 3) The window may be in the end wall of the dwelling-house instead of the roof as shown.

5.19 Single Basements Storeys

The basement storey of a dwelling provided with a single floor level below ground floor level should be provided with:

- a) an alternative escape route; or
- b) a protected stairway route via the ground floor leading to a final exit.

In either case the layout should be in accordance with one of the following options:

- 1) the total travel distance from any point of the basement to the foot of the stair should be limited to 9m. Cooking facilities should be sited away from the internal escape route; or
- 2) a protected internal hallway from which all habitable rooms can be accessed should be provided, having a travel distance not exceeding 9m from the foot of the protected stair to the door of any habitable room; or
- 3) all habitable rooms should be accessible from an internal hallway and an alternative exit should be provided from the basement; or

- 4) a line of fire separation, comprising 30 minutes fire-resisting construction, should be provided between the living and sleeping areas of the basement, and the basement should have an alternative exit from the bedroom area.

5.20 Multi-Basement Storeys

For dwellings with multiple floor levels below ground floor level, at least one of the following should be provided:

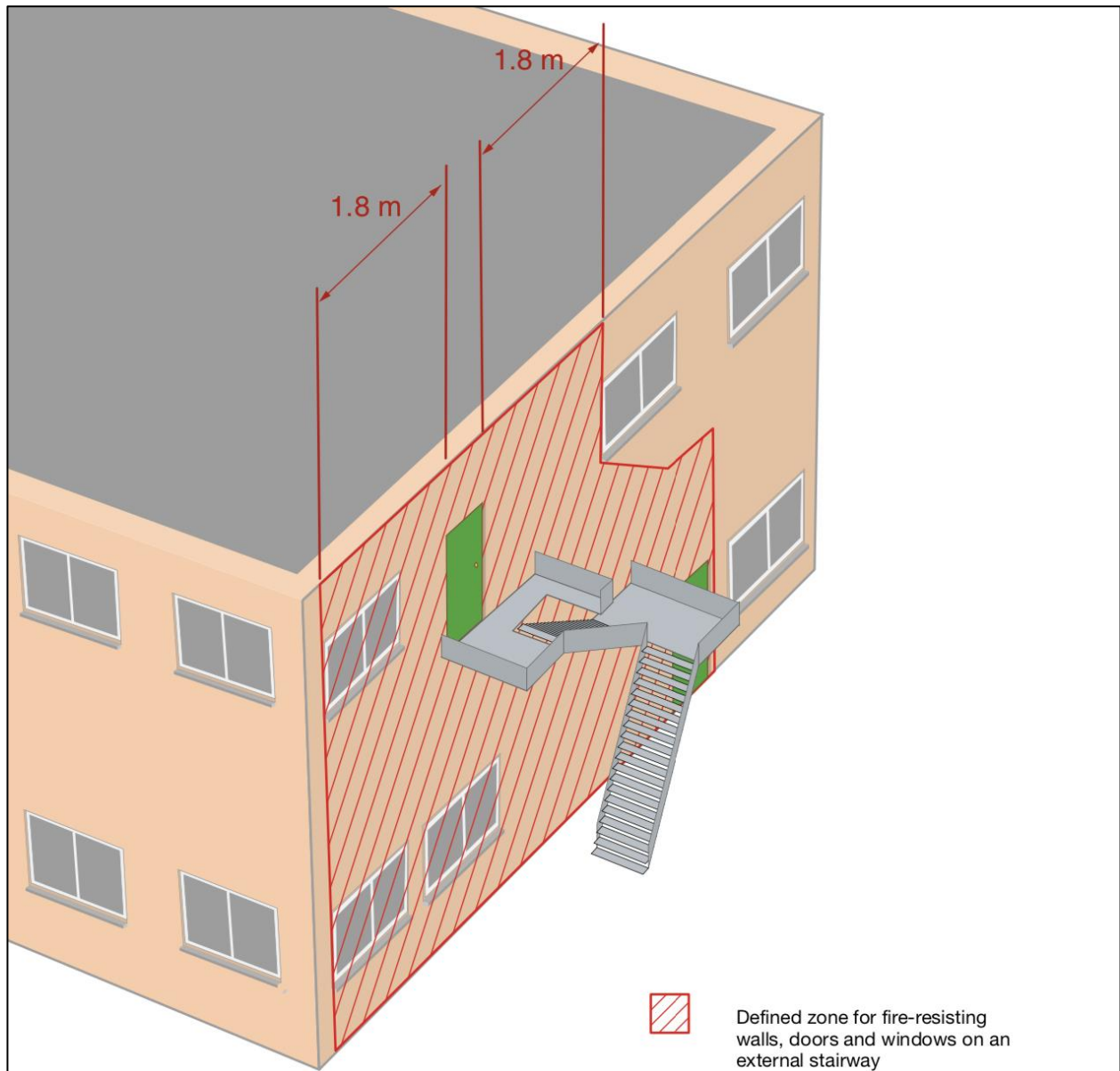
- a) an alternative exit from every level below ground. A line of fire separation, comprising 30 minutes fire-resisting construction, should be provided between the living and sleeping areas of the basement, and the basement should have an alternative exit from the bedroom area; or
- b) a protected stairway enclosure serving all habitable rooms and one alternative exit from each basement level; or
- c) a protected stairway and an LD1 fire detection and fire alarm system in accordance with BS 5839 Part 6. The maximum depth of the basement should be not more than 7.5 m below the entrance to the dwelling; or
- d) a protected stairway enclosure and an automatic water fire suppression system. The travel distance should not exceed 9m from the foot of the protected stair to the door of any habitable room.

