

# HOUSES IN MULTIPLE OCCUPATION STANDARDS



INVESTOR IN PEOPLE

Housing  
Executive

## Contents

1.0	Introduction	3
2.0	Standards	4
3.0	Method of Measurement	6
4.0	Overcrowding	7
5.0	Over Occupation	8
6.0	Facilities for Storage, Preparation and Cooking of Food and for the Disposal of Waste Water	9
7.0	Personal Washing Facilities and Sanitary Conveniences	13
8.0	Light and Ventilation	15
9.0	Means of Escape from Fire and Other Fire Precautions	16
10.0	Human Habitation	38
Annex 1	Glossary of Terms	39
Annex 2	Guide to Functionality	44
Annex 3	Unacceptable Items within Stairway Enclosures	46

### **Equality Statement**

The contents of this Standards Document have been screened in accordance with the Housing Executive's equality Scheme procedures and it has been concluded that there are no significant equality issues that require a full Equality Impact Assessment.

Please note that this document is available on request in alternative formats including:

- Large Font
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## 1.0 Introduction

- 1.1 The Housing Executive is responsible for ensuring that HMOs meet a number of requirements in relation to the overall condition of the dwelling, and the number of people living in the dwelling.
- 1.2 When determining the suitability of a property the Housing Executive will have regard to the Standards for Houses in Multiple Occupation adopted by the Board at its meeting in May 2002.

## 2.0 Standards

- 2.1 These standards shall be applied as minimum requirements to all categories of Houses in Multiple Occupation (as classified below). Irrespective of such requirements however, consideration should be given to the shape and usable space of any room in determining whether it is suitable for use and/or occupation and by how many occupants. This is a matter, of course, of functionality; whether given its shape and size the particular room is reasonably capable in fact of performing the role assigned to it for the number of persons who need to use it.

For further guidelines on functionality see Annex 1

### 2.2 CATEGORIES OF HMOs

#### 2.2.1 CATEGORY A (Bedsits)

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

#### 2.2.2 CATEGORY B (Shared Houses)

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

#### 2.2.3 CATEGORY C (Lodgings)

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

#### 2.2.4 CATEGORY D (Hostels; Bed and Breakfast; Guest Houses; Hotels)

Accommodation for people with no other permanent place of residence, as distinct from an establishment which only provides accommodation for visitors to the area for a short time e.g. tourists. This category would include establishments used to house homeless families or persons who would otherwise be homeless. This also applies if there was a mix of homeless households, with that establishment as their only place of residence, and short term visitors. Some of these premises may fall under the Fire Services (Northern Ireland) Order 1984.

#### 2.2.5 CATEGORY E (Residential Homes)

Residential homes provide board and personal care for persons in need of such accommodation and care by reason of old age, disablement, past or present dependence on alcohol or drugs, or past or present mental disorder.

These houses would provide permanent accommodation, and would include a level of support not normally present within Category D accommodation, which only provides a home for the time being.

Residential homes which are registered under the Registered Homes (N.I.) Order 1992 or any re-enactment or statutory modification must satisfy the requirements of the relevant Health and Social Services Board. The Housing Executive therefore does not take any enforcement against such premises.

#### 2.2.6 CATEGORY F (Flats/Flatlets/Maisonettes)

Houses or building which by conversion contain dwellings, which are flats, flatlets or maisonettes. Each dwelling would contain all the standards amenities, although not necessarily behind one door. There would be no sharing of amenities or habitable rooms with the occupants of other units of accommodation.

## 3.0 Method of Measurement

- 3.1 For the purposes of determining the floor area of a room the following method shall be applied;
  - 3.1.1 The area of any part of the floor space over which the vertical height of the room is, by reason of a sloping roof or ceiling reduced to less than 1.5m, shall be excluded from the computation of the floor area of that room.
  - 3.1.2 Subject to any exclusion under the foregoing rule, the floor area shall be measured so as to include in the computation of the floor area any floor space formed by a bay window extension, and excluding any area at floor level which is covered or occupied by fixed cupboard or projecting chimney breasts.

Any area at floor level which is covered or occupied by a fixed cupboard may be included or excluded from the computation depending upon its use; e.g. built-in wardrobes may be included, hot-press/cupboards may be excluded.

All measurements for the purpose of computing the floor area shall be made at the floor level and, subject as aforesaid shall extend to the back of all projecting skirtings.

## 4.0 Overcrowding

4.1 The Housing (NI) Order 1992, Article 76 deals with overcrowding in houses in multiple occupation.

4.2 There are two separate standards relating to the space available and a dwelling is deemed overcrowded when the number of persons sleeping in the dwelling is such as to contravene the Room Standard or the Space Standard.

4.3 Room Standard

4.3.1 The room standard is contravened when the number of persons sleeping in a dwelling and the number of rooms available as sleeping accommodation is such that two persons of opposite sexes, over the age of 12, who are not living together as husband and wife must sleep in the same room.

4.4 The Space Standard

4.4.1 The space standard is contravened when the number of persons sleeping in a dwelling is in excess of the permitted number, having regard to the number and floor area of the rooms of the dwelling available as sleeping accommodation.

For this purpose no account shall be taken of a child under the age of one, and a child aged one or over but under twelve shall be reckoned as one-half of a unit.

4.4.2 Bedroom (Table 1)

1 occupant	6.5m <sup>2</sup>
2 occupants	11m <sup>2</sup>
3 occupants	15m <sup>2</sup>

For each additional person there shall be a minimum additional 4.5m<sup>2</sup> of floor area.

4.4.3 Bedroom/Living Room (Table 2)

1 occupant	10m <sup>2</sup>
2 occupants	15m <sup>2</sup>
3 occupants	19.5m <sup>2</sup>

4.4.4 Bedroom/Living Room/Kitchen (Table 3)

1 occupant	13m <sup>2</sup>
2 occupants	20.5m <sup>2</sup>



## 5.0 Over Occupation

- 5.1 The Housing (NI) Order 1992, Article 80, specifies requirements for HMOs and provides the Housing Executive with powers to require the execution of works to render the premises fit for the number of occupants.
- 5.2 The Housing Executive may serve a notice where in its opinion, an HMO fails to meet one or more of the requirements (a) to (e) below and having regard to the number of individuals or householders or both, and due to that failure(s) the premises are not reasonably suitable for occupation by those individuals or households.
  - (a) there are satisfactory facilities for the storage, preparation and cooking of food including an adequate number of sinks with a satisfactory supply of hot and cold water;
  - (b) it has an adequate number of suitably located water-closets for the exclusive use of the occupants;
  - (c) it has, for the exclusive use of the occupants, an adequate number of suitably located fixed baths or showers and wash-hand basins each of which is provided with a satisfactory supply of hot and cold water;
  - (d) subject to Article 82 of the Housing (NI) Order 1992, there are adequate means of escape from fire; and
  - (e) there are adequate other fire precautions.

