London Fire Safety Guidance for Houses in Multiple Occupation

Introduction

Part 1 of the Housing Act 2004 introduced the Housing Health and Safety Rating System (HHSRS). It provides comprehensive guidance on the assessment of hazards presented within a residential property by fire (Hazard 24). Houses in multiple occupation present particular challenges in the assessment of fire hazard. The hazard rating arrived at will be dependent on a range of factors which each independently affect the hazard rating band. The HMO's design, construction and condition should limit the spread of fire, howsoever caused and provide a safe and ready means of escape. In addition, there should be adequate fire protection to the means of escape and between each unit of accommodation, appropriate detection and alarm systems and as appropriate emergency lighting and fire fighting equipment

Thanks go to the following officers who have produced this guide:

Richard Drew	**Westminster City Council**
Kevin Thompson	**London Borough of Ealing**
John Hewish	**Westminster City Council**
Andrew Chadney	**London Fire Brigade**

Purpose of the Guidance

This guidance offers advice on means of escape and other fire precautions in all types of Houses in Multiple Occupation (HMOs). HMOs meeting this guidance may be considered to be close to the ideal as recommended in the *HHSRS Operating Guidance* and present hazards of a reasonable and acceptable severity assuming an adequate standard of maintenance and management. The guidance assumes average risk occupation. Application of this guidance by practitioners should bring an acceptable degree of consistency and provide clarity for landlords. The guidance adopts a purely risk assessed approach largely based on the height, size and layout of the building.

Practitioners are reminded that purpose built premises or conversions which comply in full with the provisions of the Building Regulations 1991 are not HMOs for the purposes of the Housing Act 2004. Alternative standards apply to these properties under BS5588 -12: 2004. In addition a building that complies with current Building Regulations will by definition have adequate fire precautions for normal use. It will not normally be necessary to require further works to provide means of escape unless the property is occupied in a way which was not foreseen when Building Regulation approval was granted. If building work is needed, for example to achieve adequate means of escape, including electrical work such as appropriate emergency lighting or fire detection and alarm systems, it will also be necessary to submit an application to Building Control before doing the work. Any works which are to be subsequently hidden, for example electric cables beneath new plasterwork,

should be inspected before being obscured. After a satisfactory completion inspection by Building Control, a Completion Certificate will be issued. This is an important document which should be kept in a safe place to aid the owner when the property comes to be sold.

Status of the guidance

Section 10 of the Housing Act 2004 requires Local Housing Authorities to consult with the Fire and Rescue Authority before taking Housing Health and Safety Rating System enforcement action under Section 5(2) or 7(2) of Part 1 of the Act in respect of a Fire hazard. This guidance is intended as a basis for that consultation. The document offers guidance in determining the appropriate level of fire protection to be required in Houses in Multiple Occupation under such enforcement action.

The guidance is advisory. Practitioners should have regard to it when exercising their powers but are reminded that they must be flexible in forming their opinions in light of all the circumstances of a particular case. Practitioners may consider higher or lower standards than those in this guidance to be appropriate in light of any risk assessment undertaken. The guidance is not prescriptive and discretion in the matters covered remains with practitioners.

Acknowledgements

"The Guidance for Fire Safety in Houses in Multiple Occupation is welcomed and this Authority commends its use as a basis for consultation between local housing authorities in London and the London Fire and Emergency Planning Authority (LFEPA). The content of the guide provides clear advice when officers from both Authorities are considering appropriate fire safety measures to ensure fire safety in HMOs after fire hazard assessments have been carried out under Part 1 of the Housing Act 2004. The Authority believes that the production of this Guide will lead to greater consistency in enforcement decisions across London to the benefit of landlords and HMO residents"

John Judd
Assistant Commissioner
Community Fire Safety
London Fire Brigade

"The CIEH is pleased to endorse the London Fire Safety Guidance for Houses in Multiple Occupation. The guide deals with a complex subject in relation to a complex system but clearly sets out the principles of its use as part of a risk assessment using the Housing Health and Safety Rating System. It will prove a useful tool for local housing authorities in recognising the 'ideal' for HMOs and more importantly identifying and defining what is necessary in order to properly protect the health safety and welfare of *tenants of such properties"*

Andrew Griffiths
Principal Policy Officer
Chartered Institute of Environmental Health

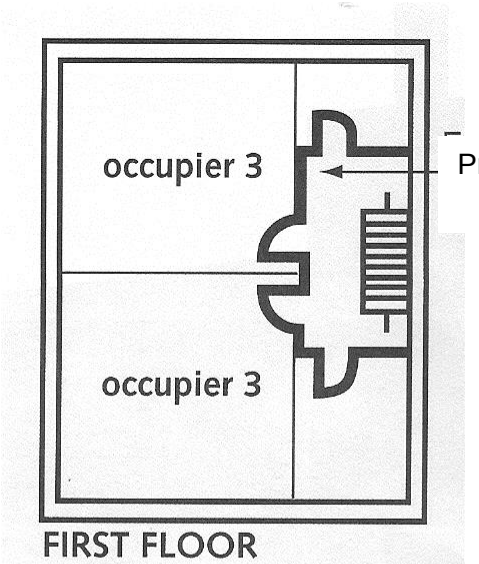
Two Storey HMOs

Requirement	Fire resistance	Technical standards and ~ guide to compliance
Walls and Ceilings	**30 minute fire resistance** • to all standard risk rooms ~ within dwellings (including ceilings beneath attics) ~ between dwellings ~ bordering the protected route • ceilings between basement or cellar and ground floor escape route **60 minute fire resistance** • to all higher risk rooms ~ within dwellings (including ceilings beneath attics and within basements or cellars) ~ between dwellings or occupations ~ bordering the protected route	**Construction specification to be tested to :** **BS 476 : Part 8 : 1972 or** **BS 476 : Parts 20 - 22 : 1987 as appropriate**
Doors	**30 minute fire resistance(FD30S)** • to all standard risk rooms ~ within dwellings ~ opening onto the protected route **60 minute fire resistance(FD60S)** • to all higher risk rooms** ~ within dwellings ~ opening onto the protected route • within a separating wall	**Construction specification tested to : BS 476 : Parts 22, 23 and 31.1 Installation to : BS 8214 : 1990.**
Lobbies	Not required	
Cupboards and stores	Where in staircase enclosure treat as a risk room (as above). Door to be kept locked shut when not in use.	
Surface finishes	**Walls and ceilings**	**Product specification**

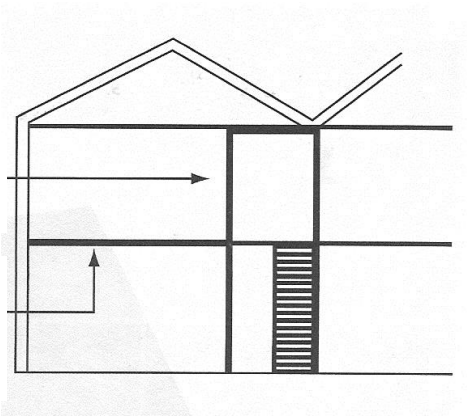
	• Class 1 throughout protected route • Class 1 in all hostel rooms **Floor coverings** • Low radius of fire spread throughout protected route	**tested to :** **BS 476 : Part 7 : 1971/1997** **Product specification tested to : BS 4790 : 1987 (1996)** **Product labelled to : BS 5287 : 1988 (1996)**
Signs and notices	**Fire doors** • Signs required on all fire doors except those to individual lettings and final exit doors not fitted with panic bolts **Fire Exits and directional signs** • Any exit which is not a normal route of travel from a building should have a Fire Exit sign	**Design specification to :** **BS 5499 : Part 1 : 1990**
Automatic fire detection and warning	• L2 Category in hostels • Grade D LD2 Category in all other HMOs	**BS 5839 : Part 1 : 2002** **BS 5839 : Part 6 : 2004** ~ design of system under Part 6 dependent upon risk assessment.
Staircase lighting	• Standard lighting throughout • Emergency lighting not required unless complex/unusual layout	~ any switch illuminates entire route ~ minimum duration applies **BS 5266 : Part 1 : 1988**
Extinguishers & fire blankets	Hostels and all HMOs	**BS EN 3 : 1996** ~ Water type in common parts ~ CO_2 type and Fire Blankets in shared kitchens ~ Fire Blankets in bedsit and flat kitchens
Secondary means of escape	Not required	

BASEMENTS • If floor area >150m^2 two stairways or escape routes generally required • Stairways serving upper floors should generally not extend to basement • Ground floor protected route to be separated from any basement risk room by 2 fire resisting doors	see **Doors** above	**Construction specification tested to BS 476 : Parts 22, 23 and 31.1 and fitted to BS 8214 : 1990.**
TRAVEL DISTANCES	For maximum travel distances see Technical Appendix	

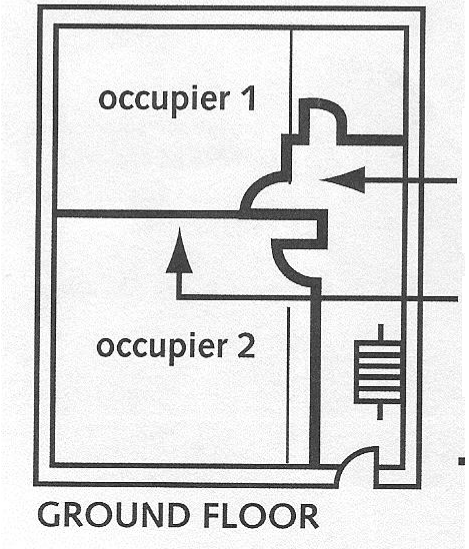
Two Storey HMOs



Protected route



Fire resisting construction



Any basement to be separated from ground floor

Fire resisting separation

Fire resisting construction

Fire resisting door, self closing

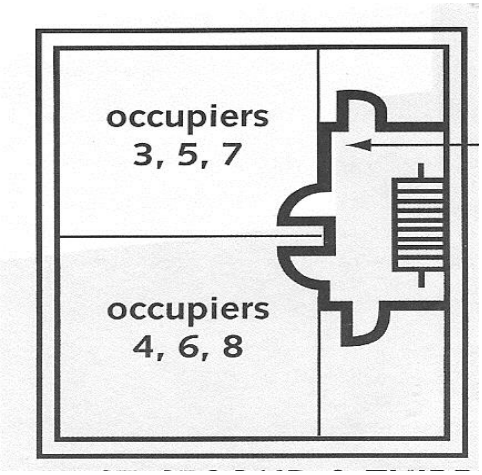
Three and Four Storey HMOs

Requirement.	Fire resistance	Technical standards and ~ guide to compliance
Walls and Ceilings	**30 minute fire resistance** • to all standard risk rooms ~ within dwellings (including ceilings beneath attics) ~ between dwellings ~ bordering the protected route • ceilings between basement or cellar and ground floor escape route **60 minute fire resistance** • to all higher risk rooms ~ within dwellings (including ceilings beneath attics and within basements or cellars) ~ between dwellings ~ bordering the protected route	**Construction specification to be tested to :** **BS 476 : Part 8 : 1972 or** **BS 476 : Parts 20 - 22 : 1987 as appropriate**
Doors	**30 minute fire resistance (FD30S)** • to all standard risk rooms ~ within dwellings ~ opening onto the protected route **60 minute fire resistance (FD60S)** • to all higher risk rooms** ~ within dwellings ~ opening onto the protected route • within a separating wall	**Construction specification tested to : BS 476 : Parts 22, 23 and 31.1 Installation to : BS 8214 : 1990.**
Lobbies	Not required	
Cupboards and stores	Where in staircase enclosure treat as a risk room (as above). Door to be kept locked shut when not in use.	
Surface finishes	**Walls and ceilings**	**Product specification**

	• Class 1 throughout protected route • Class 1 in all hostel rooms **Floor coverings** • Low radius of fire spread throughout protected route	**tested to :** **BS 476 : Part 7 : 1971/1997** **Product specification tested to : BS 4790 : 1987 (1996)** **Product labelled to : BS 5287 : 1988 (1996)**
Signs and notices	**Fire doors** • Signs required on all fire doors except those to individual lettings and final exit doors not fitted with panic bolts **Fire Exits and directional signs** • Any exit which is not a normal route of travel from a building should have a Fire Exit sign	**Design specification to :** **BS 5499 : Part 1 : 1990**
Automatic fire detection and warning	• Hostels : L2 Category throughout • In all other HMOs : ~ Grade A, LD2 Category coverage (i.e. protected route and rooms/lobbies off of protected route ~ Grade D, LD2 coverage in risk rooms	**BS 5839 : Part 1 : 2002** **BS 5839 : Part 6 : 2004** ~ design of system under Part 6 dependent upon risk assessment.
Staircase lighting	• Standard lighting throughout • Emergency lighting in escape route	• guide to compliance ~ any switch illuminates entire route ~ minimum duration applies **BS 5266 : Part 1 : 1988**
Extinguishers & fire blankets	Hostels and all HMOs	**BS EN 3 : 1996** ~ Water type in

		common parts ~ CO_2 type and Fire Blankets in shared kitchens ~ Fire Blankets in bedsit and flat kitchens
Secondary means of escape	Not required	
BASEMENTS • If floor area >150m^2 two stairways or escape routes generally required • Stairways serving upper floors should generally not extend to basement • Ground floor protected route to be separated from any basement risk room by 2 fire resisting doors	see **Doors** above	**Construction specification tested to BS 476 : Parts 22, 23 and 31.1 and fitted to BS 8214 : 1990.**
TRAVEL DISTANCES	For maximum travel distances see Technical Appendix	