5.21 External Escape Routes

Where the escape from an HMO involves an external stair, balcony or flat roof, it should not be threatened by fire or smoke issuing from any door, window or ventilator in the proximity of the escape route. The stair shall be protected from the weather when it serves a floor or flat roof more than 6m above ground level. The degree of protection from the weather will depend on the exposure of the stair.

A typical external escape route is illustrated in Figure 15, Page 44.

**Figure 15 - Fire resistance of external walls adjacent to external escape routes
(Source DHSSPS Fire Safety Risk Assessment Sleeping Accommodation Guide)**



5.22 Escape route onto a Flat Roof

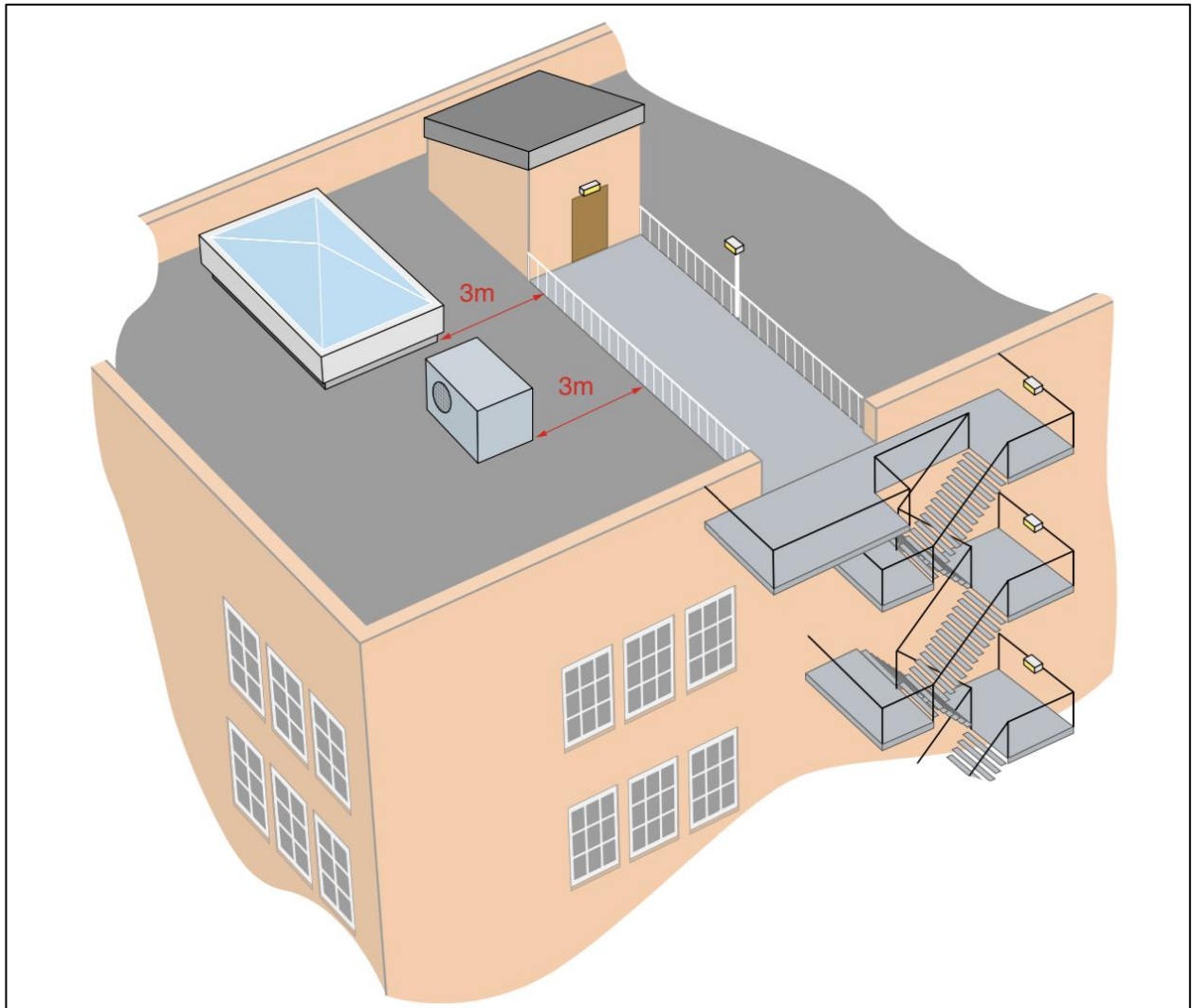
An alternative escape route may be by way of a flat roof, provided that:

- (1) the flat route is part of the same building from which escape is being made;
- (2) the route across the roof leads to a storey exit or external escape route;
- (3) the part of the flat roof forming the escape route and its supporting structure, together with any opening in the roof within 3 m of the escape route, is fire-resisting; and
- (4) the route is adequately defined and guarded by walls and/or protective barriers in accordance with BS 6180.

A typical roof escape route is illustrated in Figure 16 below.

External escape routes should receive routine inspection and maintenance to ensure they remain fit for use.

Figure 16 - An escape route across a roof (Source DHSSPS Fire Safety Risk Assessment Sleeping Accommodation Guide)



5.23 Means of Escape which are Not Acceptable

Portable ladders, throw-out ladders, fixed vertical or raking ladders, lowering lines and other self-rescue devices are not acceptable as a means of escape.

6 GENERAL FIRE PRECAUTIONS

6.1 Managers Responsibilities

The manager of the premises must ensure:

- 1) Fire alarm systems are tested weekly and a record of testing is maintained;
- 2) Servicing and maintenance of the fire alarm system, including replacing smoke and heat detectors and standby supply batteries at the recommended intervals;
- 3) Operating instructions are held for the fire alarm system;
- 4) The operating instructions are sufficient to enable a lay person to fully understand the use of all controls and the meaning of visual and audible signals;
- 5) The contamination of detectors is prevented during work that gives rise to dust, smoke, paint spray, etc; and
- 6) Instructions are issued to tenants.