## 6.0 Facilities for Storage, Preparation and Cooking of Food and for the Disposal of Waste Water

- 6.1 In assessing the suitability of the kitchen facilities, the Housing Executive will take into account the manner in which the premises are occupied.
- 6.2 Where meals are provided for residents the kitchen facilities may have to comply with the Food Safety (N.I) Order 1991 or any re-enactment or statutory modification. Decisions regarding the need for compliance can only be made by the local Council Environmental Health Department.
- 6.3 Depending on any restrictions of kitchen usage by residents (under 6.2), as confirmed by the Environmental Health Department, separate kitchen facilities for residents may be required.
- 6.4 Where separate kitchen facilities are necessary each kitchen shall contain the following:-
  - 6.4.1 Cooker with four rings or hot plates, oven and grill
  - 6.4.2 A sink complying with paragraph 6.13
  - 6.4.3 A securely fixed worktop 1200mm x 600mm minimum
  - 6.4.4 2 no. double socket outlets in addition to any socket or point used for an electric cooker or oven. Sockets should be positioned immediately adjacent to the work surface, and installed in compliance with the current edition of the Regulations for Electrical Installations of the Institution of Electrical Engineers.
- 6.5 Kitchen facilities for the purpose of paragraph 6.4, shall be available for use 24 hours a day. Each individual or household shall have a kitchen for their individual use or shared with one or more other individuals or households.
- 6.6 Shared kitchens, where practicable, shall be provided on the same floor as the habitable rooms.
- 6.7 Where it is not practicable to have the kitchen(s) on the same floor as the habitable rooms, a suitable dining area should be provided adjacent to each kitchen.
- 6.8 All facilities and appliances should be designed and installed so as not to be prejudicial to safety. Sinks, worktops and immediately adjacent walls and floors should be non-porous and reasonably smooth so as to facilitate cleaning.

## 6.9 SPACE STANDARD

### 6.9.1 Kitchen (Tables 4a & 4b)

1-2 individuals	5m <sup>2</sup>
3-5 individuals	7m <sup>2</sup>
6-10 individuals	10m <sup>2</sup>

1 household	5m <sup>2</sup>
2-3 households	7m <sup>2</sup>
4-6 households	10m <sup>2</sup>

### 6.9.2 Kitchen/Dining Room (Tables 5a & 5b)

1-2 individuals	9m <sup>2</sup>
3-5 individuals	11.5m <sup>2</sup>
6-10 individuals	19.5m <sup>2</sup>

1 household	9m <sup>2</sup>
2-3 households	11.5m <sup>2</sup>
4-6 households	19.5m <sup>2</sup>

### 6.9.3 Kitchen/Living Room (Tables 6a & 6b)

1-2 individuals	9m <sup>2</sup>
3-5 individuals	11.5m <sup>2</sup>
6-10 individuals	19.5m <sup>2</sup>

1 household	9m <sup>2</sup>
2-3 households	11.5m <sup>2</sup>
4-6 households	19.5m <sup>2</sup>

No Kitchen, kitchen/dining room or kitchen/living room shall be shared by more than 10 individuals or 6 households, irrespective of its total floor area.

### 6.10 Food Storage

6.10.1 Each individual shall be provided with a proper food store, 0.18m<sup>3</sup> dry storage and 0.06m<sup>3</sup> cold storage, within the unit of accommodation. Households comprising of more than one individual will require more of each type of storage space.

6.10.2 Where shared kitchens are provided, each individual or household sharing shall have their own proper food store either within the unit of accommodation or in the kitchen.

6.10.3 The space in a sink unit below the sink will not be accepted for food storage.

#### 6.11 Food Preparation

6.11.1 A securely fixed worktop shall be provided for each individual or household using a kitchen, the minimum size of such worktops should be as follows;

Table 7

1 individual or household	600mm x 600mm
2 individuals or households	1200mm x 600mm

increasing in width thereafter by 300mm per additional individual or household sharing.

6.11.2 In addition to any socket or point used for an electric cooker or oven, there shall be provided in each kitchen a minimum of;

Table 8

1-5 individuals	2 double sockets
6-10 individuals	3 double sockets

Sockets should be positioned immediately adjacent to the work surface(s) and installed in compliance with the current edition of the Regulations for Electrical Installations of the Institution of Electrical Engineers.

#### 6.12 Cooking of Food

6.12.1 Each kitchen shall be provided with a proper cooking appliance(s). The minimum acceptable will be a cooker with four rings or hot plates together with a grill and an oven in the following ratios;

Tables 9a & 9b

1-5 individuals	1 cooker
6-10 individuals	2 cookers

1-3 households	1 cooker
4-6 households	2 cookers

No kitchen shall contain more than two cooking appliances.

6.12.2 If due to the physical constraints of an existing kitchen (internal arrangement) the siting of a second cooker would have a detrimental effect on the safety of anyone using that kitchen, a built in microwave oven may be provided. This will only be acceptable if the maximum occupancy within the unit does not exceed 7 individuals.

### 6.13 Disposal of Waste Water

6.13.1 Each kitchen shall be provided with a stainless steel (or other equal and approved material) sink and drainer (1000mm x 600mm minimum) properly located within a base unit and properly connected through an adequate sized trap to the drains.

6.13.2 Each sink shall have an adequate and wholesome supply of cold drinking water directly off the rising main. There shall also be an adequate continuous supply of hot water.

6.13.3 In shared kitchens, sinks with adequate continuous supplies of hot and cold water shall be provided in the following ratios;

Table 10a & 10b

1-5 individuals	1 sink
6-10 individuals	2 sinks

1-3 households	1 sink
4-6 households	2 sinks

## 7.0 Personal Washing Facilities & Sanitary Conveniences

- 7.1 Where a dwelling is not capable of occupation by more than 3 persons, as determined under Article 76 of the Housing (N.I) Order 1992, the provision of a suitably located bath or shower, W.C and wash hand basin (separated or not), with continuous supplies of hot and cold running water, shall be satisfactory for the purposes of these standards.
- 7.2 Where an en-suite bathroom or shower room, or a bathroom or shower room for the individual use of an individual or household, containing a suitable bath or shower, wash hand basin and W.C, is available, this shall be adequate.
- 7.3 Where the bathroom or shower room is shared, each individual or household sharing shall have a readily accessible bathroom or a shower room provided in the following ratios:

Table 11

1-5 individuals	1 bathroom or shower room
6-10 individuals	2 bathrooms or shower rooms
11-15 individuals	3 bathrooms or shower rooms

Where a bathroom or shower room is shared, it shall contain a WHB within the compartment. However if due to the physical constraints of the bathroom or shower room a WHB can not be accommodated within the space, an additional WHB shall be provided within each bedroom.

- 7.4 Where paragraph 7.1 is not applicable and the bathroom or shower room is shared, each occupant shall have an accessible water closet compartment, separate from the bathroom or shower room, and containing a W.C and a wash hand basin in the following ratios:

Table 12

1-5 individuals	1 water closet
6-10 individuals	2 water closets
11-15 individuals	3 water closets

Where 2no. WC's are required (6-10 individuals sharing), 1no. WC may be in a room also containing a bath or shower and a wash hand basin. Where 3no. WC's are required (11-15 individuals sharing), 1no. WC may be in a room also containing a bath or shower and a wash hand basin.