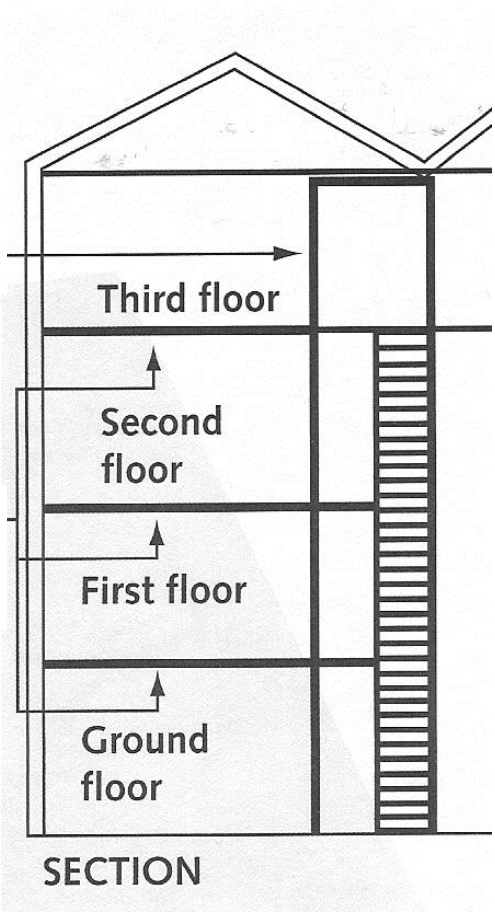
Three and Four Storey HMOs

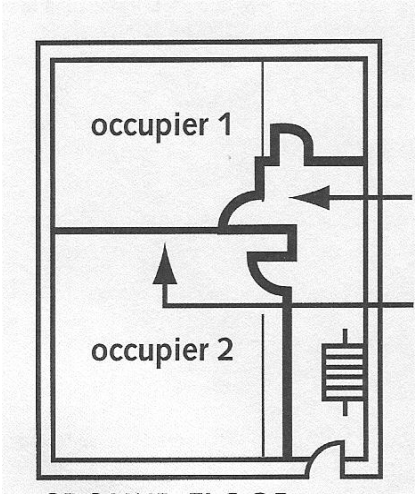


First. Second and Third floors

Protected route

Fire resisting separation





Ground Floor

Any basement to be separated from ground floor

Fire resisting separation

Fire resisting construction

Fire resisting door, self closing

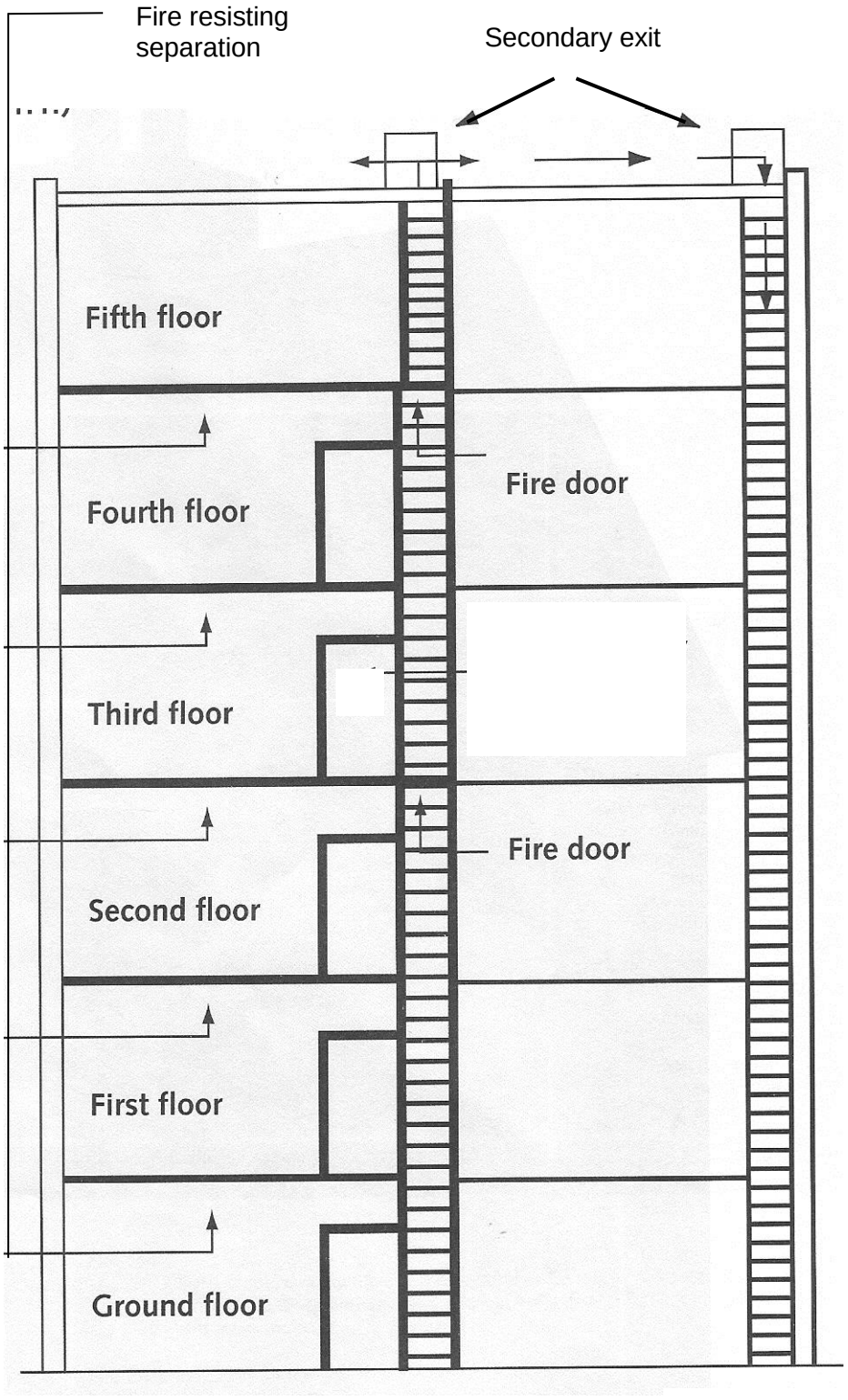
Five Storey HMOs

Requirement	Fire resistance	Technical standards and ~ guide to compliance
Walls and Ceilings	**30 minute fire resistance** • to all standard risk rooms ~ within dwellings (including ceilings beneath attics) ~ between dwellings ~ bordering the protected route • ceilings between basement or cellar and ground floor escape route **60 minute fire resistance** • to all higher risk rooms ~ within dwellings (including ceilings beneath attics and within basements or cellars) ~ between dwellings ~ bordering the protected route	**Construction specification to be tested to :** **BS 476 : Part 8 : 1972** **or** **BS 476 : Parts 20 - 22 : 1987 as appropriate**
Doors	**30 minute fire resistance (FD30S)** • to all standard risk rooms ~ within dwellings ~ opening onto the protected route **60 minute fire resistance (FD60S)** • to all higher risk rooms ~ within dwellings ~ opening onto the protected route • within a separating wall	**Construction specification tested to :** **BS 476 : Parts 22, 23 and 31.1 Installation to : BS 8214 : 1990.**
Lobbies	Lobbies are required between all risk rooms and the escape route on all storeys except the top storey except : • where there is a secondary means of escape • where there is an independent second stairway	
Cupboards and stores	Where in staircase enclosure treat as a risk room (as above). Door to be kept locked shut when not in use.	
Surface finishes	**Walls and ceilings**	**Product specification**

	• Class 1 throughout protected route Class 1 in all hostel rooms **Floor coverings** • Low radius of fire spread throughout protected route	**tested to :** **BS 476 : Part 7 : 1971/1997** guide to compliance **Product specification tested to : BS 4790 : 1987 (1996)** **Product labelled to : BS 5287 : 1988 (1996)** guide to compliance
Signs and notices	**Fire doors** • Signs required on all fire doors except those to individual lettings and final exit doors not fitted with panic bolts **Fire Exits and directional signs** • Any exit which is not a normal route of travel from a building should have a Fire Exit sign	**Design specification to :** **BS 5499 : Part 1 : 1990**
Automatic fire detection and warning	• Hostels : L2 Category throughout • In all other HMOs : ~ Grade A, LD2 Category coverage (i.e. protected route and rooms/lobbies off of protected route ~ Grade D LD2 coverage in other risk rooms	**BS 5839 : Part 1 : 2002** **BS 5839 : Part 6 : 2004** ~ design of system under Part 6 dependent upon risk assessment.
Staircase lighting	• Standard lighting throughout • Emergency lighting in escape route	~ any switch illuminates entire route ~ minimum duration applies **BS 5266 : Part 1 : 1988**

Extinguishers & fire blankets	Hostels and all HMOs	**BS EN 3 : 1996** ~ Water type in common parts ~ CO_2 type and Fire Blankets in shared kitchens ~ Fire Blankets in bedsit and flat kitchens
Secondary means of escape	Only required in buildings : • where no lobbies provided • no independent second stairway	
BASEMENTS • If floor area >150m^2 two stairways or escape routes generally required • Stairways serving upper floors should generally not extend to basement • Ground floor protected route to be separated from any basement risk room by 2 fire resisting doors	see **Doors** above	**Construction specification tested to BS 476 : Parts 22, 23 and 31.1 and fitted to BS 8214 : 1990.**
TRAVEL DISTANCES	For maximum travel distances see Technical Appendix	