6.2 Instructions for Tenants

The manager of the premises should ensure that they provide written information and instructions to tenants on:

- 1) Actions in the event of a fire (leave the building immediately, call 999 and request the fire & rescue service);
- 2) The use of firefighting equipment;
- 3) Actions in the event of a fire alarm signal; (leave the building immediately, call 999 and request the fire & rescue service. If you know the cause is a false alarm, do not call 999);
- 4) How to avoid false alarms and the common causes of false alarms;
- 5) Arrangements for resetting the fire alarm in the event of a false alarm;
- 6) Arrangements for reporting a defect;
- 7) Arrangements for checking the system on reoccupation of the dwelling after a vacant period;
- 8) The need to keep a clear space around all detectors and manual call points;
- 9) The need to avoid contamination of the detectors by paint.

6.3 Firefighting Equipment

Appropriate firefighting equipment should be provided as follows:

Shared Flats/Maisonettes (Category F)

- A fire blanket shall be installed in each kitchen in accordance with BS 7944.

1 and 2 Storey Properties (Categories A, B and C)

- A fire blanket shall be installed in each kitchen in accordance with BS 7944.
- A carbon dioxide (CO₂) extinguisher shall be installed adjacent to any incoming mains electric supply cupboard.
- A 9L water extinguisher (or an equivalent extinguisher of 13A rating) shall be installed on the primary escape route.
- All extinguishers shall be installed and maintained in accordance with BS EN3, Part 3 and BS 5306 Part 3.

3 or more Storey Properties (Categories A, B and C)

- A fire blanket shall be installed in each kitchen in accordance with BS 7944.
- A carbon dioxide (CO₂) extinguisher shall be installed adjacent to any incoming mains electric supply cupboard.
- A 9L water extinguisher (or an equivalent extinguisher of 13A rating) shall be installed on each floor.
- All extinguishers shall be installed and maintained in accordance with BS EN3, Part 3 and BS 5306 Part 3.

In exceptional circumstances, firefighting equipment may not be suitable in an HMO occupied by vulnerable people, subject to a fire risk assessment from a competent person indicating that the occupants would not be capable of operating such equipment or may endanger themselves by the misuse of the equipment in a fire situation.

6.4 Notices and Signs

1, 2 and 3 Storey HMOs (All Categories)

Notices and signs are not required in 1, 2 and 3 storey HMOs, except:

- where the escape route is complex or lengthy; or
- where the HMO is occupied by more than 6 persons.

If the exceptions do not apply, then notices and signs must be installed in accordance with below.

Non-exempt, and 4 or more storey HMOs (All Categories)

Notices and signs should be installed as follows:

- A fire action sign beside each break glass point;
- Illuminated exit signs above each exit; and
- Fire door keep shut signs on high risk rooms.

All fire safety signs, notices and graphical symbols should conform as far as practicable with BS 5499 Part 4, BS 5499 Part 5 and the Health and Safety (Signs and Signals) Regulations (NI) 1996. Existing signs and notices need not be replaced immediately if they are fulfilling their purpose effectively. They should, however, be examined and be replaced if they are found to be inadequate.

6.5 Fire Resistant Glass

Fire resistant glass can be used to give periods of fire resistance up to one hour, though the actual fire resistance is determined by the nature and dimensions of the glass, the type of frame and method of securing the glass.

The use of fire resistant glass is beyond the scope of this guide. Reference must be made to:

- Building Regulations Technical Booklet E;
- BS 6262 Part 3 in relation to fire safety;
- BS 6262 Part 4 in relation to impact safety;
- BS 6180 if used in a barrier; and
- BS 5234 if used in a partition.

6.6 Final Exits and Communal Doors

All final exit and communal doors shall be fitted with an easy opening device to allow exit without using a key in the event of an emergency.

The easy opening device should be chosen so that they give security but do not allow tenants to be locked out by the action of the self closers. The best design is a simple mortice lock and door handles which require a key to lock the door, but the inside has a thumb turn instead of a key. This means that the occupant can escape from the room in an emergency without relying on a key.