- 7.5 External water closets shall not be reckonable for this purpose.
- 7.6 Where amenities are shared, each occupant should be able to reach a W.C, washbasin and bath or shower without having to pass through accommodation which is occupied exclusively by another individual or household. No unit of accommodation should generally be more than one floor vertically, or 30 metres horizontally, from the nearest W.C, wash hand basin and bath or shower.
- 7.7 Bathrooms, shower rooms and W.C compartments shall be constructed as to ensure privacy.
- 7.8 Baths, showers, W.Cs and wash hand basins shall not be permitted in kitchens.
- 7.9 Baths should be 1.67m minimum in length; shower trays 800mm X 800mm minimum and wash hand basins 360mm x 265mm minimum, each with it's own continuous supplies of hot and cold running water.
- 7.10 Bathrooms, shower rooms and W.C compartments should have surfaces which are designed to be reasonably smooth and non-absorbent and capable of being readily and easily cleaned. Floors should be slip resistant.

## 8.0 Light and Ventilation

### 8.1 Natural Light

8.1.1 Where practical all kitchens, bathrooms and water closet compartments shall be provided with natural light via an area of clear glazing in the kitchen, and obscure glazing in the bathrooms and WC compartments, situated in either a window and/or door, equivalent in total area to at least 1/10th of the floor area of the room.

### 8.2 Artificial Lighting

8.2.1 All kitchens, bathrooms and water closet compartments shall be adequately lighted by electricity.

8.2.2 Time switches shall not be permitted.

### 8.3 Ventilation

8.3.1 All kitchens, bathrooms and water closet compartments should be ventilated directly to the external air by a window, the openable area of which shall be equivalent to at least 1/20th of the floor area of the room.

8.3.2 Where this is not practicable, mechanical ventilation providing a minimum of three air changes per hour shall be provided. Such installations shall be fitted with an overrun device for a minimum of 20 minutes and be connected to the lighting circuit of the room.

8.3.3 Neither an openable door giving access directly to the external air, nor a louvered opening in such a door will be acceptable for the purposes of these requirements.



## 9.0 Means of escape from fire and other fire precautions

### 9.1 MEANS OF ESCAPE FROM FIRE

This section provides a summary of the fire standards applicable to all HMOs. Further guidance and expansion on the standards can be found within the document titled, Houses in Multiple Occupation, Fire Safety Guide: June 2002.

#### 9.1.1 INTRODUCTION

The emphasis is on ensuring that a satisfactory protected route for escape purposes is provided to enable all the occupants to safely vacate the building prior to combustion products making the environment untenable.

For the purpose of this guide a vulnerable person is defined as an “elderly person (over 60), children under 10, mentally or physically impaired persons, ill or depressed persons and persons on medication and known substance abusers (alcohol or drugs)”. DETR Guidance 1999

#### 9.1.2 SINGLE STOREY CATEGORIES A, B, or C

A single storey house does not include a house with a basement

All rooms should have close fitting internal doors and all habitable rooms shall open directly onto a hallway (including a corridor or landing leading to the hallway) which leads to the entrance without passing through any room (except a porch), other than where the habitable room -

- a) has an alternative escape route;
- b) the habitable room has an openable window of minimum size 850mm high and 500mm wide. (Floor to sill height min 800mm and max 1100mm)

#### 9.1.3 TWO STOREY CATEGORIES A, B or C

A two-storey house does not include a house with two storeys and a basement, or a house where the upper storey floor level is more than 4.5m above ground level. (Each storey shall have an openable window (or door) through which emergency egress to a safe place outside the house would be possible).

##### 9.1.3a CATEGORY A

Every stair enclosure within the property should be enclosed in fire resisting construction having 30 minutes fire resistance (integrity and insulation) including the soffit to the ground floor

staircase, and any door in the stair enclosure should be a fire door with 30 minutes fire resistance (integrity). This excludes bathrooms, W/C or shower compartments provided that such compartments have no fire risk and fire or fire products cannot spread from an adjacent compartment via the bathroom, W/C or shower compartment to the escape route

The fire-resisting stair shall either: -

- a) Extend to a final exit; or
- b) Lead to at least two escape routes at ground level, each delivering to a final exit and separated from each other by fire resisting construction and self-closing fire doors.

Any glazing in the stair enclosure, other than to a bathroom or sanitary accommodation, shall be fire resisting.

Bathrooms or sanitary accommodation shall be fitted with an imperforate door.

9.1.3b CATEGORIES B or C [Occupied by less than six non-vulnerable persons].

All rooms should have close fitting internal doors and all habitable rooms shall open directly onto a hallway (including a corridor or landing leading to the hallway) which leads to the entrance without passing through any room (except a porch), other than where the habitable room -

- a) has an alternative escape route;
- b) is on a storey not more than 4.5m above ground level and the habitable room has an openable window of minimum size 850mm high and 500mm wide. (Floor to sill height min 800mm and max 1100mm)

9.1.3c CATEGORIES B or C [Occupied by six or more non-vulnerable persons].

As per section 9.1.3a

9.1.3d CATEGORY B or C HMO [Occupied by vulnerable persons].

As per section 9.1.3a

9.1.4 THREE STOREY CATEGORIES A, B or C

A three-storey house does not include a house with three storeys and a basement, or a house where the upper storey floor level is more than 7.5m above ground level. Each storey shall have an openable window (or door) through which emergency egress to a safe place outside the house would be possible.

Every stair enclosure within the property should be enclosed in fire resisting construction having 30 minutes fire resistance (integrity and insulation) including the soffit to the ground floor staircase, and any door in the stair enclosure should be a fire door with 30 minutes fire resistance (integrity). This excludes bathrooms, W/C or shower compartments provided that such compartments have no fire risk and fire or fire products cannot spread from an adjacent compartment via the bathroom, W/C or shower compartment to the escape route.

Except

A stair in an HMO with a storey at a height exceeding 4.5m by one storey which does not contain a living room, bedroom or kitchen.

The fire-resisting stair shall either: -

- a) Extend to a final exit; or
- b) Lead to at least two escape routes at ground level, each delivering to a final exit and separated from each other by fire resisting construction and self-closing fire doors.

Any glazing in the stair enclosure, other than to a bath room or sanitary accommodation, shall be fire-resisting. Bathrooms or sanitary accommodation shall be fitted with an imperforate door.

#### 9.1.5 FOUR STOREY CATEGORY A, B or C (NO STOREY OVER 11M)

A four-storey house does not include a house with four storeys and a basement, or a house where the upper storey floor level is more than 11m above ground level. Each storey shall have an openable window (or door) through which emergency egress to a safe place outside the house would be possible.

Every stair enclosure within the property should be enclosed in fire resisting construction having 30 minutes fire resistance (integrity and insulation) including the soffit to the ground floor staircase and any door in the stair enclosure should be a fire door with 30 minutes fire resistance (integrity). Excluding bathrooms, W/C or shower compartments provided that such compartments have no fire risk and fire or fire products cannot spread from an adjacent compartment via the bathroom, W/C or shower compartment to the escape route.