Five Storey HMO



SECTION

Fire resisting construction

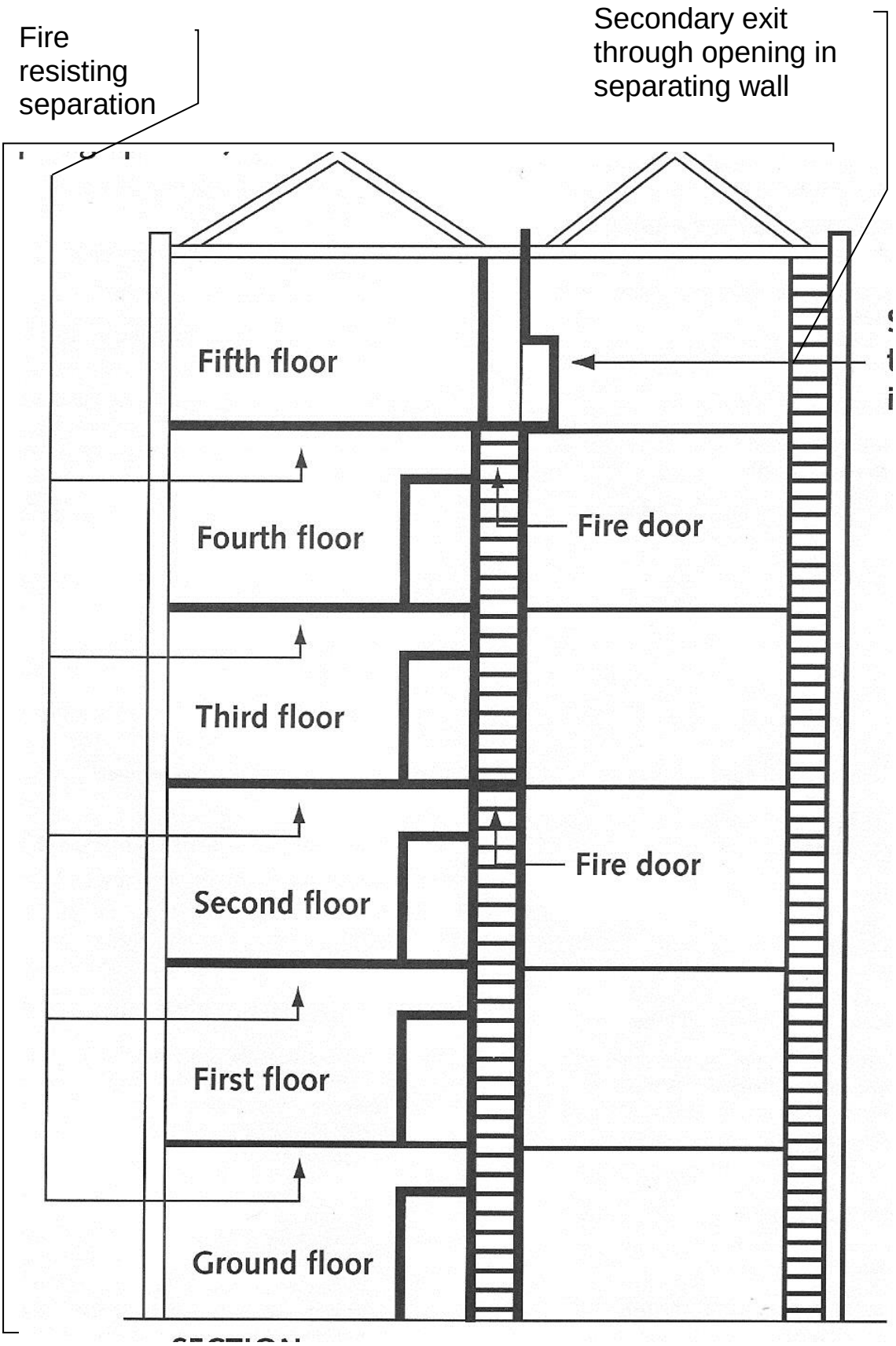
Six Storey HMOs

Requirement	Fire resistance	Technical standards and ~ guide to compliance
Walls and Ceilings	**30 minute fire resistance** • to all standard risk rooms ~ within dwellings (including ceilings beneath attics) ~ between dwellings ~ bordering the protected route • ceilings between basement or cellar and ground floor escape route **60 minute fire resistance** • to all higher risk rooms ~ within dwellings (including ceilings beneath attics and within basements or cellars) ~ between dwellings ~ bordering the protected route	**Construction specification to be tested to :** **BS 476 : Part 8 : 1972 or** **BS 476 : Parts 20 - 22 : 1987 as appropriate**
Doors	**30 minute fire resistance (FD30S)** • to all standard domestic risk rooms** ~ within dwellings ~ opening onto the protected route **60 minute fire resistance (FD60S)** • to all non-domestic risk rooms** ~ within dwellings ~ opening onto the protected route • within a separating wall	**Construction specification tested to :** **BS 476 : Parts 22, 23 and 31.1 Installation to : BS 8214 : 1990.**
Lobbies	• Lobbies are required between all risk rooms and the escape route on all storeys except the top storey unless the building has an independent second stairway	
Cupboards and	Where in staircase enclosure treat as a	

stores	risk room (as above). Door to be kept locked shut when not in use.	
Surface finishes	**Walls and ceilings** • Class 1 throughout protected route • Class 1 in all hostel rooms **Floor coverings** • Low radius of fire spread throughout protected route	**Product specification tested to :** **BS 476 : Part 7 : 1971/1997** **Product specification tested to : BS 4790 : 1987 (1996)** **Product labelled to : BS 5287 : 1988 (1996)**
Signs and notices	**Fire doors** • Signs required on all fire doors except those to individual lettings and final exit doors not fitted with panic bolts **Fire Exits and directional signs** • Any exit which is not a normal route of travel from a building should have a Fire Exit sign	**Design specification to :** **BS 5499 : Part 1 : 1990**
Automatic fire detection and warning	• Hostels : L2 Category throughout • In all other HMOs : ~ Grade A, LD2 Category coverage (i.e. protected route and rooms/lobbies off of protected route ~ Grade D, LD2 coverage in other risk rooms	**BS 5839 : Part 1 : 2002** **BS 5839 : Part 6 : 2004** ~ design of system under Part 6 dependent upon risk assessment.
Staircase lighting	• Standard lighting throughout • Emergency lighting in escape route	~ any switch illuminates entire route ~ minimum duration applies **BS 5266 : Part 1 : 1988**
Extinguishers & fire blankets	Hostels and all HMOs	**BS EN 3 : 1996** ~ Water type in

		common parts ~ CO_2 type and Fire Blankets in shared kitchens ~ Fire Blanket in bedsit/flat kitchens
Secondary means of escape	Required in all cases unless the building has an independent second stairway	
BASEMENTS • If floor area >150m^2 two stairways or escape routes generally required • Stairways serving upper floors should generally not extend to basement • Ground floor protected route to be separated from any basement risk room by 2 fire resisting doors	see **Doors** above	**Construction specification tested to BS 476 : Parts 22, 23 and 31.1 and fitted to BS 8214 : 1990.**
TRAVEL DISTANCES	For maximum travel distances see Technical Appendix	

Six Storey HMOs



SECTION

Fire resisting construction

Fire Detection and Alarm Systems

INTRODUCTION

The purpose of the Automatic Fire Detection and Warning (AFD) system within an HMO is to provide a reliable and constant means of detecting the presence of fire and/or smoke at the earliest possible stage in order to provide an audible early warning to all occupiers to evacuate the building.

AFD shall be provided in all HMOs. Systems should comply with the recommendations of the appropriate British Standard.

- The appropriate British Standard for all **hostels** is BS 5839: Part 1: 2002
- The appropriate British Standard **for other HMOs** is BS 5839: Part 6: 2004

HOSTELS

All hostels, including accommodation for staff, shall be fitted with a BS 5839: Part 1: 1988 type L2 system. It shall include manual call-points.

The appropriate type of detector should be provided in the following locations :

- living rooms
- bedrooms
- kitchens
- dining rooms
- stairways
- cupboards and stores within the protected route
- cellars used for storage
- attics used for storage
- any other area containing a fire risk

ALL OTHER HMOS

BS 5839: Part 6: 2004 should be applied to all other HMOs.

Unlike BS 5839: Part 1, Part 6 is not a prescriptive standard but is based on the principles of **risk analysis**. It should be treated with flexibility. The standards recommended in Part 6 Table 1 are to be regarded as base guidelines.

RISK ANALYSIS CRITERIA

GENERAL PRINCIPLES

- System design must be appropriate to the risk
- In assessing risk, consider each room in the dwelling separately
- Consider statistical data on fire incidence in each type of dwelling/room
- Occupant characteristics are relevant
- No risk low enough to obviate the need for some form of detection & warning system in the house

SPECIFIC CONSIDERATIONS

- Risk of death from fire in HMOs is 8-10 times greater than in single-family dwellings. There is also a greater risk of fire occurring in flats than houses. The increased risk for bedsit and flat occupiers is related to storey height, and escalates where over 2 storeys in height.
- Smoke in escape routes is the most serious threat to safe escape, being overcome by smoke or gas is the most common cause of death from a fire. NB: smoke detectors are to be installed in the **circulation spaces** of all dwellings.
- 50% of all fatalities occur in the room where the fire originates – in HMOs this figure is 60%.
- Nearly 50% of all fatal fires start in living rooms or dining rooms.
- 30% of fatal fires start in bedrooms.
- 15% of fatal fires start in kitchens
- Greatest risk of death from fire is when occupants are asleep.
- Fires resulting from smoking are the most common cause of death and the second most common cause of fire. In most cases, the item ignited is furniture or bedding.
- Space heating appliances are the second most common cause of fire deaths.
- Fires from electrical appliances/wiring cause 8% of deaths
- Most prevalent single cause of electrical fires (other than cookers and heaters) are electric blankets.
- Elderly people and children are at significantly greater risk.
- Socially deprived people on low incomes at greater risk generally.
- Arson is a growing problem, particularly in HMOs.

These principles and statistical facts must be taken into account when specifying a system for a particular property or property grouping.

DESIGN CONSIDERATIONS/GRADES OF SYSTEM

BS 5839: Part 6 grades the systems to be used in dwellings according to the assumed risk and the complexity of the system required. For the purpose of specifying fire detection system and alarm system and the associated engineering design parameters there are six grades. These grades are defined as follows:

Grade A This is a fire detection and alarm system that is designed and installed in accordance with the recommendations of BS 5839: Part 1: 2002,

except clauses relating to alarm audibility, alarm warnings for the hearing-impaired, standby supplies, manual call points, and radio-linked systems, which are replaced by Part 6.

Grade B This is a fire detection and alarm system including detectors (other than smoke or heat alarms), alarm sounders, and control and indicating equipment which either conforms to BS EN 54-2 (power supply to BS EN 54-4), or to a simpler type laid out in Annex C of BS 5839: Part 6.

Grade C This is a system of fire detectors and sounders (which may be combined in the form of smoke alarms) connected to a common power supply with both mains and a standby supply with an element of central control. e.g. a small dedicated fire control panel.

Grade D This is a system of one or more mains powered smoke (or heat) alarms each with integral standby supply. These are designed to operate in the event of mains failure and therefore could be connected to the local lighting circuit rather than an independent circuit at the dwelling's main distribution board.

Grade E This is a system of one or more mains powered smoke (or heat) alarms with no standby power supply. This grade of system will not function if mains power is disconnected or interrupted. It must therefore be wired to a dedicated circuit at the dwelling's main distribution board.

Grade F This is a system of one or more battery powered smoke alarms. These are not recommended in HMOs.

NOTE: In Grades D, E, and F where more than alarm is installed they are to be interlinked.

Mixed Grade Systems

Installations where more than one alarm system is installed to serve the whole dwelling are termed 'mixed systems'. These systems are installed to meet differing life safety objectives and may be to differing Grades, having regard to the need to avoid false alarms from one dwelling unit affecting all occupiers.

Table 1 of BS 5839 Part 6 recommends a mixed system for HMOs of 3 storeys and above [Grade A communal areas & Grade D within individual dwelling units].

LEVEL OF PROTECTION: TYPES OF SYSTEM

Whilst BS 5839 : Part 6 : 2004 details various levels of coverage for detection, only LD2 type coverage is appropriate for HMOs. LD2 type systems incorporate fire detectors in all circulation spaces forming part of an escape

route and in all rooms or areas considered to present a high fire risk on risk analysis (see Risk Analysis paragraph XX).

A POLICY FOR AFD WITHIN EACH CLASS OF HMO

When specifying a system it is necessary to follow the principles of risk analysis. The design and complexity of the system should reflect the risk presented by the subject HMO and the type of occupier.

The recommendations for system design outlined below are based on a broad risk analysis using data contained in BS 5839 : Part 6 : 2004. It is important to note that the recommendations will, in the majority of cases, provide a reasonable level of protection. However, individual characteristics of the subject HMO should always be considered before specifying a particular system. For example, if it is clear that the dwelling is subject to unusually high risk factors such as if intended exclusively for elderly persons, persons with social problems such as alcohol or drug abuse, or where there is sub-standard structural fire protection, then it may be considered appropriate to employ a higher standard.

The following classes of HMOs will be considered:

- Houses converted to self-contained flats (including studio flats), each occupied by a single household
- Bedsit-type houses in multiple occupation
- Shared houses
- Flats in multiple occupation

Houses Converted to Self-Contained Flats (Including Studio Flats), each Occupied by a Single Household

ONE OR TWO STOREY HOUSE CONVERTED TO SELF-CONTAINED FLATS, EACH OF WHICH IS OCCUPIED BY A SINGLE HOUSEHOLD

These are HMOs where no floor level exceeding 4.5m in height above ground and no floor greater than 200 m^2 in area

Grade D System

- Mains wired smoke alarms with battery back-up
- Linked so that all sound when any one alarm is activated
- **May be** wired to the local lighting circuit or alternatively to.a single independent circuit at the dwelling's (i.e. house's) main distribution board – no other equipment to be connected to this circuit other than a circuit monitoring device.

LD2 Category Coverage

- Interlinked smoke alarms sited in staircase enclosure, landings and hallways and lobbies including internal hallway/lobby of each flat near but not outside the kitchen (false alarms).
- Kitchen, bedrooms and living rooms not covered by smoke alarms.
- If no internal hallway/lobby is provided smoke or heat alarms shall be sited in the room(s) adjoining the staircase. Where cooking facilities are provided they shall be heat alarms. In bedsits containing cooking facilities, in addition to the heat alarm, a non-interlinked smoke alarm, with battery back-up, wired to the local lighting circuit and to sound only in the room concerned shall be provided.

THREE, FOUR, FIVE OR SIX STOREY HOUSE CONVERTED TO SELF-CONTAINED FLATS, EACH OF WHICH IS OCCUPIED BY A SINGLE HOUSEHOLD

These are those HMOs where one or more level exceeds 4.5m above ground and/or any floor is greater than 200 m^2 in area

Grade A System

- Fire detection and alarm system designed and installed in accordance with BS 5839: Part 1, except clauses relating to alarm audibility, alarm warnings for the hearing impaired, manual call points, capacity of standby batteries, (and radio-linked systems) which are amended by BS 5839: Part 6.

- Control panel to standard of BS EN 54-2 (power supply to BS EN 54-4).
- Wiring, siting and type of detectors etc., BS 5839: Part 1 applies, as for a Category L2 system

LD2 Category Coverage

- Smoke detectors throughout staircase, hallways, landings, cupboards, and common lobbies if present. Individual flat lobbies should have heat detectors (smoke detection inadvisable due to false alarms)
- If no lobby is present, smoke detectors shall be sited in the rooms adjoining the staircase but if cooking facilities are provided in these rooms the detectors should be heat detectors.

