


HOUSING – FIRE SAFETY

Guidance on fire safety provisions for certain types of existing housing.

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PART A: INTRODUCTION

1. Purpose of this guidance

- 1.1 This document contains guidance for fire safety enforcement officers in Local Housing Authorities and in Fire and Rescue Authorities, together with landlords, on how to comply with the legal requirements in relation to fire safety in certain types of residential accommodation. It offers practical advice on risk assessment and contains case studies with suggested fire safety solutions. Appendix I provides an overview of the legal framework in relation to fire safety but it should be noted that housing providers should be able to comply with fire safety requirements without a detailed knowledge of the legal framework. Where necessary advice on enforcement matters can be sought from the Local Authority, Fire and Rescue Authority or appropriate Landlords Association.
- 1.2 The guidance does not set prescriptive standards but provides recommendations and guidance for use when assessing the adequacy of fire precautions in these types of premises. Other fire risk assessment methods may be equally valid to comply with fire safety law and alternative approaches to individual fire safety solutions may be acceptable.
- 1.3 The Housing Act 2004 brought in a new system of regulation for fire safety in existing residential premises by way of the Housing Health and Safety Rating System (HHSRS) and licensing provisions for Houses in Multiple Occupation (HMOs). These Housing Act provisions are enforced by Local Housing Authorities (LHA). Alongside this the Regulatory Reform (Fire Safety) Order 2005³ (FSO) places duties on landlords and gives powers to Fire and Rescue Authorities in relation to fire safety in the common areas of HMOs, flats and maisonettes and sheltered accommodation in which personal care is not provided. There is therefore a dual enforcement regime in place. In order to avoid duplication and the potential for conflict, The Fire Safety Protocol established a framework for joint working arrangements between these two sets of Authorities and it is being adopted locally around the country to good effect. The protocol is included in this guidance at Appendix 2.
- 1.4 Guidance to Fire and Rescue Authorities under the FSO has been issued in the "*HM Government Fire Safety Risk Assessment Sleeping Accommodation Guide*", published by the Department for Communities and Local Government in May 2006. Guidance for Housing Authorities under the Housing Act 2004 is contained in the "*HHSRS Operating Guidance*". In order to underpin the fire safety protocol and offer practical guidance to enforcing authorities and landlords several local and regional guides have also been developed around the Country. Some excellent work has been done in this respect but it has been widely recognised that a single set of national, risk based guidance is needed to bring together this regional work and inform Housing Authorities, Fire and Rescue Authorities and landlords in their application of fire safety solutions. Such guidance will help simplify the dual enforcement approach and bring some consistency across the Country.

LACORS has jointly produced, with the Chief Fire Officers' Association and the Chartered Institute of Environmental Health, this guidance to meet these objectives.

2. Scope of this guidance

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- 2.1 This fire safety guide covers a range of existing residential premises including:
- Single household properties,
 - Shared houses,
 - Bedsit HMOs,
 - Properties converted into self-contained flats or maisonettes,
 - Purpose-built flats to a standard **not** in compliance with the Building Regulations 1991
 - Sheltered accommodation in which personal care is not provided,
 - Small hostels to which the *HM Government Sleeping Accommodation Guide* is inappropriate (application will be determined by the LHA and FRA jointly under the terms of the *Fire Safety Protocol*).
- 2.2 This guidance does not apply to properties constructed or converted to a standard in compliance with the Building Regulations 1991 (and which still comply). Buildings converted and maintained to a standard meeting those regulations will not require additional fire safety measures unless occupied in a manner other than intended under the original construction or conversion scheme e.g. occupation of a single household flat as a flat in multiple occupation or where some other additional risk has been subsequently introduced. Where a building did comply but has deteriorated significantly through lack of maintenance, damage or other alteration it may require additional measures and this guidance should be applied.
- 2.3 This guidance is also not intended to apply to:
- Guest houses and bed and breakfast accommodation used by tourists/visitors. However, this type of accommodation is sometimes used to accommodate single homeless persons as their sole home. In such cases this guidance may apply and the terms of the *Fire Safety Protocol* should be adhered to determine enforcement responsibilities (see Appendix 1).
 - Hotels and motels,
 - Large hostels for which the *HM Government Sleeping Accommodation Guide* is more appropriate (see note in 2.1 above)
 - Refuges eg. family accommodation centres, half way houses,
 - Residential health and beauty spa centres,
 - Residential conference, seminar and training centres,
 - Student halls of residence, including those managed by commercial providers, and areas of sleeping accommodation in other training institutions including military barrack-style quarters,
 - Areas of buildings in boarding schools that provide sleeping accommodation,
 - Seminaries and other religious colleges,
 - Sheltered Accommodation where personal care is provided,

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- Residential care homes,
- Holiday chalets and complexes, camping and caravan parks (except privately owned individual units),
- Areas in workplaces where staff “sleeping-in” is a condition of employment or a business requirement, as in hotels (but not including tied accommodation such as separate flats, houses, apartments or HMOs).