The fire-resisting stair shall either: -

- a) Extend to a final exit; or
- b) Lead to at least two escape routes at ground level, each delivering to a final exit and separated from each other by fire resisting construction and self-closing fire doors.

Each storey that is over 7.5m above ground level shall have an alternative escape route leading to its own final exit. Where access to an alternative escape route is through the protected stairway, the protected stairway shall be subdivided by fire resisting construction at or about 7.5m above ground level. The floor at or about 7.5m above ground level should be constructed to 30 minutes nominal fire resistance.

Any glazing in the stair enclosure, other than to a bathroom or sanitary accommodation, shall be fire resisting.

Bathrooms or sanitary accommodation shall be fitted with an imperforate door.

#### 9.1.5 CATEGORIES D or E

The guidance below for hostel and residential type accommodation is based on the assumption that the residents will be capable of leaving the building unaided in the event of fire, and that any assistance or supervision that might be immediately on hand in the form of trained staff will be minimal particularly at night. Regard will therefore need to be had to the adequacy of the sign-posting of exit-routes and exit doors and the *escape lighting* arrangements associated with these routes. This guidance is also appropriate for student halls of residence and nurses' homes. Each storey shall have an openable window (or door) through which emergency egress to a safe place outside the house would be possible.

When it is evident that unaided escape would not be achievable each individual case will be assessed on merit in conjunction with the Northern Ireland Fire Brigade and Building Control as appropriate.

All Category D premises will require 1/2 hour nominal horizontal separation between floors.

Category E properties will be required to meet the requirements of the relevant Health and Social Services Board.

### 9.1.5a MAXIMUM DISTANCE OF TRAVEL

The maximum *distance of travel* from within a bedroom to a 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 not exceed the following distances.

Table 13 (Escape in more than one direction)

Category from any point within		Distance of Travel	
		(a) Within room	(b) Total distance
3.8A	Sleeping area	18m	35m
3.8B	<i>Area of higher fire risk</i>	12m	25m (note 1)
3.8C	All other situations	18m	35m

Table 14 (Escape in one direction only).

Category from any point within		Distance of Travel	
		(a) Within room	(b) Total distance
3.9A	Sleeping area	9m	18m
3.9B	<i>Area of higher fire risk</i>	6m	12m (note 3)
3.9C	All other situations	9m	18m

#### 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 with widths complying with section 9.1.5c, are provided.
3. Alternatively up to 18m when the total distance of travel is not wholly within the *area of higher risk*.

### 9.1.5b 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 14 and the total distance of travel should not exceed the distance shown in column b of Table 13 appropriate to the location which it is being measured.

### 9.1.5c MEANS OF ESCAPE (Stages)

Requirements regarding means of escape are set out in the following paragraphs with specific reference to each of the relevant stages i.e.

- |         |  |
|---------|--|
| Stage 1 | Travel within rooms                                  |
| Stage 2 | Travel from rooms to a stairway or <i>final exit</i> |
| Stage 3 | Travel within stairways and to <i>final exits</i> .  |

#### STAGE 1 - TRAVEL WITHIN ROOMS

##### Inner and access rooms

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

- (a) from an *inner room* used as sleeping accommodation  
6m
- (b) from an *inner room* constituting an area of higher fire risk  
6m
- (c) from an *inner room* used for any other purpose:  
9m  
(see note 4)

##### 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 be only 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. Where vision panels are installed in walls adjoining an escape route it will be necessary to satisfy the appropriate fire resistance standard of the element.

4. Where an *inner room* forms part of an area containing no sleeping accommodation the restrictions on *distance of travel* recommended in stage 1- travel within rooms (inner and access rooms) 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) a room occupied by more than 30 people;
- (b) a room in which the distance to be travelled between any point and the existing exit exceeds the appropriate distance recommended in Table 14

#### 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:

- (a) 750mm for an occupancy of up to 100 people; or
- (b) 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:

- (a) the angle between lines defining the routes from any point in the room to the exits is not less than 45°; or
- (b) from any point at which the angle is less than 45° the distance to be travelled between the point and the nearest exit does not exceed the appropriate *distance of travel* recommended in Table 14.

## 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 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
- (c) a combination of (a) and (b); or
- (d) (a) or (b) and a door in a *separating wall* between premises which are separated by *fire resisting construction*. (This situation is only acceptable where the premises are governed by legislation (i.e. - a fire certificate) or are directly under the control of the one occupier.

### Corridors

In all corridors serving sleeping accommodation and those which form *dead ends* the walls, partitions and ceilings forming the corridor should be of *fire resisting construction* and all room doors (except doors to toilets containing no fire risk) opening on to the corridor should be fire resisting and self closing. Doors to cupboards in corridors should be kept locked shut when not in use. A sign with the words "Fire Door - Keep Locked" should be permanently displayed on the outside of all fire doors to cupboards

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

- (i) 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 Table 14).
- (ii) The *dead end* portion of the route should not exceed the *distance of travel* set out in Table 14.

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. Accessibility should be in accordance with the Building Regulations (Northern Ireland) 1994 Technical Booklet R

### STAGE 3 - TRAVEL WITHIN STAIRWAYS TO FINAL EXITS

#### **Number of stairways**

Ideally more than one stairway should be provided. However, it is appreciated that there may be circumstances where such provision would be impractical, due to structural reasons or conflict with accommodation layouts. In such cases a single storey stairway may be considered satisfactory if:

- (a) the floor area of any upper storey of the building does not exceed 200m<sup>2</sup>; and *distances of travel* conform to those given in Table 14;
- (b) the building 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;
- (c) the stairway shall extend to a final exit or lead to at least two escape routes at ground level, each delivering to a final exit and separated from each other by fire resisting construction and self-closing fire doors, and
- (d) in a building more than 2 floors in height access to the stairway from any rooms (other than a toilet containing no fire risk) is through two sets of *fire doors*. Where it is impractical to achieve this in premises of not more than three floors in height, a suitable alternative may be achieved by the provision of *fire doors* to rooms opening into the stairway with an automatic fire warning system (as per section 9.2) subject to a suitable maintenance agreement, and adequate fire risk management;

#### Enclosures of stairways

- A. All stairways required for *means of escape* (over 2 storeys) should be separated from the remainder of the building by *fire resisting construction* and self-closing *fire doors* so to form a stairway enclosure.

- B. 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 a stairway enclosure to reach an alternative escape route. If this is not possible the stairway should still be separated and it may be reasonable for an alternative route to by-pass the stairway by means of balconies or by means of a by-pass corridor, or, exceptionally, intercommunicating doors between rooms. By-pass corridors and doors should be of appropriate fire resistance (where necessary) and of suitable width. By-pass or intercommunicating doors should be kept free of obstruction and available at all times.
- C. Ideally stairway enclosures should lead to a *final exit*. Where there is only one stairway(s) from 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:
- i. 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
  - ii. 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.

When the stairway is enclosed in accordance with Stage 3 - travel within Stairways to final Exits (Enclosures of stairways parts B or C) and has a final exit from the enclosure and the only doors in the enclosure are:

- (a) to toilets containing no fire risk;
- (b) to *protected lobbies*;
- (c) to corridors;
- (d) to lift wells contained within a stairway enclosure;
- (e) to *final exits*;

it should be regarded as a protected route.