Grade D System

• Mains wired smoke alarms with battery back-up

• Linked within the flat (not between flats) so that all within the affected flat sound when any one alarm is activated

• **May be** wired to the local lighting circuit, or alternatively, to.a single independent circuit at the dwelling's (i.e. house's) main distribution board – no other equipment to be connected to this circuit other than a circuit monitoring device.

LD2 Type Coverage

• Smoke alarms to circulation spaces (hallway & internal stairway) of flats.as a minimum. Additional detection may be required on the basis of Risk Assessment.

• In studios containing cooking facilities, **in addition** to the Grade A heat detector, there shall be a **non-interlinked** smoke alarm, with battery back-up, wired to the local lighting circuit so as to sound only in the room concerned.

The extent of the Grade D installation within the flats recommended above is a minimum standard and should be reviewed by risk assessment. Consideration can be given to extending the Grade D installation so that all risk rooms are covered by detection and alarm

Bedsit -Type Houses in Multiple Occupation

ONE OR TWO STOREY HOUSE WHICH PROVIDES BEDSIT-TYPE ACCOMMODATION

i.e. no floor level exceeding 4.5m in height above ground and/or no floor greater than 200 m^2 in area

Grade D System

- Mains wired smoke alarms (heat alarms if bedsit contains cooking facilities) with battery back-up
- Linked so that all sound when any one alarm is activated
- May be wired to the local lighting circuit, or alternatively to a single independent circuit at the dwelling's (i.e. house's) main distribution board – no other equipment to be connected to this circuit other than a circuit monitoring device.

LD2 Category Coverage

- Smoke alarms (interlinked) sited in staircase enclosure, landings, hallways, lobbies, and to the circulation spaces of any multi-room units.
- Smoke alarms (interlinked) sited in bedrooms, living rooms and bedsits **without** cooking facilities.
- Heat alarms (interlinked) sited in kitchens and bedsits **containing** cooking facilities.
- In bedsits **containing** cooking facilities, in addition to the heat alarm there should be a **non-interlinked** smoke alarm, with battery back-up, wired to the local lighting circuit and to sound only in the room concerned.

THREE, FOUR, FIVE OR SIX STOREY HOUSE WHICH PROVIDES BEDSIT-TYPE ACCOMMODATION

HMOs where one or more level exceeds 4.5m above ground and/or any floor is greater than 200 m^2 in area

Grade A System

- Fire detection and alarm system designed and installed in accordance with BS 5839: Part 1, except clauses relating to alarm audibility, alarm warnings for the hearing impaired, manual call points, capacity of standby batteries, and radio-linked systems which are replaced by BS 5839: Part 6.
- Control panel to standard of BS EN 54-2 (power supply to BS EN 54-4)..

- Wiring, siting and type of detectors etc., BS5839: Part 1 applies, as for a Category L2 system

LD2 Category Coverage

- Smoke detectors throughout staircases, hallways, landings, storage cupboards, and common lobbies (if present).
- Smoke detectors in living rooms, bedrooms and bedsits **without** cooking facilities. Note the advice in the B.S. regarding the preference for heat detection in the principal habitable room(s), and the design requirement to avoid false alarms affecting more than one unit of accommodation.
- Heat detectors in kitchens and bedsits **containing** cooking facilities. In such bedsits, **in addition** to the heat detector there should be a non-interlinked smoke alarm with battery back-up wired to the lighting circuit and to sound only in the room concerned.

Grade D System

- Mains wired smoke alarms (and heat alarms if bedsit contains cooking facilities in a separate room) with battery back up
- Linked within unit of accommodation only so that all sound when any one alarm is activated
- May be wired to the local lighting circuit, or alternatively to a single independent circuit at the dwelling's (i.e. room or 'flat's) main distribution board – no other equipment to be connected to this circuit other than a circuit monitoring device.

LD2 Category Coverage

- Smoke or heat detectors sited in bedsits, kitchens, bedrooms and living rooms. Where cooking facilities are provided they shall be heat detectors. In bedsits/studios, in addition to the Grade A heat detector, a non-interlinked smoke alarm, with battery backup, wired to the local lighting circuit and to sound only in the room concerned shall be provided.

HOUSES WHERE THERE IS A MIXTURE OF FLATS IN SINGLE OCCUPATION AND BEDSIT OCCUPATION

Follow the guidance in the appropriate sections for:

Flats in single occupation

AND

Bedsits type HMOs respectively

Generally this will result in:

One and two storey houses

Grade D system of smoke/heat alarms covering

- staircase enclosure
- lobbies/internal hallways of flats
- bedsits

Three or more storey houses

Grade A system covering:

- staircase enclosure
- lobbies/internal hallways of flats
- bedsits

Plus

Grade D system covering:

- internal hallways of flats
- bedsits/studios

Flats in Multiple Occupation

Two situations:

- **Where an FMO is within a bedsit HMO**
  Treat the entire house as a bedsit HMO

- **Where an FMO is within a house converted into self-contained flats**
  Treat the s/c flats (in single occupation) in accordance with s/c flat section

Additionally, treat the FMO in accordance with the FMO paragraphs

AN FMO WITHIN A ONE OR TWO STOREY HOUSE CONVERTED INTO SELF-CONTAINED FLATS

FMOs where no floor level exceeds 4.5m above ground and/or no floor greater than 200 m^2 in area.

Grade D System

- Mains wired smoke alarms with battery back-up
- Linked so that all sound when any one alarm is activated
- May be wired to the local lighting circuit, or alternatively to a single independent circuit at the dwelling's (i.e. flat's) main distribution board – no other equipment to be connected to this circuit other than a circuit other than a circuit monitoring device.

LD2 Category Coverage

- Interlinked smoke alarms sited in staircase enclosure, landings and hallways and lobbies including internal hallway/lobby of each flat.
- Interlinked smoke alarms sited in bedrooms and living rooms
- Interinked heat alarms sited in kitchens

AN FMO WITHIN A THREE, FOUR, FIVE OR SIX STOREY HOUSE CONVERTED INTO SELF-CONTAINED FLATS

FMOs where one or more floor levels exceed 4.5m above ground and/or any floor is greater than 200 m^2 in area

Provide a separate Grade D alarm installation to the flat, retaining the existing Grade A Category L2 common stairway installation (The hallway to the FMO should be provided with heat rather than smoke detection to prevent false alarms)

Grade D System

- Mains wired smoke alarms with battery back-up
- Linked within the FMO so that all sound within the FMO when any one alarm is activated
- May be wired to the local lighting circuit, or alternatively to a single independent circuit at the dwelling's (i.e. flat's) main distribution board – no other equipment to be connected to this circuit other than a circuit other than a circuit monitoring device.

LD2 Category Coverage

- Interlinked smoke alarms sited in internal hallway/lobby of each flat.
- Interlinked smoke alarms sited in bedrooms and living rooms
- Interinked heat alarms sited in kitchens. Any bedroom with cooking facilities should be treated as a bedsit.

AN FMO WITHIN A PURPOSE-BUILT BLOCK OF FLATS (MANSION BLOCK)

Grade D System

- Mains wired smoke alarms with battery back up.
- Linked so that all sound when any one alarm is activated.
- May be wired to the local lighting circuit, or alternatively, to a single independent circuit at the dwelling's (i.e. flat's) main distribution board – no other equipment to be connected to this circuit other than a circuit monitoring device.

LD2 Category Coverage

- Interlinked smoke alarms sited in internal hallway/lobby of flat.
- Interlinked smoke alarms bedrooms and living rooms
- Interlinked heat alarms in kitchens

GENERAL POINTS APPLICABLE TO ALL SYSTEMS

Silencing and disablement facilities

In order to avoid the use of undesirable methods of disablement, all fire detection and alarm systems within the scope of these parts of BS 5839 should be provided with suitable and readily accessible means by which the user can silence fire alarm signals without the use of a tool. If access to ceiling mounted smoke alarms is difficult this may justify upgrading the system to one providing an element of central control.

User responsibilities testing and servicing

The recommendations of the appropriate parts should be followed.

Fire Extinguishers

SUMMARY OF FIRE EXTINGUISHER REQUIREMENTS

Water type fire extinguishers required in escape routes
Carbon Dioxide type required in shared kitchens
Fire Blankets (in red holder) required in all kitchens, including the kitchen area of bedsits

Water type extinguishers (in escape route)

- Floor area up to 100 sq. m. : requirement is 1 X 13A water type
- Floor area 100 to 200 sq. m. requirement is 2 X 13A water type
- Floor area greater than 200 sq. m. requirement is 2 X 13A water type plus 1 X 13A for each additional 200 sq. m.

Carbon Dioxide type extinguishers (in shared kitchens)

- 1 X 34B, Carbon Dioxide type extinguisher (2Kg capacity) per kitchen

Fire blanket, to comply with BS 6575 : 1985 (in all kitchens)

- One per kitchen

SITING OF FIRE EXTINGUISHERS

Fire extinguishers should be located in conspicuous positions where readily seen by persons following the escape route e.g. outside rooms, outside lobbies, on landings etc.,

- Hung on brackets with handle approx. 1.5 metres from floor
- Away from heaters
- Away from areas where may be subject to damage
- Not obstructing escape routes
- Not obscured by cupboards, opening doors, etc.
- Not in recesses out of direct sight
- Fire blankets to be in wall mounted holders near the cooker but not above it

BRITISH STANDARDS RELATING TO FIRE EXTINGUISHERS

Current British standard	*Title*
BS EN 2 : 1992	**Classification of Fires**
BS EN 3 Parts 1-6 : 1996	**The manufacturing standard for portable fire extinguishers (except fire blankets)**
BS 7863 : 1996	**Colour coding to indicate the extinguishing media contained in portable fire extinguishers**
BS 6575 : 1985	**Fire blankets**
BS 5306 : Part 3 : 1985	**Fire extinguishing installations and equipment on premises.** **Part 3 : Code of Practice for selection, installation and maintenance of portable fire extinguishers**

THE MANUFACTURING STANDARD FOR FIRE EXTINGUISHERS

Rating/Classification of Fire Extinguishers

The classification and rating of portable fire extinguishers is laid down in BS EN 3 Part 1 : 1996. It sets out the methods of testing the performance rating of extinguishers used on different types of fires.

The distribution of extinguishers throughout the premises should be based on the extinguisher's performance rating and not, as previously, on the capacity of the extinguisher.

The rating should be 13A (in common parts) and 34B (in shared kitchens).

- **13A types** will commonly be water filled with a 9 litre capacity although some lower capacity water types will achieve this rating together with some foam and dry powder types.

- **34B types** will commonly be 2 Kg Carbon Dioxide types which are intended primarily for use on electrical fires

It is recommended that fire blankets are provided for all kitchens to cater for chip pan or frying pan fires. (These are not covered by BS EN 3 : 1996)

Portable fire extinguishers should bear the BSI kitemark showing they comply with BS EN 3 : 1996.

MAINTENANCE AND SERVICING

This is laid down in BS 5306 : Part 3 : 1985, Section 3, Clause 7

A monthly routine inspection by user should:-

- Ensure the extinguisher is in the correct position
- Check they have not been discharged, lost pressure or suffered obvious damage
- Replace any which are subject to the above
- An annual inspection must be carried out by a ***Competent Person***.
- The date of the annual inspection is to be marked on each extinguisher.

Doors

TECHNICAL POINTS APPLICABLE TO ALL CATEGORIES OF FIRE DOORS

Thickness of door leaf

The thickness of the door leaf is no longer a reliable guide to fire resistance as some thin proprietary door leaves are now commercially available. However, traditionally 30 minute doors are 44mm thick; 60 minute doors are 54mm thick.

Self-closing devices

In the event of fire it is essential that a fire resisting door is closed and secured within its frame to provide an effective fire barrier. Self closing devices are therefore essential (except to doors to locked cupboards). Where latches are not fitted, the device must retain the door leaf in the closed position until the intumescent seal has been activated. During a fire situation a latched door will be secured in its frame by the mortise lock or latch but for corridor doors where locks and latches are inappropriate it is the self closing device which must perform this function. BS 5588: Part 1 Clause 18.b.2(c) makes the following recommendations for door closing devices :

- They should not be capable of being disconnected easily.
- They should override any latches or seals fitted to the doors
- They should be of a type that has been shown by fire test, in accordance with BS 476: Part 22 : 1987 (or Part 8 subsequent to 1981), to be capable of holding the door into the frame until the intumescent strip has been activated.

They should effectively close the door from any angle

Electro-Magnetic Door Holders

No means should be provided for holding a self-closing ***fire door*** in an open position other than an Electro-magnetic door holder or approved alternative alarm sensitive door holder.
Electro-magnetic door holders are only permitted where the doors do not enclose a single escape stairway and provided they are linked to the fire alarm/detection system. (Building Regulations 1991, Approved Document B,

Appendix B). Mechanisms that are required to be released manually are not permitted in any circumstances
Note: ADB appendix B will disallow use on any door opening onto an escape stair in a residential building

Electro-magnetic door holders have the advantage of eliminating the practice of wedging or propping fire doors open where they frequent day to day use.