An alternative easy opening device should be provided if the occupant suffers from arthritis in the hands or has other hand movement restriction.

Care must be taken when installing security locks to final exit doors, so that this requirement is not overridden.

6.7 Surface Finish of Walls and Ceilings

The surface finish of walls and ceiling should be of a standard not lower than that the class indicated in Table 4 below.

Table 4 - Surface class for both walls and ceilings (Source Building Regulations Technical Booklet E)

Surface class for both walls and ceilings		Description and Location
National Class BS 476, Parts 6 and 7	European Class BS EN 13501-1	
0	B s3,d2	<p>These are non-combustible materials and materials of limited combustibility such as brickwork, concrete, plasterboard and plastered finishes.</p> <p>Acceptable in all locations including protected routes, circulation routes, escape routes and stairways.</p>
1	C s3,d2	<p>These include timber, particleboard, hardboard and surface covered with heavy flock wallpaper, provided they have been treated with flame retardant materials.</p> <p>Acceptable in rooms.</p>
3	D s3,d2	<p>These include those specified in class 1 with the addition of thermosetting plastics and surfaces covered in polystyrene wall and ceiling tiles.</p> <p>Not acceptable on escape routes and stairways.</p> <p>Acceptable in small rooms and parts of other rooms if the total area does not exceed more than one half of the floor area up to a maximum of 20m².</p> <p>Not acceptable on escape routes and stairways.</p>

6.8 Fire Doors

Fire doors are required in protected routes along the means of escape and should be FD30S or FD30 as specified in Section 5 on Page 21.

FD30 means a door, together with its frame and furniture which, when closed, is intended to restrict the passage of fire for 30 minutes, and has been tested to BS 476 Part 22.

FD30S means a FD30 door that includes smoke seals designed to resist the passage of smoke.

Fire doors should be:

- fitted with external dual action hydraulic type self closing devices, which are adjusted to close quickly but latch slowly so as to not wear the smoke seals or damage the door frame. Self closures should be attached using tamper proof screws to prevent removal. Chain operated closers are not suitable because they cause the doors to slam shut causing a noise nuisance to occupiers, a risk of finger entrapment and tend to result in the removal of the mechanism.
- hung on three pairs of steel hinges, to resist bowing in the event of fire and bear the increase weight of the door;
- fitted with smoke seals. This specification is for a “night time escape” standard and so smoke seals are more important than intumescent strips. Cool smoke, often given off by smouldering furnishings and electrical equipment, is exceptionally toxic and tends not to rise immediately; therefore smoke seals on fire doors are essential. Nylon brush or neoprene smoke seals (draught proofing kits) are acceptable. Smoke seals can be fitted into the door itself or, a better option is to apply to the door stop so that the fire door closes onto the seals.
- reasonably close fitting into frames with a maximum gap of 3 mm between door and frame. If doors are too tight then the self closers will not work as there has to be a certain air gap around the door. In addition, heavy fire doors may drop by 1 or 2 mm over time and so tight fitting doors will stop closing and need to be adjusted. It is recommended that the door is fitted first, before fixing the stops, not the other way round.

Door frames may be improved by fitting 25mm door stops which the doors should close onto. The benefit of doing this is that it covers minor irregularities of fit, often found when working on existing door openings. Alternatively, if purpose-made doors are used which have integral intumescent strips then standard door stops may remain.

6.9 Automatic Door Release Mechanisms

Where the use of automatic door release mechanisms are considered essential, they will only be acceptable when the following conditions are met:

- 1) The door release mechanism should conform to BS 5839 Part 3 and BS 7273 Part 4 and be fail safe (i.e. in the event of a loss of power or a fault on the system, the release mechanism should be triggered automatically).