Where a stairway can be considered a *protected route*, it will not be necessary to have regard to *distance of travel* in Stage 3. Where this is not the case, the Stage 3 section of the escape route should be regarded as forming part of the total *distance of travel* permitted (see column b of Table 13 and 14).

#### 9.1.6 CATEGORY F

Each storey shall have an openable window (or door) through which emergency egress to a safe place outside the house would be possible.

##### 9.1.6a FLATS SITUATED NOT MORE THAN 4.5M ABOVE GROUND OR ACCESS LEVEL

No flat should be so planned that any habitable room is an inner room unless that room is provided with a door or window complying with paragraph 9.1.9 for escape and rescue purposes and all final exits should be fitted with an easy-opening device.

##### 9.1.6b RECOMMENDATION FOR DWELLING CONTAINING FLATS OR MAISONNETTES SITUATED MORE THAN 4.5M ABOVE GROUND OR ACCESS LEVEL.

- A: An HMO which contains a flat or maisonette with a storey height of more than 4.5m (typically more than 2 storeys) should be planned so that either:
- i. each flat or maisonette has a secondary exit from within the unit of accommodation, or
  - ii. all bedrooms and living room must be entered through a protected lobby/circulation area enclosed in 30 minute fire resisting construction (integrity and insulation) and any door should be an FD30S. Furthermore the maximum permissible distance of travel from any door of any living room or bedroom to the exit is not more than 9m; or
  - iii. the distance to be travelled from the flat entrance door to any point in any habitable room is not more than 9m and the direction of travel is away from cooking facilities; or
  - iv. sleeping accommodation, and that part of the circulation area which serves the sleeping accommodation and the exit to the flat, is separated from any other living room or kitchen by a construction providing at least 30 minutes fire resistance (integrity and insulation); and

- a. any door in this construction is a fire door with 30 minutes fire resistance (integrity), and
  - b. if that HMO has a storey at a height of more than 11m, and the distance to be travelled within the flat from any point to the exit is more than 15m, there is an exit through a door other than its main entrance from the living accommodation.
- B: Where a flat is within a building and only has a single escape route which relies upon a common stair, then there should be a lobby enclosed by walls having 30 minutes fire resistance (integrity and insulation) within the flat which protects access to that escape route, if:
  - i. there are more than 10 residents, or
  - ii. there are more than 6 residents and any storey in the building is over 7.5m, or there are less residents and:
    - a. any storey in the building is over 11m; or
    - b. there are more than four flats on any storey.

Doors in the wall should be fire doors and have 30 minutes fire resistance (integrity).
- C: A wall with an adequate degree of fire resistance should be provided between the flat and any other part of the same building. An adequate degree of fire safety is 30 minutes (integrity and insulation).
- D: A floor between flat/maisonettes should be 60 minutes fire resisting.
- E: Where the escape route from the front door of the flat is within the building it should lead by way of circulation space or stairway directly to the outside.
- F: Any part of an escape route from the front door of the flat which is within the building should be provided with artificial lighting.
- G: If the dwelling contains a maisonette which has more than two storeys, and one of them is at a height of more than 4.5m, additional safety measures should be taken as set out in section 9.1.6c over.

9.1.6c ADDITIONAL MEANS OF ESCAPE REQUIRED FROM MAISONNETTES WITH TWO OR MORE STOREYS, OF WHICH ONE IS AT A HEIGHT OF MORE THAN 4.5M, ARE GIVEN BELOW.

1. If there is accommodation on more than one level it should be planned so that -
  - i. all living rooms or bedrooms are entered directly from a circulation space enclosed in fire resisting construction having 30 minutes fire resistance (integrity and insulation) and any door in the enclosures should be a fire door with 30 minutes fire resistance (integrity);  
and
  - ii. where any storey is at a height of more than 11m there is -
    - A. an exit through a door other than its main entrance from each storey other than the entrance storey, or
    - B. an exit through a door other than its main entrance from each bedroom.
2. If there is accommodation on only one level, but the maisonette is entered from a storey below the level of the accommodation, it should be planned so that :-
  - i. an exit through a door other than its main entrance is provided; or
  - ii. all living rooms or bedrooms are entered directly from a circulation space enclosed in fire resisting construction having 30 minutes fire resistance (integrity and insulation), and any door in the enclosures should be a fire door with 30 minutes fire resistance (integrity), and the distance to be travelled from any door of a living room or bedroom to the head of the internal stair is not more than 9m; or
  - iii. the distance to be travelled from any point within the maisonette to the head of the internal stair is not more than 9m, and the direction of travel is away from cooking facilities.
3. If there is accommodation on only one level, but the maisonette is entered from a storey above the level of the accommodation, it should be planned so that an exit through a door other than its main entrance is provided from the lower storey.

#### 9.1.7 ESCAPE FROM A UNIT OF ACCOMMODATION

Layouts which have an inner room can present an unacceptable hazard to the occupants and as such the arrangement is only satisfactory where the inner room is a:

- kitchen }
- laundry or utility room }
- dressing room }
- bathroom, WC or shower room } See glossary for definitions  
accessed from a bedroom } of "Inner and access rooms"

On basement, ground and first storey it may be acceptable to allow other rooms, provided a suitable alternative means of escape from that room is provided.

"Inner inner rooms" i.e. rooms entered through more than one access room, are not permitted.

An entrance hall/lobby is not regarded as an access room.

#### 9.1.8 RECOMMENDATIONS FOR ESCAPE ONTO A FLAT ROOF

An alternative exit may be onto a flat roof provided that the following conditions are satisfied.

- (a) Such a roof is part of the same building from which escape is being made.
- (b) The route across the roof:
  - (1) leads to a storey exit;
  - (2) is adequately defined and guarded with protective barriers in accordance with BS 6180.
- (c) Such a part of the escape route and its supporting structure is constructed as a fire-resisting floor.
- (d) Where an escape route is in one direction only, any ventilation outlets or other windows that are not fire resisting, should not be sited within 3m of such a route.

#### 9.1.9 RECOMMENDATIONS FOR DOORS AND WINDOWS FOR ESCAPE OR RESCUE PURPOSES.

The following recommendations are applicable.

- (a) A window should provide an unobstructed opening not less than 850mm high by 500mm wide.
- (b) The bottom of any window opening should be not more than 1100mm above the floor of the room in which it is situated.

**NOTE:** To provide protection against falling, building regulations will generally be satisfied if the bottom of the opening is not less than 800mm above the floor (except for a rooflight, in which case the bottom of the opening should be not less than 600mm above the floor).

- (c) Where provided for escape or rescue purposes from a room above ground level:
  - (1) any doors (including a French window or a patio window) should lead to a balcony guarded with a protective barrier complying with BS6180;
  - (2) the ground beneath a window or balcony should be clear of any obstructions (such as iron railings or horizontally hung windows) and should be of a size and material suitable and safe for supporting a ladder.
- (d) A door or window should not face onto an internal shaft or enclosure unless:
  - (1) escape to a place of safety is possible without re-entering the building,
  - and
  - (2) there is sufficient space for the Fire Authority to bring in and safely erect a suitable ladder if escape or rescue would be from a room above ground level.
- (e) Where practicable the escape window or door should be located remote from the primary escape route.