Emergency exit hardware

Doors used for means of escape should be kept unlocked at all times when people are in the building and should be fastened so that they can be immediately opened by persons escaping without the use of a key.

Where the door:-

(a) might be used at the time of a fire by more than 50 persons; or
(b) is an exit from an area of high fire risk;

and has to be kept fastened while persons are in the building, it should be fastened only by means of a panic latch or panic bolt fastening which ensures that it can be readily opened by pressure applied by person within. Panic bolts should be of a strong type and the working parts should be properly maintained. Panic bolds and panic latches are covered by BS5725: Part 1.

Rebated meeting edges to double leaf doorsets

These are to be avoided, as separation between the leaves due to distortion occurs more quickly during fire than with plain leaf edges, which is detrimental to the efficiency of intumescent strips. A door leaf sequencer must be provided if both leaves are to be self closing.

Frame/Wall Junctions

The gap between the frame and the wall/partition (behind the architrave) is to be kept to a minimum.

Any gap is to be filled with a bead of intumescent mastic **except** in the following situations where further protection is not necessary:

- 30 minute, non-load bearing walls where the gap is less than 10mm and well fitting architraves, of minimum thickness 15mm with 15mm overlap onto the wall and frame are fitted

- 30 minute, load bearing walls where the gap is less than 10mm and a 19mm quadrant bead is intimately fitted

For 60 minutes fire resistance all gaps (of any size) are to be filled with a bead of intumescent paste or mastic.

Leaf/Frame Gap

This is not to exceed that specified in the ***fire test report***. As a rule of thumb, the maximum gap is to be 4mm (ignoring the smoke seal). Gaps less than 3mm may inhibit the self closing action of the door when smoke seals are fitted. Gaps greater than 4mm are detrimental to the efficiency of smoke seals. The gap at the threshold is not critical, but for practical reasons it should be as small as is possible (BS 8214 : 1990 recommends a maximum gap of 8mm). The face of the door leaf shouldn't be proud of its frame by more than 3mm.

Frames

Size: Should not be less than that in the ***fire test*** or ***assessment report***. The frame must be adequate for the mechanical operation and durability of the door, and must be of sufficient section to accept the specified ironmongery.

Frames are to be of straight grained timber of a density not less than that specified in the ***fire test*** or ***assessment report.*** Voids, imperfections, wild grain, unsound knots or areas of material damage to be avoided.

If the frame is not supplied by the door leaf manufacturer, guidance must be sought from them on suitability. The specification in the door leaf ***test report*** is to be regarded as a minimum unless subjected to an ***assessment*** by a ***suitably qualified person.***

The frame must be screwed securely into the opening.

Non-timber door frames may be encountered and must be treated with caution. Refer to BS 8214 : 1990 for guidance.

Door-stops

Contrary to popular belief the size of doorstop does not need to be increased. Indeed oversized doorstops may inhibit the effectiveness of the intumescent strip. Doorstops need only be sufficient to retain the door in the mechanical sense.

Intumescent strips

Intumescent strips and cold smoke seals are required to both edges and to the head of the door in all cases.

- Must be tested or assessed against BS 476 : Part 22 : 1987.
- Must be fitted to both jambs and the head of door, but are not required at the threshold.
- Must be fitted centrally in the door edge or in the corresponding position within the frame. It is imperative they are not fitted on the doorstop as this would exert pressure on the door face thereby increasing bowing of the door or pushing the door open during fire. They may

be glued in a groove, but the type of glue is not critical, or they may be fixed with panel pins. In listed buildings they may require surface fixing.

- For 30 minute fire resisting doors it is usual to fit a single 10mm wide intumescent strip which may be interrupted by the hinges.
- For 60 minute fire resisting doors a single 20mm wide intumescent strip or two 10mm wide strips may be used. At least 10mm of the strip must be uninterrupted by the hinges.
- Imperative that the intumescent material used is the same as that specified in the original door assembly as tested and as specified in the ***test*** or ***assessment report***. Concealed intumescent strips behind door lippings are permitted only in factory-made proprietary door assemblies supported by specific test evidence for this detail. On-site concealed fitting of the strip is not acceptable.
- Recommended that intumescent strips are not painted over to aid identification on inspection. However this may need to be relaxed in listed buildings for aesthetic reasons.

Smoke seals

- Must be tested in a door and frame assembly to BS 476 : Part 31.1
- To be fitted down both sides and along the head of the door or frame, but not required at the threshold.
- May be combined with an intumescent strip.
- Gap at the bottom of the door to be kept to the minimum practicable.
- To be glued or pinned in groove - type of glue not critical.
- Must never be painted over.

Apertures

Ventilation Grilles: These are not permitted, even the intumescent types, as they do not have any smoke control performance.

Letterboxes: These are to be avoided if possible. However, evidence of fire resistance performance may be available in certain assemblies with accompanying ***test reports***. In such cases they must be fitted between 800mm and 1000mm from the door threshold. Maximum aperture size 250mm x 38mm; to comply with BS 2911 and have well fitting sprung or gravity internal and external flaps. They cannot be fitted ad-hoc on site. Only factory fitting is permitted unless a ***test*** or ***assessment report*** for the exact

door assembly is provided. They should not be used on smoke control doors unless test evidence is available.

Glazing

It is not permitted to fit glazing to existing doors which were not designed for the purpose. Doors with glazing panels are permitted but only where purpose-designed, built and tested to BS 476 : Part 22 : 1987. Such doors are often sold without the glazing panel. If so, glazing details on site must be identical to those in the door manufacturer's documentation. **Any deviation in glazing type or fixing detail may affect the door's performance in a fire situation.**

Facings

If the door face is to be clad with a decorative panel or finish it must be fitted to both faces of the leaf to keep the door balanced. Highly flammable paint finishes are to be avoided.

Upgrading Existing Non-Fire Resisting Doors

The upgrading of non-fire-resisting door assemblies is to be avoided where possible. The practice is generally impractical and uneconomic. It is reliant upon strict adherence to an approved specification and upon a high standard of workmanship.

In each case where a door leaf is being considered for upgrading, a detailed specification of the leaf with accurate dimensions of each of its components, its method of construction including, where known, any adhesives, must be submitted to a ***suitably qualified person*** in order to assess its suitability for upgrading. Where the assessor is satisfied that the leaf can be upgraded, then a suitable technique will be specified and a report giving the assessed integrity rating will be prepared. Each variation of door type will require assessment in this way. Where the subject door is not similar to any door previously subjected to a fire test, an ***assessment report*** may still be issued subject to additional measures being carried out. The ***assessment report*** will detail these measures and they must be strictly adhered to.

Where an assessment report is not forthcoming, the only alternative will be to submit an identical sample door to a BS 476 : Part 22 : 1987 test at a UKAS registered test house. Note: this is a test to destruction and will only be possible where there are a number of identical subject doors of which one can be sacrificed. The test costs several thousand pounds.

Smoke Control Doors

In certain situations smoke control doors are required e.g. in corridors longer than 30m in hostels. Such doors need not be fire resisting and need not

conform to the requirements of this section other than those requirements relating to smoke sealing. These doors are referred to as FD20S doors.

Miscellaneous matters

A door from a space from which more than 50 people may need to escape should open in the direction of the escape. Consideration will often have to be given to the terrain leading from the ***final exit*** from the building to a final place of safety to ensure that the surface over which people would pass when escaping from fire is free from hazards.

Walls and Ceilings

GENERAL PRINCIPLES

All stairways required for ***means of escape*** should be separated from the remainder of the building by ***fire resisting construction***

It should not be assumed that all floors and ceilings will automatically provide 30 minutes of fire resistance. Some constructions may give substantially less and will require upgrading to achieve the 30 minute standard.

Care should be taken to ensure that where a room with no inherent fire risk opens onto a stairway and so no fire door is provided e.g. toilets, the room itself must be separated by ***fire resisting construction*** from the remainder of the accommodation.

Partitions should fully extend flush to floors and ceilings without gaps, voids or cavities which will prejudice the fire separation.

Glazing

Fire resisting glass may be incorporated into a wall requiring a degree of fire resistance provided that the glass in its framework satisfies the fire resistance performance criteria for British Standard 476: Parts 20-23.
The insulation criterion of the British Standard may be waived where the glazed portion is limited to the area at least 1.1 metres above floor level.

Ceilings beneath roof spaces/lofts

Particular attention should be given to any common roof space above individual tenancies and to the need to provide fire-resisting ceilings or, if practicable, to extend the dividing walls up to the underside of the roof.

Soffits and spandrels

Regard should be given to the soffit and spandrel of any stairway which forms part of a ***protected lobby*** which encroaches into accommodation.

Escape routes over flat roofs

Where a flat roof forms the floor of an escape route or part of a route, the roof [or part of it sufficient to persons using the escape route] should be constructed to an appropriate standard of fire resistance given for floors. Regard should also be given to the structure supporting the roof deck.

Separation of commercial premises

Residential accommodation within a building also comprising a commercial use should be structurally separated from it by imperforate construction which affords a fire resistance of not less than 60 minutes. Provision should also be

made for independent and protected escape routes. Where imperforate separation cannot be achieved and the level of risk allows, consideration may be given to alternative measures appropriate to the risk e.g. lobby separation between the uses, a higher grade and/or coverage of fire detection and warning system, or the provision of secondary means of escape from the residential parts of the building.

Fire stopping

It is essential to ensure that fire, smoke and combustion gases are unable to penetrate fire resisting walls, partitions and ceilings by way of openings in the structure made for the passage of essential services such as drainage, wiring and ventilation, or via gaps at junctions between partitions and walls and where partitions/walls meet ceilings/floors. If these openings are not effectively fire-stopped the required fire resistance of the dividing structure may be lost, thereby prejudicing the means of escape.

The critical points are:

- Where services pass between risk rooms or between risk rooms and the protected route.
- Where partitions dividing risk rooms from each other or from the protected route meet perimeter walls and ceilings/floors

The following solutions are available :

- Enclose the services within fire resisting construction
- Effectively fire-stop the openings in the dividing structure through which the services pass
- For gaps in wall/ceiling junctions simply fire-stop the gaps

Surface Finishes

WALLS, PARTITIONS, CEILINGS AND SOFFITS

In the early stages of a fire, the safety of a building's occupants can be affected by the properties of surface linings and finishes to walls, partitions, ceilings and soffits. Rapid spread of flame across surfaces allows the fire to spread more rapidly through the building, thereby reducing the time for escape. This is of particular concern in escape routes, especially in single staircase buildings.

Classification of materials and products for surface spread of flame

Two British Standard tests exist;

• BS 476: Part 7: 1971/1987/1997 "Method of classification of the surface spread of flame of products".

This details a test for determining the rate of spread of flame across the exposed surface of a material/product. It classifies performance from Class 1 to Class 4 (Class 1 being the highest performance/slowest spread of flame and Class 4 the lowest performance/most rapid spread of flame)

• BS 476: Part 6 "Method of test for fire propagation of products"

This details a test for determining the ease of ignition, rate of heat release in fire and other properties of materials and products. It gives a Class 0 rating for those materials/products which are found to be of limited combustibility or to have a low fire propagation index.

When assessing materials/products for their suitability in a particular HMO location, it is necessary to ensure the material/product's classification meets or exceeds the minimum required. (Class 0 will satisfy Class 0, 1, 2, 3 and 4 locations. Class 1 will satisfy Class 1, 2, 3 and 4 locations but not Class 0 locations, etc. This can only be done by reliance upon a valid test report from a *UKAS (ex NAMAS) registered testing house.* The report will detail the product and give it a classification from 0 to 4. (Class 0 will quote Part 6 of the above British Standard and Classes 1-4 will quote Part 7.) For proprietary products it is essential to ensure that the product installed on site does not differ in any way from that in the test report specification. Minor differences in thickness, substrate, colour, fixings, adhesive etc. may affect the rating and performance.

Standard required in HMOs

With the exception of small areas of wall surfaces the surface finishes of walls, partitions, ceilings and soffits should meet the minimum standard in the following table.

Type of HMO	Locations	Minimum Class (BS 476: Part 7: 1971/1997)
All HMOs including hostels	Stairways, hallways, landings, lobbies (ie all circulation spaces)	Class 1
Hostels only	Rooms 4 sq m floor area or more	Class 1
	Rooms less than 4 sq m floor area	Class 3

Table 1 - Minimum classification for rate of spread of flame permitted in different locations

Note: space dividers or other similar vertical surfaces which sub-divide rooms or common areas should also meet the above standard.

Acceptable locations for commonly encountered materials/products

It is clearly impossible to identify the classification of existing coverings on-site in HMOs unless the trade name of the product can be traced. The table below illustrates acceptable locations for materials and products commonly encountered. Where the trade name of the product under consideration is known or can be traced, the classification should be sought from the manufacturer. For new products/materials to be installed, the manufacturers should be required to confirm the classification of their product and produce a valid test report if appropriate. The following table gives a general guide in all other cases.