- 2) All doors fitted with automatic door release mechanisms should be linked to an alarm and detection system.
- 3) All automatic door release mechanisms should be triggered by any of the following:
 - a) The actuation of any automatic fire detector;
 - b) The actuation of any manual call point;
 - c) Any fault on the fire alarm and detection system;
 - d) Any loss of power to the alarm and detection system.
- 4) Each door fitted with an automatic door release mechanism should be closed at a pre-determined time each night and remain closed throughout the night. If, for management reasons this is impractical, it should be the specific responsibility of a nominated competent person to operate the release mechanism at least once a week to ensure:
 - a) The mechanisms are working effectively; and
 - b) The doors close effectively into their frames.
- 5) The alarm and detection system and the release mechanisms should be subject to an effective maintenance contract with a competent maintenance contractor.

6.10 HMO within a Building Containing Other Categories of Use

HMOs which are situated within a building comprising other categories of use, for example, a flat used as an HMO positioned above a shop, shall be structurally separated from such premises by imperforate construction which affords a fire resistance of not less than 60 minutes, combined with an independent and protected escape route.

6.11 Cooking Facilities

Cooking facilities shall be safely situated and should not, for example, be located immediately adjacent to room exits or an escape window.

6.12 Pipes and ducting penetrating fire separating elements

Where a pipe passes through a fire separating element it should be fire stopped in accordance with Building Regulations Technical Booklet E, Paragraph 4.43.

Where a ventilation or air conditioning duct passes through a fire separating element it should be fire stopped in accordance with Building Regulations Technical Booklet E, Paragraph 4.44.

7 EMERGENCY LIGHTING

The term 'emergency lighting' is used in this guide, though the term 'escape lighting' is used by Building Regulations Technical Booklet E.

7.1 1, 2 and 3 Storey HMOs

Emergency lighting is not required in 1, 2 and 3 storey HMOs, except:

- where the escape route is complex or lengthy; or
- where the HMO is occupied by more than 6 persons; or
- where no borrowed light is available.

If the exceptions do not apply, then emergency lighting must be installed in accordance with Section 7.2.

7.2 Non-exempt and 4 or more Storey HMOs

Emergency lighting should be provided throughout the escape route and may be required in communal rooms.

When the supply to the normal lighting or parts of the normal lighting to an HMO fails, emergency escape lighting is required to fulfil the following functions:

- a) to indicate clearly and unambiguously the escape routes;
- b) to provide illumination along such routes to allow safe movement towards and through the exits provided;
- c) to ensure that fire alarm call points and fire fighting equipment provided along the escape routes can be readily located.

Emergency lighting should be provided and be sited in accordance with BS 5266 Part 1 and BS EN 1838.

The number and position of luminaries will depend on the layout of the premises and the product chosen. They must provide the minimum required luminance and indicate clearly the exit route and highlight any hazards such as staircases, changes in floor levels or changes in direction.

7.3 Testing and Servicing

Emergency lighting systems should be tested and serviced regularly in accordance with the requirements of BS 5266 Part 1.

A record of testing and servicing should be maintained.

7.4 Electrical Supply to Emergency Lighting and Common Areas

There should be continuity of electrical supply to emergency lighting systems and to normal lighting circuits serving the common areas.

The electrical supply should be derived from the landlord's permanent supply in the common parts.