#### 9.1.10 MEANS OF ESCAPE FROM ALL HMOs - EXTERNAL ESCAPE

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

#### 9.1.11 MEANS OF ESCAPE FROM ALL HMOs - FIRE DOORS

A fire door in an HMO should be FD30S or approved by Building Control.

#### 9.1.12 MEANS OF ESCAPE FROM ALL HMOs - FINAL EXITS

All final exit doors shall be fitted with an easy opening device. If escape is into an enclosed yard, an easy opening device shall be fitted to the yard door when the length of the yard is equal to or less than the height of the building.

#### 9.1.13 AN HMO WHICH IS WITHIN A BUILDING CONTAINING OTHER CATEGORIES OF USE

HMOs which are situated within a building comprising other categories of use i.e. offices, shops, factories, shall be structurally separated from such premises 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.

#### 9.1.14 MEAN OF ESCAPE FROM BASEMENTS

Combustion products tend to rise and there is a danger that people attempting escape from a fire in a basement would find that they had to move into a layer of smoke. Basements, therefore, require special consideration.

Ideally, a stairway serving upper floors should not extend to the basement.

##### STAIRWAYS TO BASEMENTS

Where a stairway links a basement with the ground floor, the basement should be separated from the ground floor by two FD30S doors, one at basement level and one at ground level.

##### OCCUPIED BASEMENTS

Occupied basements should ideally have two escape routes to a safe place at ground level. In circumstances where the basement floor level exceeds 150 m<sup>2</sup>, a second escape route must be provided.

In addition, inner rooms, which are habitable, must be provided with an alternative means of escape. This escape route may be by way of an escape window or door complying with the following requirements:-

It should have an unobstructed opening that is at least 850mm high and 500mm wide, and the bottom of a window should be not more than 1100mm and not less than 800mm above the floor.



## SEPARATION OF BASEMENTS

**Option 1:** The basement is separated from the ground floor by 2x FD30S doors, one at the foot of the stairway and one at the head.

**Option 2:** The basement is separated from the ground floor by 2x FD30S doors, one between each self-contained unit within the basement and one at the head of the stairway at the ground floor.

## CEILING HEIGHT, VENTILATION & NATURAL LIGHTING

Fire protection work to basement ceilings may result in inadequate floor to ceiling height. The floor to ceiling height should be sufficient to encourage the free circulation of air and should not average less than 2.1 metres.

The provision of a glazed area to a habitable basement room should total not less than 1/10th of the floor area of that room. As a guide, the window should be positioned such that from any point on the window a line can be drawn upwards in the vertical plane at an angle of 30° to the horizontal without intercepting an obstruction within 3 metres - this may cause difficulties where external escapes are provided.

## DEFINED ZONE OF FIRE RESISTING CONSTRUCTION

Where occupied basement windows are within 1.8 metres of a sole exit from an HMO, then 1.8 metres either side of the exit should be treated as a fire resistant space in respect of the basement only. It will therefore be necessary for 30 minute fire resisting glazing to be provided within the 1.8 metre zone.

Consideration will need to be given for additional ventilation where glazing is required to habitable rooms.

## BASEMENT CEILINGS.

In HMOs provided with a comprehensive Automatic Fire Detection system to BS 5839 Type L2 or a mains wired interconnecting system, where the systems provide extended coverage to separate areas within a basement, then the basement ceiling shall provide a minimum of 30 minutes fire resistance.

Extended detector coverage may be by the provision of detectors in each compartment, or by a combination of additional detectors in some compartments, and high level ventilation between the compartments.

Where extended detector coverage is not provided, then the ground floor shall be separated from the basement by 60 minutes fire resisting construction. If extended coverage is not provided, the basement shall not be linked by a common stairway.

## 9.2 OTHER FIRE PRECAUTIONS

### 9.2.1 DETECTION AND GIVING WARNING IN THE CASE OF FIRE.

9.2.1a A dwelling defined as a **Category A** HMO should be provided with a suitable fire detection and alarm system complying with BS 5839: Part 1: 1988: Type L2.

9.2.1b A property defined as a **Category B** HMO, with one or two storeys, with no floor level exceeding 4.5m in height above ground level, and no floor level greater than 200m<sup>2</sup> in area, should be provided with a suitable fire detection and alarm system complying with BS 5839: Part 6: 1995: Type LD3, Grade D.

All other dwellings defined as a **Category B** HMO should be provided with a suitable fire detection and alarm system complying with BS 5839: Part 1: 1988: Type L2.

9.2.1c A property defined as a **Category C** HMO, with one or two storeys with no floor level exceeding 4.5m in height above ground level, and no floor level greater than 200m<sup>2</sup> in area, should be provided with a suitable fire detection and alarm system complying with BS 5839: Part 6: 1995: Type LD3, Grade D. All other dwellings defined as a **Category C** HMO should be provided with a suitable fire detection and alarm system complying with BS 5839: Part 1: 1988: Type L2.

9.2.1d A dwelling defined as a **Category D** HMO should be provided with a suitable fire detection and alarm system complying with BS 5839: Part 1: 1988: Type L2.

9.2.1e A dwelling defined as a **Category E** HMO should comply with the requirements under the Registered Homes (NI) Order 1992 or any re-enactment or statutory modification.

9.2.1f A dwelling defined as a **Category F** HMO should be provided with a suitable fire detection and alarm system complying with BS 5839: Part 1: 1988: Type L3 to the common parts (an audible signal relayed to each residential unit). Each flat or maisonette shall be provided with stand alone detection in accordance with BS 5446 Part 1.

## 9.2.2 EMERGENCY/ESCAPE LIGHTING

### 9.2.2a ONE AND TWO STOREY HMOs.

Emergency/escape lighting is not required in 1 and 2 storey HMOs

#### **Except**

If the route of escape is complex or lengthy or;

The HMO is occupied by 6 or more persons or;

Where no natural light is available.

Where it is provided then it shall conform to paragraph 9.2.2c below.

### 9.2.2b THREE STOREY HMOs.

Emergency lighting is not required in 3 storey HMOs

#### **Except**

If the route of escape is complex or lengthy or;

The HMO is occupied by 6 or more persons or;

Where no natural light is available.

Where it is provided then it shall conform to paragraph 9.2.2c below.

### 9.2.2c HMOs WITH FOUR OR MORE STOREYS

Emergency/escape lighting should be provided throughout the escape route of all HMOs with 4 or more storeys and may be required in communal rooms.

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

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

Emergency lighting should be provided in accordance with BS5266. Part 1:1999, Code of Practice for the Emergency lighting of Premises other than cinemas and certain other specified premises used for entertainment.

Regard must be had to BS 5266 Part 1:1999 together with BS EN 1838 in relation to the siting of the luminaries. The number and position of luminaries will also be further dependent on the layout of the premises and the product chosen.