Multiple layers of gloss paint

Surfaces may be found where multiple layers of gloss paint have been applied. These surfaces will not provide Class 1 under BS 476: Part 7: 1971/1987/1997. Therefore it is recommended that the paint is removed from locations requiring a Class I classification. Proprietary products may be available which can cover the paint thereby providing a Class 1 surface. These should only be used subject to a satisfactory fire test report but are not recommended for areas subject to heavy wear and tear.

Material/Product	Acceptable locations
A Brickwork, blockwork, concrete, plasterboard (all types), plaster finishes (including render on wood or metal laths) and Any other product with Class 0 classification and valid test report	All locations including hostels
B Timber, hardboard, particleboard (chipboard) and Any other product with Class 3 rating with valid test report	**ALL TYPES OF HMO (including hostels)** Not permitted in escape routes, ie stairways, hallways, landings, lobbies **HOSTELS ONLY** Permitted in: Small rooms not greater than 4 sq m floor area, Small areas of walls in larger rooms (area not greater than half floor area or 20 sq m, whichever is lesser Not permitted in ceilings **HMOs (not hostels)** Unrestricted in rooms
C As Group B above but flame retardant treated to Class 1 with valid test certificate	All locations including hostels
D Woodwool slab	All locations including hostels
E Non-flame-retardant decorative laminates	As Group B above
F Flame-retardant decorative laminates to Class 1 with valid test certificate	All locations including hostels
G Expanded polystyrene wall and ceiling laminates: • maximum thickness 5mm (walls), 12mm (ceilings), with only one coat of water-based emulsion finish • where painted with gloss paint	 As Group B above Not permitted in any location, should be removed if existing
H Thin vinyl and paper coverings on inorganic (Group A above) surface	All locations including hostels
I Heavy flock paper – non-flame-retardant grade	As Group B above
J Heavy flock paper – flame-retardant grade to Class 1 with valid test certificate	All locations except hostels

Table 2 - Classifications of rate of spread of flame for various products and acceptable locations for their use

Note – Class 1 can sometimes be achieved by the application of proprietary products. It is imperative to obtain a valid test report for the product in an

identical test scenario. Any deviation from the test specification may lower the performance of the product in situ. Durability and maintenance is another consideration. If the building is heavily used and subject to damage or vandalism it may be inappropriate to accept such products.

FLOOR COVERINGS

Floor coverings throughout the protected route (i.e. stairways, hallways, landings and lobbies) of all categories of HMO including hostels should conform to low radius of fire spread (up to 35mm) when tested in accordance with BS 4790: 1987 (1996).

BS 4790 “Method for determining of the effects of a small source of ignition on textile floor coverings (hot metal nut method)”: specifies a standard, controlled test to which floor coverings are submitted. Floor coverings, having been tested, are classified according to the extent and rapidity they allow fire to spread across them. The classification required in this context is low radius of fire spread (up to 35mm).

BS 5287:1988 (1996) “Specification for assessment and labelling of textile floor coverings tested to BS 4790” specifies how these tested floor coverings are to be labelled.

It is of course difficult to assess existing floor coverings in HMOs unless the supplier/manufacturer can be traced. As a general guide for existing carpets, those comprising a mix of 80% wood, 20% synthetic fibre (commonly referred to as 80/20 carpets) will comply.

When considering the suitability of new floor coverings for protected routes it is sufficient to ensure the carpet is labelled to BS 5287 above as low radius of fire spread (up to 35mm). Suppliers/manufacturers will be able to confirm.

FURNITURE AND SOFT FURNISHINGS

All Furniture & Soft Furnishings in the HMO, and supplied by the Landlord or his Agents must be fire resisting and comply with the Furniture & Furnishings (Fire)(Safety) Regulations 1988 (as amended). Furniture produced after this date will be labelled to show compliance, older furniture will require assessment by a competent person, this is unlikely to be cost effective.

Staircase Lighting

Normal staircase lighting

In common escape routes including stairways, normal lighting with a suitable system of control should be provided so that people are able to move within the escape route from a building during the hours of darkness and in areas that do not have the benefit of daylight.

A dedicated lighting circuit for the stairway must be installed so that the use of any one switch/push button along the route will illuminate the entire escape route.

Careful consideration should be given to the duration of the lighting that can be expected if press button slow release lighting switches are provided and should be assessed according to risk i.e. distance of travel, height of building, mobility of occupiers etc. A minimum of 4 minutes duration is recommended in all cases.

Emergency Escape lighting

This will be considered necessary in certain situations dependent upon risk, taking into account factors such as the amount of borrowed light and the complexity of the layout of the HMO in question. It is recommended that all HMOs are provided with emergency escape lighting.

Where considered necessary, emergency escape lighting must be designed to automatically illuminate upon the failure of the supply to the normal artificial lighting. The emergency lighting installation must comply with BS 5266 : Part 1 : 1988. On failure of the normal lighting, the emergency lighting must :

- Illuminate the escape route to assist the occupants to move easily to exits and a place of safety
- Enable easy identification of fire alarm call points and fire fighting equipment throughout the escape route

Emergency lighting must operate not only when there is complete failure of the supply to the normal artificial lighting but when there is a localised failure that could be hazardous.

The source of the supply should be from the same local fuse as the normal (staircase) lighting so that, in the event of fuse failure causing normal lighting to be extinguished, the emergency lighting is brought into operation in the same locality.

The supply to self contained luminaries should be designed to prevent unauthorised disconnection, but it must incorporate a suitable means for simulating a mains failure (i.e. test switch).

The mounting height of luminaires will be governed by the physical characteristics of the area. They should be mounted as low as possible to but at least 2 m above floor level measured to the underside of the luminaire.

Luminaires should be sited in the following positions :

- near each intersection of corridors;
- at each exit door;
- near each change of direction (other than on a stairway);near each stairway so that each flight of stairs receives direct light;
- near any change of floor level;
- outside each final exit and close to it[1].
- near each fire alarm call point;
- near fire fighting equipment;
- to illuminate exit and safety signs required by the enforcing authority.

[1] This is not required unless it is outside a secondary escape route or where the normal street lighting is inadequate.

"*Near*" is normally considered to be within 2 metres measured horizontally.

The route should be reasonably uniformly lit.

The time for which escape lighting is designed to operate will always be longer than the minimum time to evacuate the premises, in case people are cut off, injured etc. Further, time must be allowed for an adequate search of the premises to be carried out. Normally it should be designed to operate for 3 hours after the failure of the mains supply

It is essential that the emergency lighting system is routinely inspected and tested in accordance with BS 5266 : Part 1 : 1988. In particular the entire system must be tested and inspected by a competent person three years after it has been installed and commissioned and annually thereafter.

A log book supplied when the system is commissioned must be kept on the premises to record details of servicing, routine inspection, faults and alterations to the system.

Secondary Means of Escape

INTRODUCTION

Any secondary means of escape must lead to a final exit at street level. It must be a protected route and afford safe, unobstructed travel throughout its entire route.

Secondary means of escape can either be afforded using an external staircase or using an adjoining building.

SECONDARY ESCAPE ROUTE VIA EXTERNAL STAIRCASE

The following requirements are to be met:

- Access from top floor landing (and other floors if desired).
- Access from common parts, not via rooms, bathrooms or WCs (unless impracticable when special arrangements for access may be considered in consultation with the Fire Officer).
- Staircase to terminate at ground floor level.
- Staircase to terminate in an area from which there is unobstructed access to the pubic street without re-entering the building.
- Staircase design to meet the design criteria in the paragraph below "DESIGN REQUIREMENTS FOR STAIRCASES AND WALKWAYS"
- A fire-resisting self-closing *fire door* and screen across the staircase is to be provided at the third floor and at alternative levels above in such a manner that complete separation is provided between the upward and downwards flights of stairs at those levels.

(**Note:** The entire route – staircase and roof level walkway – to be adequately lit to the same standard as the protected route generally (see "STAIRCASE LIGHTING" section).

Protection of External Secondary Means of Escape

External secondary means of escape staircases and walkways must be protected from the effects of any fire. Windows, doors and other openings which could affect the escape route must therefore be protected.

In practice, openings in the following locations must be made fire-resisting:

- Doors opening on to the secondary escape or within a zone measured 1.8m horizontally from the escape route must be of 30 minute fire resisting construction (figure 1) – except the access door at the top of the stair which need not be fire-resisting. Where doors open from areas of higher fire risk, they must be of 60 minute fire-resisting construction.
- Windows opening on to the secondary escape or within a zone measured 1.8m horizontally from the escape route to be of 30

minute fire-resisting construction/glazing and to be fixed shut – 60 minutes fire-resisting construction if serving an area of higher fire risk (figure 1).

- Any ducts or openings within the 1.8m zone mentioned above to be fire-resisting or fire stopped.
- The structure of the building within the 1.8m zone mentioned above to be of minimum 30 minute fire-resisting construction.

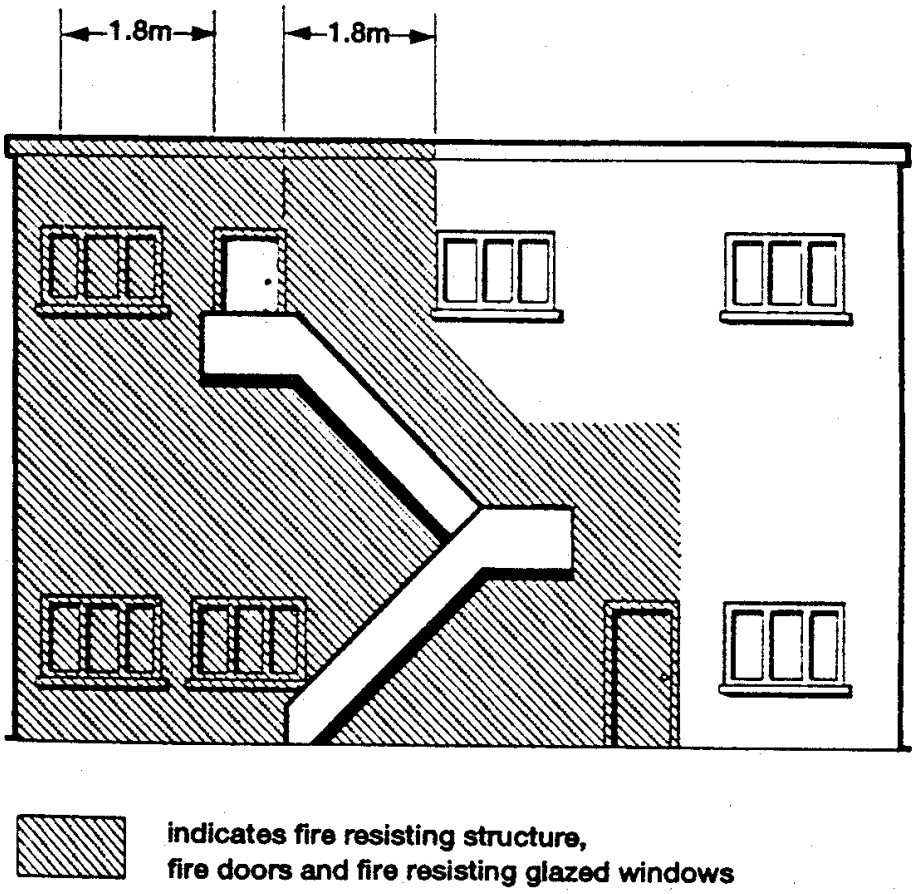


Figure 1
Area adjacent to secondary means of escape within which doors, windows, openings etc. are to be of minimum 30 minutes fire resistance (60 minutes where areas of higher fire risk)

SECONDARY ESCAPE VIA ADJOINING BUILDING

This is most effective where the two buildings involved are in the same ownership. Where the escape is via a building in a different ownership it will be necessary to obtain a legally binding agreement between the two owners to ensure right of access at all times. Right of way should be registered against property titles at the Land Registry.

Via Roof

Escape may be via the roofs of the two buildings and down into the protected route of the adjoining building (common parts). Free access through the adjoining common parts must be afforded and the route must terminate at a final exit at ground floor giving free access to the street. The following requirements apply:

- The entire length of the secondary means of escape is to be passable without the use of a key, tool or other removable or unfamiliar mechanism..
- Access preferably via a standard door.
- Where access not possible via a standard door, the access from the stairway to the roof must be sufficient to allow an adult to pass through with ease. Minimum recommended dimensions 800mm x 540mm. The access should be readily openable in the direction of egress without the use of a removable key or tool and without undue force. To be counterbalanced so as to open automatically in the direction of egress when the catch is operated and remain in the open position. There should be an appropriate top ledge to facilitate access through the hatch on to the roof walkway.
- A fixed walkway across the roof is to be provided.
- Stairs and walkways to meet the design criteria the paragraph below "DESIGN REQUIREMENTS FOR STAIRCASES AND WALKWAYS"

Via Party Wall

Access to the adjoining property may be via an opening in the party wall linking the two common parts. A 60 minute fire-resisting door is required at this opening.