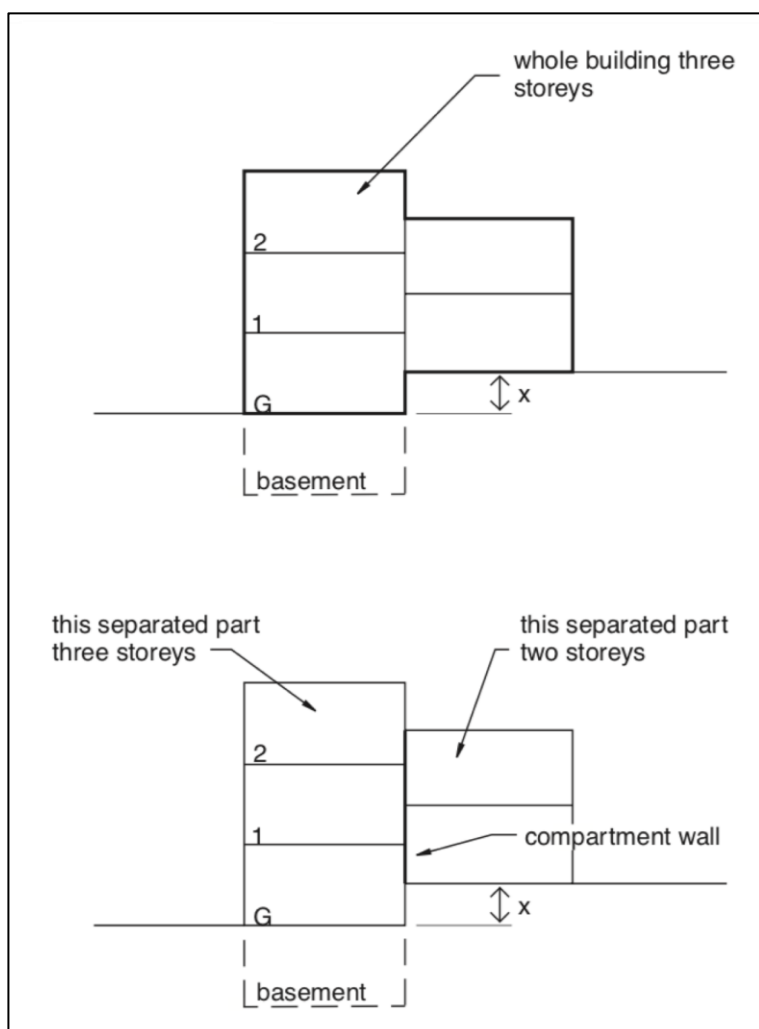
Prepayment meters serving these installations are prohibited.

8 GLOSSARY

8.1 Number of storeys

The number of storeys should be counted as shown in Figure 17 below.

Figure 17 - Number of Storeys (Source Building Regulations Technical Booklet E)



Notes:

- 1) Count at the position which gives the greatest number of storeys.
- 2) Where X exceeds 1.2m the building or separated part is considered to have two basement storeys and therefore be a two storey building.

8.2 Glossary of Terms

These definitions are provided to assist the appropriate person in understanding some of the technical terms used in this guide. They are not exhaustive.

Term	Definition
Access Room	A room through which the only escape route from an inner room passes.
Accommodation stairway	A stairway, additional to that required for means of escape purposes, provided for the convenience of occupants.
Alternative escape route	Escape routes sufficiently separated by either direction and space, or by fire-resisting construction to ensure that one is still available irrespective of the location of a fire.
Compartment wall and/or floor	A fire-resisting wall or floor that separates one fire compartment from another.
Competent person	A person with enough training and experience or knowledge and other qualities to enable them properly to assist in undertaking the preventative and protective measures.
Final exit	An exit from a building where people can continue to disperse in safety and where they are no longer at danger from fire and/or smoke.
Fire door	A door or shutter, together with its frame and furniture, provided for the passage of people, air or goods which, when closed is intended to restrict the passage of fire and/ or smoke to a predictable level of performance.
Fire safety strategy	A number of planned and co-ordinated arrangements designed to reduce the risk of fire and to ensure the safety of people if there is a fire.
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.
Firefighting stairway	A fire-resisting enclosure containing a firefighting stair, fire mains, firefighting lobbies and if provided, a firefighting lift.
Flat	A dwelling, forming part of a larger building, that has all its rooms on one level or not more than half a storey height apart.
Habitable Room	Any room in a dwelling other than a kitchen, utility room, bathroom, dressing room or WC.
Inner room	A room from which escape is possible only by passing through another room (the access room).