The Emergency/escape lighting should be provided within 5 seconds of the failure of the normal lighting supply.

For routes that are permanently unobstructed and up to 2m wide the horizontal illuminance at floor level on the centre line of the escape route should be not less than 0.2 lx but preferably 1 lx.

For points of emphasis the minimum horizontal illuminance at the floor along the centre line of the escape route should be not less than 1 lx. In addition, for escape routes up to 2m wide, 50% of the route width should be lit to a minimum of 0.1 lx.

In addition to providing the minimum illuminance as above, the Emergency/escape lighting should indicate clearly the exit route and highlight any hazards such as staircases, changes in floor levels or changes in direction.

The whole system shall be tested and maintained regularly in accordance with the requirements of BS 5266 Part 1: 1999.

### 9.2.3 FIRE FIGHTING EQUIPMENT

Fire fighting equipment shall be provided in all HMOs.

The number and siting of all fire extinguishers will depend on the size and layout of the property being considered however the following is given as a guide:

The provision shall be:

A multi-risk fire extinguisher of 13A rating situated on each floor.

A fire blanket in each room used for cooking in accordance with BS 6575.

A carbon dioxide (CO<sub>2</sub>) extinguisher adjacent to any incoming mains electric supply cupboard.

Extinguishers shall be installed and maintained in accordance with BS EN-3: Part 3 and BS 5306 Part 3 (1985).

### 9.2.4 GENERAL PROVISIONS

#### 9.2.4a ELECTRICITY SUPPLY

There should be continuity of supply to the fire detection and emergency lighting systems serving the house and to the ordinary domestic lighting circuits serving the common areas.

**Pre-payment electricity meters of whatever kind serving these installations are unacceptable.**

#### 9.2.4b SITING OF COOKING FACILITIES

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

#### 9.2.4c NOTICES AND SIGNS

All fire safety signs, notices and graphical symbols should conform as far as practicable with BS 5499: Part 1: Specification for Fire Safety Signs, where applicable BS 2560: Specification for Exit Signs (internally illuminated) and Health and Safety (Signs and Signals) Regulations (NI) 1996. Existing signs and notices need not be replaced immediately if they are fulfilling their purpose effectively. They should, however, be examined and be replaced if they are found to be inadequate.

A door fitted with a panic bolt or panic latch should have the words “Push Bar To Open” in conspicuous lettering of appropriate size printed on the door immediately above the push-bar.

A sign with the words “Fire Door-Keep Shut” should be permanently displayed at about eye level on both faces of all fire doors except doors which are kept open and which close automatically on the operation of fire sensors. Doors of the latter kind should be marked in lettering of appropriate size “Automatic Fire Door - Keep Clear”-”Close at Night” as appropriate. **“Fire Door” signs need not be displayed on the entrance doors to each individual occupied room in category A, B or D or on the doors to or within self-contained units (category F).**

A sign with the words “Fire Door - Keep Locked” should be permanently displayed on the outside of all fire doors to cupboards and boiler rooms.

A sign with the words “Fire Escape - Keep Clear” should be permanently displayed at about eye level on each face of all doors which are provided solely as means of escape in case of fire and which, because they are not normally used, are liable to be obstructed. This is particularly relevant in the case of communicating or by-pass doors used as fire exits which pass through habitable rooms.

With reference to Regulation 10(2) of the management regulations, it is intended that any exit which is not a normal route of travel from a building should be indicated by a sign bearing the words "Fire Exit" in lettering of appropriate size. The sign should be displayed immediately above the exit opening, wherever possible. Where this is not possible a position should be chosen where the sign is least likely to be obstructed and most likely to be seen.

At suitable points along an escape route where an exit sign cannot be seen, or where a person escaping might be in doubt as to the location of an exit, a sign should be provided bearing, in lettering of appropriate size, the words "Fire Exit" and the necessary directional arrow. Such signs should be fixed in conspicuous positions, wherever possible between 2m and 2.5m above floor level.

Exit and directional signs should be internally or otherwise illuminated so as to be clearly seen.

## 10.0 Human Habitation

- 10.1 The Housing (NI) Order 1981, Article 46 substituted by Schedule 5 of the 1992 Order, regarding fitness for human habitation will have to be considered.

## Annex 1

### GLOSSARY

#### GLOSSARY OF TERMS USED IN THE GUIDANCE.

**Access Room**

A room through which passes the only escape route from an inner room.

**Alternative Escape Routes**

Escape routes sufficiently separated by either direction and space, or by fire-resisting construction, to ensure that one is still available should the other be affected by fire.

**Circulation Area: Circulation Space**

An area or space, including a stairway, mainly used as a means of passage between a room and an exit from the building.

**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.

**Detector**

A component of a fire detection and alarm system that contains at least one sensor which constantly, or at frequent intervals, monitors at least one physical and/or chemical phenomenon associated with fire, and that provides at least one corresponding signal to initiate a warning.

**Distance of Travel**

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.

**Dwelling**

*A unit of residential accommodation occupied (whether or not as a sole or main residence):*

- (a) by a single person or by people living together as a family; or
- (b) by persons who do not live together as a family, but who live in self-contained single family flats or maisonettes within the unit.

**Final Voltage (of a battery)**

The voltage at which the cell manufacturer considers the cells to be fully discharged at the specified discharge current.



**Control Equipment**

Equipment that, on receipt of a fire signal, controls the giving of a fire alarm by one or more of the following:

- fire alarm sounders;
- indicating equipment;
- a transmitter which is capable of transmitting fire alarm signals to a remote location.

**Indicating Equipment**

Equipment that provides visual indication of any fire alarm or fault warning signal received from control equipment.

**Fire Alarm Sounder**

A component of a fire detection and alarm system for giving an audible warning of fire.

**Fire Detection and Alarm System**

A system that comprises a means for automatically detecting one of the characteristic phenomena of fire and a means for providing a warning to occupants.

**Fire-resisting Construction**

Construction that is able to satisfy for a stated period of time some of all of the appropriate criteria given in the relevant parts of BS 476.

**Fire Risk**

A combination of the probability of fire occurring and the magnitude of the consequences of fire.

**Flat**

A dwelling, forming part of a larger building, that has all its rooms on one level or not more than half a storey height apart.

**House in Multiple Occupation**

An HMO is a "house which is occupied by persons who do not form a single household." (Housing (NI) Order 1992.)

**Habitable Room**

Any room in a dwelling other than a kitchen, utility room, bathroom, dressing room or WC.

**Inner Room**

A room from which escape is possible only by passing through another room (the access room).

**Maisonette**

A dwelling, forming part of a larger building, which includes rooms on two or more levels that are more than half a storey in height apart.

**Normal Supply**

The supply from which the fire detection and alarm system is expected to obtain its power.

**Occupied Basements**

An occupied basement is one which has either a bedroom or living room below the level of the highest external ground level.

**Sheltered Housing**

A block or group of dwellings, with each dwelling incorporating its own cooking and sanitary facilities, designed specifically for persons who might require assistance, e.g. elderly people, and where some form of assistance is available at all times.