DESIGN REQUIREMENTS FOR STAIRCASES AND WALKWAYS

Staircases, landings, roof level walkways and access steps to roof escapes are to comply with BS 5395 – Stairs, Ladders and Walkways, Parts 1, 2 and 3 as appropriate

Staircases, landings and walkways providing secondary means of escape to be provided with artificial lighting to the same standard as the main escape route

Straight Stairs

- They must meet the following standards:

- Clear width: minimum 600mm, preferred 800mm.
- Pitch: minimum 30 degrees, optimum 35 degrees, maximum 42 degrees, from horizontal.
- Going (depth of tread front to back): optimum 250mm, minimum 225mm, maximum 300mm.

- Rise (vertical distance between treads): optimum 175mm, minimum 100mm, maximum 220mm.
- Treads to be flat and of non-slip material (or fitted with non-slip nosings 25mm-50mm).
- Handrails required on both sides of stairs fixed 840mm – 1,000mm height measured at right angles from the pitch line and fitted no wider than the tread.
- Minimum headroom clearance: 1.5m measured at right angle from the pitch line.
- Balustrades: where fitted must not allow passage of a sphere 100mm diameter to pass through or provide toe holds allowing a child to climb.

For further details refer to BS 5395: Part 1: 1977 and Part 3: 1985.

Spiral/Helical Stairs

These are acceptable only in exceptional circumstances and subject to the following conditions:

- Where no more than 30 able-bodied persons would use them.
- Maximum height 9m.
- Minimum diameter 1.5m.
- Design criteria to comply fully with BS 5395: Part 2: 1984.

Spiral and helical stairs will rarely be encountered and will be prefabricated/factory made. The full details of the design criteria laid down in BS 5395: Part 2: 1984 “Code of practice for the design of helical and spiral stairs” are not therefore reproduced here. If this type of stair is under consideration the reader should consult the British Standard.

Walkways and Platforms

These should have minimum requirements of:

- Clear width: minimum 800mm.
- Non-skid surface.
- Adequate headroom: minimum 2.1m.
- Guard rails on either side: height 1.1m with horizontal mid-rail.
- Non-slip steppings for ease of access and egress and for parapet crossings.
- Securely fixed: not just by their own weight.
- Incline: should preferably be horizontal, maximum allowable incline 10 degrees.

For greater detail refer to BS 5395: Part 3: 1985.

Unacceptable Means of Escape

The current **HMO Code of Practice** does not permit the following arrangements as secondary means of escape components.

- Fixed vertical ladders.
- Pull down/raking ladders
- Lowering lines/ropes and other manipulative emergency devices.

Maintenance of escape routes

Escape routes should be kept free from obstructions and combustible materials at all times, and notices to this effect should be displayed in those parts of the escape routes which could present convenient storage areas, e.g. under stair open spaces. The need for proper maintenance cannot be too strongly emphasised.

Layout and Travel Distances

Layout

Fires which occur in living rooms and kitchens can develop rapidly and produce large volumes of smoke and hot gases which could invade all parts of the accommodation before occupants become aware of the danger, particularly when they are asleep. It is required, therefore, that where practicable:

- bedrooms are not entered through a living room or kitchen,

  and

- bedroom doors should be nearer to an exit from the accommodation than kitchen or living room doors.

Doors to rooms, other than to bathrooms and WCs which open into an inner entrance hall which leads to the exit from the accommodation should be ***fire doors*** (with smoke seals).

If the walls and doors to the entrance hall are suitably fire-resisting the hall could be deemed a ***protected lobby****.*
The assessment of the ***means of escape*** should be considered in two stages.

Houses with more than one stairway

In a house where more than one stairway is provided, each should be separated from the remainder of the building by ***fire-resisting construction*** and by ***fire doors*** and persons should not have to pass through one stairway enclosure to reach the other.

Travel Distance

Stage 1: Travel within a ***unit of accommodation***
Stage 2: Travel from a ***unit of accommodation*** to a ***final exit***

Stage 1 : Travel within a unit of accommodation

The actual travel distance from any point within the accommodation to reach a place of safety will need to be considered. The travel distances given below are considered to be the maximum distances generally acceptable but they are not hard and fast limits as a number of factors can affect these (e.g. the internal layout of the existing accommodation may prove difficult if not impossible to alter to reach these standards).

Recommended maximum travel distances within a *unit of accommodation*

Habitable rooms – from any point within the room to the room exit: 9.0 metres.
From any exit from a room to the entrance door of the accommodation unit : 9.0 metres.
From the entrance door of the accommodation to the nearest stairway: 7.5 metres.

Stage 2 : Travel from the entrance door of a *unit of accommodation* to a final exit

An unlimited ***travel distance*** in stage 2 will be acceptable if it is in a ***protected route***.

Where the travel is not entirely within a ***protected route*** the following shall apply:

The factors which have to be considered when assessing ***means of escape*** will vary from one situation to another. Accordingly, for reasons similar to those stated above, the distances suggested in the following paragraphs should be regarded as guidelines and not as hard and fast limits.

Recommended maximum travel distances from the entrance door of a *unit of accommodation* to a final exit

The maximum ***travel distance*** from within a bedroom to the room exit or in all other instances from within a room to a point of access into a ***protected route***, to an external route, or to a ***final exit*** should be in accordance with the following tables:

Table A – Escape in more than one direction		
From any point within:	Maximum recommended ***travel distance***	
	(A) within room	(B) total distance
A1 Sleeping area	18m	35m
A2 ***Area of higher fire risk***	12m	25m (Note 1)
A3 All other situations	18m (Note 2)	35m
Examples: see diagram 1		

Table B – Escape in one direction only		
Category from any point within:	Maximum recommended ***travel distance***	
	(A) within room	(B) total distance
B1 Sleeping area	9m	18m
B2 ***Area of higher fire risk***	6m	12m (Note 3)
B3 All other situations	9m	18m
Examples: see diagram 2		

Notes

[1] Alternatively up to 35m when the total distance of travel is not wholly within the ***area of higher fire risk.***

[2] Alternatively up to 35m where one of the exits from the room is a ***final exit*** and not less than three exits of adequate widths are provided.

[3] Alternatively up to 18m when the total distance of travel is not wholly within the ***area of higher fire risk.***

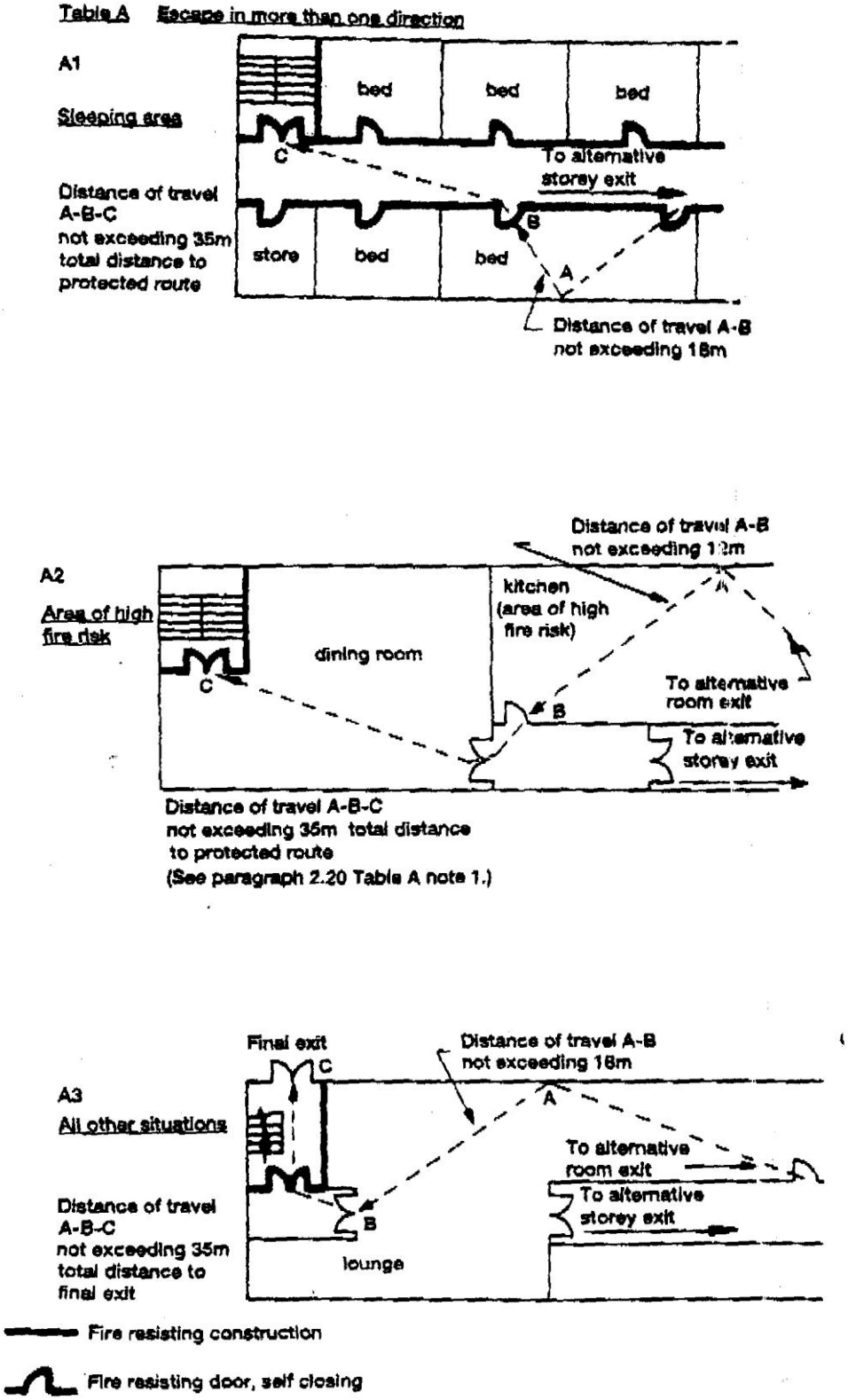


Diagram 1 : Escape in more than one direction

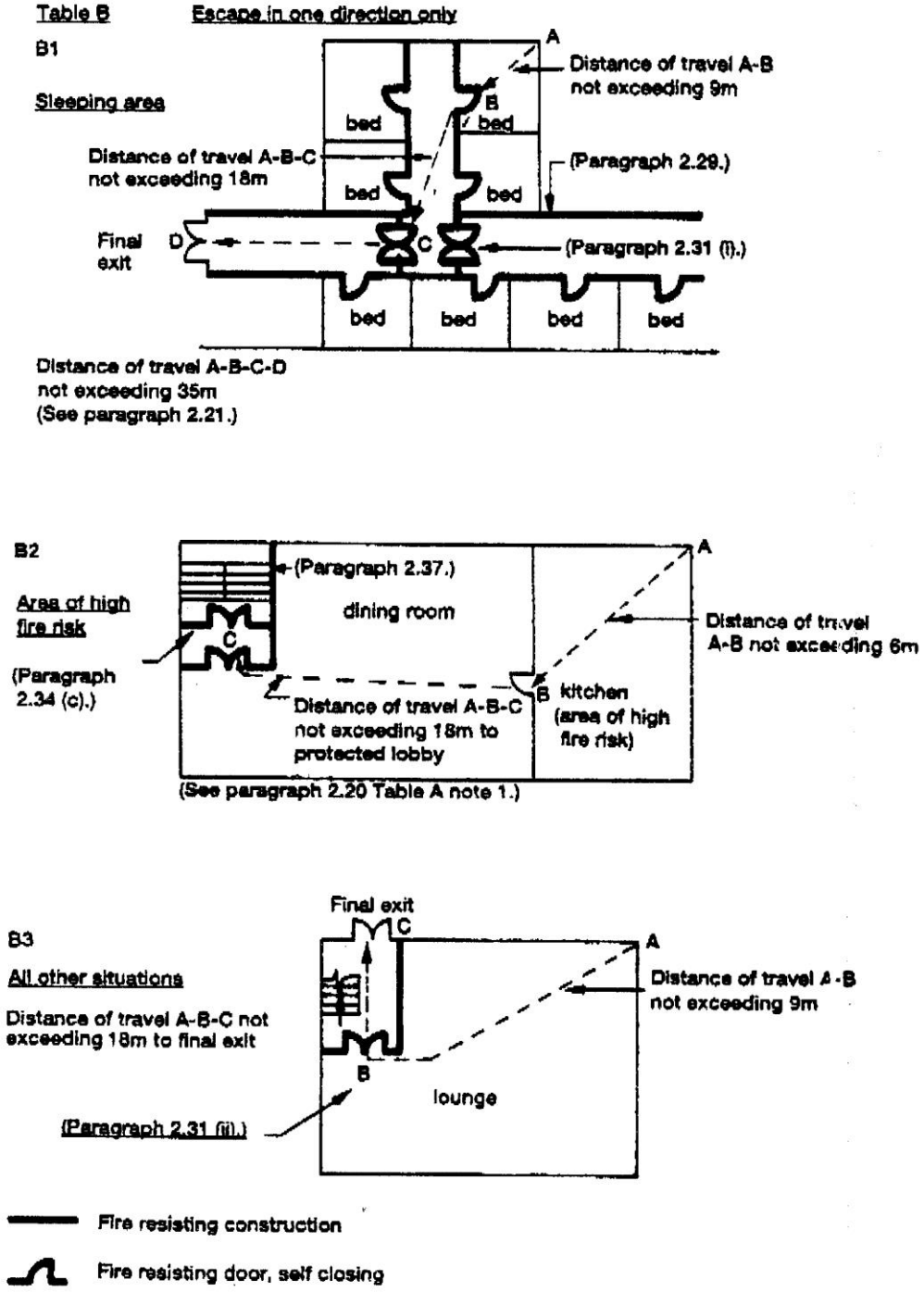


Diagram 2 : Escape in one direction only

Initial dead end

In any situation where an escape route consists initially of a ***dead end*** and then has alternative routes to a ***final exit*** or door to a stairway which is a ***protected route,*** the distance in the room and the ***dead end*** together should not generally exceed the appropriate distance in column (B) of Table B and the total ***travel distance*** should not normally exceed the distance shown in column (B) of Table A appropriate to the location from which it is being measured. See diagram 2 (B1) for example.