These types of accommodation fall under the Regulatory Reform (Fire Safety) Order 2005 and detailed fire safety guidance for them is contained in “HM Government Fire Safety Risk Assessment Sleeping Accommodation Guide”.

3. Intended readership

- 3.1 This guidance is aimed at those who manage, give advice, enforce standards, or live in existing residential accommodation falling within the scope of this guide. Typically this will include:
- Private sector housing providers (landlords)
 - Managing agents or facility managers
 - Enforcement officers in Local Housing Authorities
 - Enforcement officers in Fire and Rescue Authorities
 - Private sector tenants
 - Advice agencies
 - Residential leaseholders
 - Owner-occupiers (where appropriate)

PART B: FIRE RISK ASSESSMENT

4. **Introduction** :The Regulatory Reform (Fire Safety) Order 2005 (FSO) places a duty on the responsible person to take general fire precautions to ensure, as far as is reasonably practicable, the safety of the people on the premises and in the immediate vicinity.
 - 4.1 The responsible person must carry out a fire risk assessment for the purpose of identifying the general fire precautions and other measures needed to comply with the FSO. Although under the FSO this requirement only applies to the common parts of premises, in practice the responsible person will need to take into account the entire premises including, to some extent, the units of accommodation themselves.
 - 4.2 Having identified what general fire precautions are necessary and having implemented them, the responsible person must put in place a suitable system of maintenance and appoint competent persons to implement any procedures that have been adopted. This could, for instance, include a premises manager or agent who need not necessarily be permanently on the premises but who would ensure that the responsible person's duties were observed.
 - 4.3 Guidance on fire risk assessments follows in this section and more detailed guidance can be found in "*Fire safety risk assessment sleeping accommodation guide: HM Government*" this is freely available on the CLG website at www.communities.gov.uk/firesafety
5. **What is a fire risk assessment?**
 - 5.1 A fire risk assessment is an organised and methodical look at the premises, the activities carried on there and the likelihood that a fire could start and cause harm to those in and around the premises.
 - 5.2 Most premises covered by this guide will be relatively small and have a straightforward and simple layout and little fire safety expertise is likely to be required to carry out the risk assessment. In larger buildings or where the building contains different uses e.g. residential accommodation alongside or above a separate commercial use, then specialist advice may be required.
 - 5.3 The aims of the fire risk assessment are:
 - To identify the fire hazards.
 - To reduce the risk of those hazards causing harm to as low as reasonably practicable.
 - To decide what physical fire precautions and management arrangements are necessary to ensure the safety of people in your premises if a fire does start.
 - 5.4 The terms 'hazard' and 'risk' should be understood in the context of this guidance.
 - **Hazard:** anything that has the potential to cause harm.
 - **Risk:** the chance of that harm occurring.

6. Suggested method for carrying out a risk assessment

- 6.1 The guidance offered here follows the general methodology contained in *HM Govt. Fire Safety Risk Assessment Sleeping Accommodation Guide* but alternative approaches may be equally acceptable e.g. *Decent & Safe Homes East Midlands (DASH)*, *Homestamp* and others.
- 6.2 The assessment method suggested in this guide shares the same approach as that used in general health and safety legislation and it can be carried out either as part of a more general risk assessment or as a separate exercise.
- 6.3 The fire risk assessment should be carried out in a practical and systematic way and enough time must be allocated to the exercise. In some larger premises and those with mixed uses it may be helpful to divide them into rooms or a series of assessment areas using natural boundaries, e.g. kitchens, offices, stores, as well as corridors, stairways and external routes.
- 6.4 The process can be broken down into five steps;

Table C1 : The five steps to fire risk assessment
1. Identify fire hazards
2. Identify people at risk
3. Evaluate, remove, reduce and protect from risk
4. Record, plan, in form, instruct and train
5. Review

7. Step 1 – Identify the hazards within the premises

- 7.1 For a fire to start, three things are needed:

- a source of ignition
- fuel
- oxygen

If any one of these is absent, a fire cannot start. Taking measures to avoid the three coming together will therefore reduce the chances of a fire occurring.