**Smoke**

Particulate and aerosol products of combustion, whether this is of the smoldering or open flame type.

**Smoke Alarm**

A device containing within one housing all the components, except possibly the energy source, necessary for detecting smoke and for giving an audible alarm.

**Social Alarm System**

A system that provides facilities for alarm initiation, signal transmission, alarm reception, reassurance and assistance, for use by elderly and other persons considered to be living at risk.

**Standby Supply**

An electricity supply that provides power to the normal fire detection and alarm system when the normal supply fails.

**Storey Height**

The distance in metres from the external ground level to the internal floor level of the storey under consideration.

**Vulnerable Person**

This term is defined as an elderly person (over 60), children under 10, mentally or physically impaired persons, ill or depressed persons and persons on medication and known substance abusers (alcohol or drugs).

## **Zone**

A subdivision of the protected premises such that the occurrence of the fire within it will be indicated by a fire alarm system separately from a fire in any other subdivision.

### **BRITISH STANDARD 5839: PART 1, 1988**

#### **L Type Systems - Summary Explanation**

L type systems are installed primarily for the protection of life. There are 3 levels of protection:

#### **L3 Protection of Escape Routes (First Level of Protection):**

Automatic fire detection along the route of escape and within the adjacent rooms.

The system is to be designed so that in the event of a fire an alarm is given at a sufficiently early stage to allow time for the escape routes to be used before they are blocked by smoke.

A detector should be sited in each room (other than a toilet) that opens directly onto any stairway and at each storey level. Detectors may be necessary in dormitories.

The absence of structural separation in roof voids could allow a fire to spread from an unprotected room and affect adjoining escape routes. Where the possibility of fire spread is not eliminated by structural means, detectors should be sited either in the areas where fire might start, or in the areas through which the fire products might reach the escape routes.

#### **L2 Protection of Vulnerable Areas (Second Level of Protection):**

Installation of detectors in those parts of the premises where the most vulnerable people are likely to be, or where the most dangerous fires are likely to start, as well as the escape routes.

Initial coverage is within the escape route as the L3 system described above.

Additionally:

Those areas in which the normal occupants are especially vulnerable to fire starting in their vicinity and,

Those areas having a particularly high probability of ignition and from which fire or fire products could spread to affect the building occupants.

**L1 Total Coverage (Third Level of Protection):**

Requires fire detection in all parts of the premises.

In those areas which would have a direct effect on the occupants or their escape routes smoke detectors should be installed.

Where fire would only affect the occupants or the escape routes after fire spread has occurred beyond the room of origin, either heat or smoke detectors may be installed.

**BRITISH STANDARD 5839: PART 6, 1995**

LD System is an automatic fire detection and alarm system intended for the protection of life

Type LD3: A system incorporating detectors in all circulation spaces that form part of the escape route from the dwelling.

Grade D: A system of one or more mains-powered smoke alarms, each with an integral standby supply.

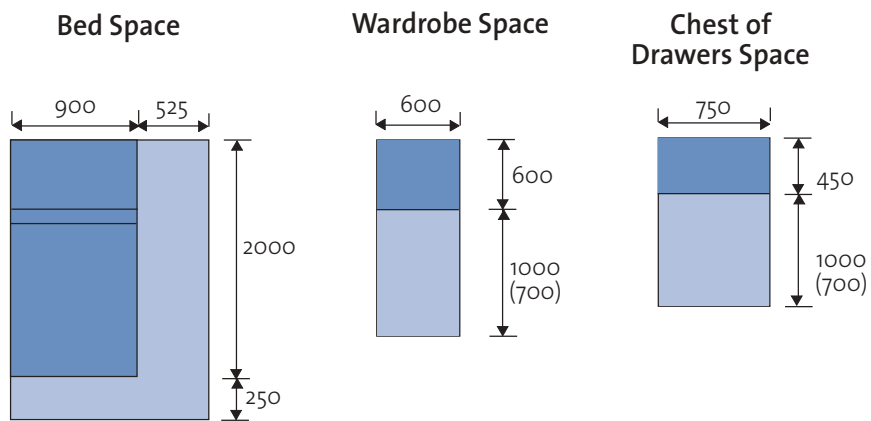
## Annex 2

### FUNCTIONALITY

#### Activity Spaces Within Bedrooms

While a floor area of 6.5m<sup>2</sup> is specified for a single bedroom the functionality of a room as a bedroom must be considered. In this context a single bedroom will be suitable for its function if it is able to accommodate a bed, a wardrobe and a chest of drawers together with their associated activity spaces as shown in **Figure 1**.

Fig 1



#### Key

Activity Space

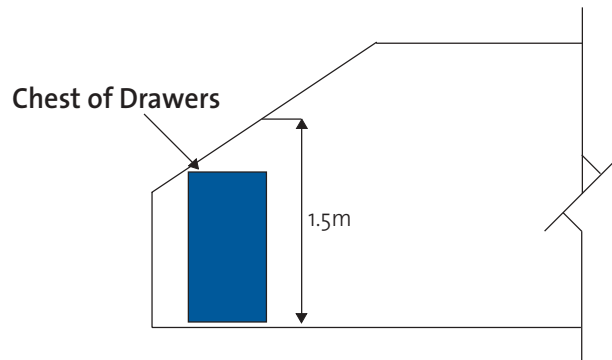
Dimensions in millimetres

( ) Reduced dimensions when measured to a bed

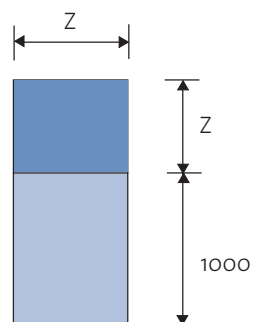
### Notes

1. An activity space is measured at floor level.
2. The shaded area of an activity space may overlap only the shaded area of another activity space.
3. When considering a room with a sloping ceiling a chest of drawers can be below 1.5m high providing the front face of the chest of drawers is on the 1.5m vertical plane. **See Figure 2**

Fig 2



### Activity Spaces for Cookers



#### Key

- Activity Space
- z Not less than the dimension of the appliance.
- Dimensions in millimetres

## Annex 3

### UNACCEPTABLE ITEMS WITHIN STAIRWAY ENCLOSURES

- (a) Portable heaters of any type.
- (b) Heaters which have unprotected naked flames or radiant bars.
- (c) Fixed heaters using a gas supply cylinder.
- (d) Oil-fuelled heaters.
- (e) Cooking appliances.
- (f) Upholstered furniture.
- (g) Wardrobe or other storage furniture.
- (h) Coat racks.
- (i) Storage of any kind (unless it is kept in a locked cupboard, which is constructed to the same standard of fire resistance as the enclosure to the stairway) and is provided with a smoke detector.
- (j) Lighting involving the use of naked flames.
- (k) Gas meters other than those installed in accordance with appropriate Gas Safety Regulations. Gas pipes must be made of a material with a high melting point to comply with Gas Safety Regulations. Where a gas installation has been installed a suitable gas detector should be provided.
- (l) Existing incoming main electric meters are to be encased so as to provide half hour fire resistance.