Requirements regarding ***means of escape*** for hostel-type accommodation are set out in the following paragraphs in relation to each of the stages at which ***means of escape*** have to be considered, ie:

- Stage 1 Travel within rooms
- Stage 2 Travel from rooms to a stairway or ***final exit***
- Stage 3 Travel within stairways and to ***final exits***

Stage 1 – Travel within rooms

Inner* and *access rooms

The ***travel distance*** from any point in an ***inner room*** to the nearest exit from the ***access room*** should not normally exceed:

from an ***inner room*** used as sleeping accommodation:	6m
from an ***inner room*** constituting an ***area of higher fire risk:***	6m
from an ***inner room*** used for any other purpose:	9m

(see note [4] and diagram 3)

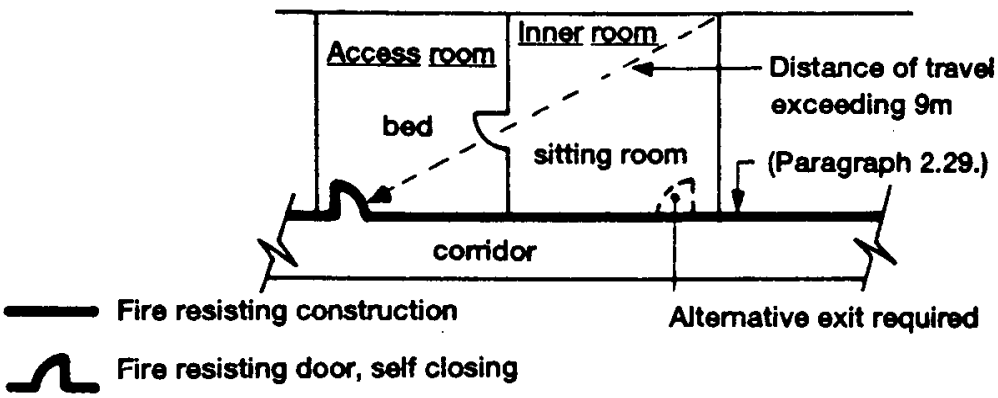


Diagram 3 : ***Inner rooms* and *Access rooms***

Notes

[1] An ***access room*** should not be an ***area of higher fire risk****.*

[2] If no other ***means of escape*** can be provided from the ***inner room****,* the ***inner room*** should only be used for sleeping accommodation if the ***access room*** is used solely for the same purpose.

[3] Unless there are overriding considerations (e.g. privacy, security) a clear vision panel should be provided in a suitable position between the ***access room*** and an ***inner room*** and, if appropriate, between the ***access room*** and a corridor or other area leading from it. This will provide a facility for the residents of these rooms to receive an early visual warning of fire in the room or area through which they may have to pass to reach a place of safety. If automatic fire detection is provided in these areas, vision panels may be omitted. Where vision panels are installed in walls adjoining an escape route it will be necessary to satisfy the appropriate fire resistance standard of that element.

[4] Where an ***inner room*** forms part of an area containing no sleeping accommodation, the restrictions of ***distance of travel*** recommended in paragraph 2.24 need not apply if from the point of exit from the ***inner room*** there is escape in more than one direction through the ***access room****.*

Number of exits

More than one exit will be required from:

- a room occupied by more than 30 people;
- a room in which the distance to be travelled between any point and the existing exit exceeds the appropriate distance recommended in Table B above

Width of exits

The width of an exit from any room should not normally be less than 750mm having regard to the room's use. In a room with more than one exit for ***means of escape****,* the width of each exit should not be less than:

- 750mm for an occupancy of up to 100 people; or
- 1.1m for an occupancy of up to 200 people.

An additional 75mm should be allowed for every 15 (or proportion of 15) people above 200.

Siting of exits

In a room requiring more than one exit, the exit will be satisfactorily sited if:

- the angle between lines defining the routes from any point in the room to the exits is not less than 45º;

or

- from any point at which that angle is less than 45º the distance to be travelled between that point and the nearest exit does not exceed the appropriate ***travel distance*** recommended in Table B above

Stage 2 – Travel from rooms to a stairway or final exit

Escape in more than one direction

Escape in more than one direction in Stage 2 may be from any point from which there are different routes leading to:

(a) separate stairways (including external stairways) which are ***protected routes****;* or
(b) separate ***final exits****;* or

a combination of (a) and (b); or

(a) or (b) and a door in a ***separating wall*** between premises which are separated by ***fire-resisting construction****.*

Corridors

Corridors, where possible, should connect directly with exits from the storey.

Where an escape route consists initially of a ***dead end*** and then has alternative routes, the alternative routes should be separated from each other by self-closing ***fire doors*** at the junction of the ***dead end*** (see diagram 2, Table B1).
The ***dead end*** portion of the route should not exceed the ***distance of travel*** set out in Table B above.

Corridors exceeding 30 metres should be subdivided so as to restrict the free travel of smoke throughout the length of the corridor. Doors provided for the sole purpose of restricting the passage of smoke need not be ***fire doors*** providing they are fitted with suitable smoke seals, are of substantial construction and are self-closing.

A main corridor should not normally be less than 1.1 metres wide for a floor area accommodating more than 100 persons.

Stage 3 – Travel within stairways to *final exits*

Number of stairways and fire resisting lobbies in hostels

Ideally more than one stairway should be provided. However, it is appreciated that there may be circumstances where such provision would be impracticable due to structural reasons or conflict with accommodation layouts.

In such cases a single stairway may be considered satisfactory if:

- the floor area of any upper storey of the building does not exceed 200m^2; and ***travel distances*** conform to those given in the above tables
- the house has no more than four floors or, if the house has more than four floors no upper floor is at a height of more than 11 metres;
- the stairway conforms with one of the arrangements described in the section below ("**enclosures of stairways**"), and
- in a building more than two floors in height access to the stairway from any room (other than a toilet or bathroom containing no fire risk) is through two sets of ***fire doors****. (*i.e. the staircase is protected by ***fire resisting lobbies****).* Where it is impractical to achieve this, in premises of not more than three floors in height, the lobby requirement may be waived subject to a suitable AFD maintenance agreement, and adequate fire risk management.
- the house has five or six floors and the arrangements are such as to provide suitable alternative secondary means of escape.

Enclosures of stairways

In premises requiring the provision of more than one escape route, the method whereby a stairway is separated from the remainder of the building should be such as to ensure that a person need not pass through one stairway enclosure to reach the other. If this is not possible the stairway should still be separated and it may be reasonable for an alternative route to bypass the stairway by means of balconies or by means of a bypass corridor or, exceptionally, intercommunicating doors between rooms. Bypass corridors and doors should be of appropriate fire resistance (where necessary) and of suitable width (see above). Bypass or intercommunicating doors should be kept free of obstruction and available at all times.

Ideally, stairway enclosures should lead direct to a ***final exit****.* Where there is only one stairway for the upper floor(s) of a building and a ***final exit*** cannot be provided from the stairway enclosure, one of the following arrangements should be adopted:

- the provision of two exits from the stairway enclosure, each giving access to ***final exits*** by way of routes separated from each other by ***fire-resisting construction****;* or
- the provision of a ***protected route*** from the stairway enclosure which is deemed to be an extension of the stairway enclosure leading to a ***final exit****.*

Where there is more than one stairway from the upper floor(s) of a building and there are no ***final exits*** from the stairway enclosures, the stairways and the routes to their ***final exit(s)*** should be separated from each other by ***fire-resisting construction*** and ***fire doors*** so that an outbreak of fire at any point cannot affect more than one escape route from one of the stairways simultaneously.

Glossary of Fire Safety Terms

Access room means a room forming the only escape route from an ***inner room***.

Competent assessor means a person considered suitably qualified, experienced and competent to carry out a fire assessment. Difficult to identify as no formal qualification. Base identification on relevant experience with the product being assessed, track record, reputation, membership of a professional association, employment history and relevant qualifications. Will include UKAS registered testing houses, reputable fire consultants and the manufacturing company of the product to be assessed.

Dead end means a place from which escape is possible in one direction only, or in directions less than 45° apart which are not separated by fire-resisting construction.

Escape lighting means lighting provided for use when the supply to the normal lighting fails to ensure that the means of escape can be safely and effectively used at all material times.

Final exit means the termination of an escape route from a building giving direct access to a place of safety such as a street, passageway, walkway or open space, and sited to ensure that persons can disperse safely from the vicinity of the building and the effects of fire.

Fire door means a door which, if tested in a UKAS registered testing house would satisfy the following criteria :

- Assembly to provide 30 or 60 minutes fire resistance (as appropriate) in terms of integrity when tested or assessed to BS 476 : Part 22 : 1987.
- Assembly to provide adequate smoke sealing when tested to BS 476 : Part 31.1.
- Assembly to be installed and maintained in accordance with BS 8214 : 1990.

Fire assessment report means a considered professional opinion from a suitably qualified person (Competent Assessor) detailing the perceived likely performance of a product or construction in a fire situation where the product/construction in the assessed condition has not been tested full scale. Issued when a similar product or construction has been tested full scale but the product/construction to be used varies slightly from the one tested. Assessment reports must always link back to primary test evidence from a UKAS registered testing house. Assessments are required because fire tests cover one particular construction of particular dimensions and configuration which may vary slightly on-site and it is impracticable to test every possible size and configuration.

Fire-resisting construction means the ability of a component of a building to satisfy some or all of the criteria specified in British Standard 476: Part 8 or

Parts 20-23, relating to load-bearing capacity, integrity and where appropriate insulation for less than 30 minutes or for such longer period as may be required in the case of that construction.

Fire test report means the documentation received from a UKAS testing house detailing a test carried out to BS 476 on a particular product or construction and the fire resistance performance achieved by the product/construction in that test.

Higher risk room means a room or other area which, because of its function and/or contents, presents a greater risk of fire occurring and developing than elsewhere, this will usually include all non-domestic uses.

Inner room means a room from which escape is possible only by passing through an ***access room.***

Independent second stairway means a second standard stairway within a building (not being a ***secondary means of escape***) which is protected to the same degree as the first i.e. a two staircase building. To fall within this definition the two staircases must be fully independent with no necessity to pass through one to get to the other.

Means of escape*:* there is at present no statutory definition of what constitutes “means of escape from fire” but the standards laid down in this guidance are based on the definition contained in section 5(5) of the Fire Precautions Act 1971 as amended by the Fire Safety and Safety of Places of Sport Act 1987, which states “escape in relation to premises means escape from them to a place of safety beyond the building which constitutes or comprises the premises and any area enclosed by it or enclosed with it”.

Protected lobby means a lobby having an adequate degree of protection from fire and forming part or the whole of the horizontal component of a escape route or affording additional protection to an escape route.

Protected route means a route having an adequate degree of protection from fire including walls (other than any part that is an external wall of a building) partitions and floors separating the route from the remainder of the building.

Secondary means of escape an alternative protected route from a building leading to a ***final exit***. Usually via an external staircase or an adjoining building.

Separating wall means a wall separating buildings.

Standard risk room means a room or other area which, because of its function and/or contents presents a risk of fire but does not fall into the definition of ***higher risk room,*** e.g. bedsitting rooms, living rooms, bedrooms, ordinary domestic kitchens, small domestic boiler rooms, cupboards and small domestic stores. Bathrooms/WCs containing no fire risk and all parts of the protected route are excluded.

Suitably qualified person See Competent Assessor

Travel distance means the actual distance that a person must travel between any point in a building and the nearest ***final exit****,* or door to a stairway which is a ***protected route,*** or door to a ***protected lobby*** leading to a stairway, or door to adjoining premises as the case may be.

Unit of accommodation a part of an HMO let as exclusive accommodation for a particular occupier or occupiers. It could be a flat, bedsit, hostel room or a collection of non-self-contained rooms. It does not include the common escape route.