Term	Definition
Maisonette	A dwelling, forming part of a larger building, which includes rooms on two or more levels that are more than half a storey height apart.
Means of escape	Route(s) provided to ensure safe egress from the premises or other locations to a place of total safety.
Normal Supply	The supply from which the fire detection and alarm system is expected to obtain its power.
Protected lobby	A fire-resisting enclosure providing access to an escape stairway via two sets of fire doors and into which no room opens other than toilets and lifts.
Protected route	An escape route which is adequately protected from the rest of the building by fire-resisting construction.
Protected stairway	A stairway which is adequately protected from the rest of the building by fire-resisting construction.
Self-closing device	A device that is capable of closing the door from any angle and against any latch fitted to the door.
Stay put fire strategy	<p>A strategy where only persons directly affected by heat or smoke are advised to evacuate and all other occupants are advised to remain in place, unless the fire and rescue service deem it necessary to evacuate other residents at a later stage.</p> <p>In relation to HMOs, a stay put fire strategy is only suitable for Category F (Shared Flats/Maisonettes), which have been designed, constructed and maintained to support such a strategy. Special provisions are necessary to ensure that the stairway(s) remain relatively free from smoke and heat in the event of a fire within a dwelling, which is of particular importance where only one staircase serves the building.</p>
Storey exit	A final exit or a doorway giving direct access into a protected stairway, firefighting lobby or external escape route.
Storey height	The distance in metres from the external ground level to the internal floor level of the storey under consideration.
Travel distance	The actual distance to be travelled by a person from any point within the floor area to the nearest storey exit or final exit, having regard to the layout of walls, partitions and fixings.
Vulnerable person	A person who may require additional measures to assist them to evacuate in the event of a fire due to impaired mobility, a disability or other illness which may impact on their ability to self-evacuate.

9 SUPPORTING GUIDANCE

The latest version of all documents listed in this section should be used, including any amendments. Any views expressed in these documents are not necessarily those of NIFRS.

1. The Building Regulations (Northern Ireland) 2012 (as amended) - Technical Booklet E - Fire Safety, October 2012.
2. The Building Regulations (Northern Ireland) 2012 (as amended) - Technical Booklet R - Access to and use of buildings, October 2012.
3. BS 9991: 2015 - Fire safety in the design, management and use of residential buildings. Code of practice.
4. Fire Safety Risk Assessment Sleeping Accommodation Guide, published by Department of Health, Social Services and Public Safety in March 2013.
5. National Fire Chiefs Council Fire Safety in Specialised Housing.
6. BS 476 (multiple parts) - Fire Tests on building material and structures.
7. BS 5266-2: 1998 - Emergency lighting. Code of practice for electrical low mounted way guidance systems for emergency use.
8. BS 5266-6: 1999 - Emergency lighting. Code of practice for non-electrical low mounted way guidance systems for emergency use. Photoluminescent systems.
9. BS 5306-3: 2017 - Fire extinguishing installations and equipment on premises. Commissioning and maintenance of portable fire extinguishers. Code of practice.
10. BS 5306-9: 2015 - Recharging of portable fire extinguishers. Code of practice.
11. BS 5839-1: 2017 - Fire detection and fire alarm systems for buildings. Code of practice for system design, installation, commissioning and maintenance of systems in non-domestic premises.
12. BS 5839-6: 2019 - Fire detection and fire alarm systems for buildings. Code of practice for design, installation, commissioning and maintenance of systems in domestic premises.
13. BS ISO 3864-1: 2011 - Graphical symbols. Safety colours and safety signs. Design principles for safety signs and safety markings.
14. BS 5499-4: 2013 - Safety signs. Code of practice for escape route signing.
15. Health and Safety (Signs and Signals) Regulations (NI) 1996.
16. BS 5499-10: 2014 - Guidance for the selection and use of safety signs and fire safety notices.
17. BS 7944: 1999 - Type 1 heavy duty fire blankets and type 2 heavy duty heat protective blankets.
18. BS 8214: 2016 - Timber-based fire door assemblies. Code of practice.
19. BS EN 14637: 2007 - Building hardware. Electrically controlled hold-open systems for fire/smoke door assemblies. Requirements, test methods, application and maintenance.