- 7.2 Sources of ignition :

Identify potential sources of ignition i.e. sources of heat which might get hot enough to ignite any materials around them. In premises covered by this guide they may include:

- if people smoke within the premises, smokers' materials, e.g. cigarettes, matches and lighters
- naked flames, e.g. candles, night lights
- electrical, gas or oil-fired heaters (fixed or portable)
- boilers
- cookers, toasters and other kitchen equipment especially when shared
- faulty or misused electrical equipment
- electric blankets, computers, TVs, washing machines and dryers
- lighting equipment (fixed and movable) e.g. halogen lamps or table lamp

- the electrical installation itself
- the gas installation
- arson attack
- plant rooms

7.3 Sources of fuel:

Anything that burns is fuel for a fire. Things that will burn reasonably easily and are in enough quantity to provide fuel for a fire or cause it to spread to another fuel source are potential hazards. In premises covered by this guide they may include the following but this list is not exhaustive:

- furniture
- textiles, soft furnishings, bedding, clothing and curtains,
- laundry (bedding, linen, towels),
- accumulations of unwanted mail, waste paper, cardboard, newspapers and magazines (including bags of such awaiting recycling collection),
- waste storage, refuse containers,
- flammable-liquid-based products in stores or rooms, such as paints, varnishes, thinners, adhesives, white spirit, methylated spirit, cooking oils,
- liquefied gas (LPG), paraffin, heating oils and petrol,
- paper products, packaging materials, stationery, advertising material, paper
- and books,
- decorations for seasonal and religious occasions,
- plastics and rubber, such as video tapes, polyurethane foam-filled furniture and polystyrene-based display materials,
- wall, floor and ceiling coverings, surface finishes.

7.4 Sources of oxygen :

In premises covered by this guide the oxygen source will be simply the air in the building. Where only normal natural domestic ventilation is provided the risk will generally be normal.

8. Step 2 – Identify people at risk

8.1 It is necessary to identify those who will be at risk if there is a fire and where they are likely to be found. In premises covered by this guide these will generally be residents and their visitors and anybody working in the premises such as a caretaker or cleaner and any visiting contractors. Only in buildings with mixed residential and commercial use are there likely to be other people to consider.

8.2 However, the risk assessment should consider people at risk who may include:

- people asleep (who will be slow to respond and disorientated);
- people who are unfamiliar with the premises, e.g. guests, visitors
- people with disabilities* (including mobility impairment, or hearing or vision impairment etc.)
- people who may have some other reason for not being able to leave the premises quickly, e.g. parents with children

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- people who are sensorially impaired due to alcohol, drugs or medication
- unaccompanied children and young persons
- anyone working in enclosed, isolated parts of the building
- anyone for whom English is not their first language

8.3 In evaluating the risk to people with disabilities it may be necessary to discuss their individual needs with them. In mixed use premises it may be necessary to seek professional advice.

9. Step 3 – Evaluate, remove, reduce and protect from risk

9.1 Hazards should be **removed** where it is practicable to do so and where they cannot be removed they should be **reduced** as far as they can be. What is considered reasonable in a particular case will depend on an **evaluation** of the potential to cause harm and the chance of that harm occurring. Some simple examples are given below:

- Replace portable heating appliances with fixed convector heaters or a central heating system.
- Ensure electrical sockets are adequate in number and sited appropriately to avoid overloading and trailing leads
- Ensure electrical, mechanical and gas equipment is installed, used, maintained and protected in accordance with the manufacturer's instructions
- Ensure all furniture complies with the Furniture and Furnishings (Fire) (Safety) Regulations 1988
- Ensure combustible items, such as furniture, laundry, decorations etc, are stored properly and are kept away from potential ignition sources, such as cookers, heaters and boilers.
- Ensure refuse is properly stored and disposed of.
- In crowded accommodation provide adequate shelving and cupboard space so that everyday items are not in proximity to cookers, heaters, etc

9.2 Having taken measures to remove or reduce fire hazards as far as is practicable, protection arrangements need to be put in place to **protect** people from the remaining fire risk as far as is reasonably practicable by ensuring that adequate fire precautions are in place to warn people in the event of a fire and to allow them to escape to a place of safety.

9.3 The general principles of fire risk reduction are outlined in Part C and guidance is also given there on what measures should be implemented and to what standards, based on overall fire risk assessment.

9.4 Case studies of various types of premises and how these precautions could be employed to reduce fire risk are given in Part D.

10. Step 4 Record, plan, inform, instruct and train

10.1 If the responsible person's business employs five or more people (not necessarily at the particular premises being risk assessed), if the premises are licensed or an alterations notice is

in force (see A.57), then the *significant findings*, the actions to be taken as a result of the assessment and details of anyone especially at risk **must be recorded**. Significant findings should include details of:

- The fire hazards that have been identified (ignore trivial things like a tin of solvent based glue).
- The actions taken, or that will be taken, to remove or reduce the chance of a fire occurring (preventive measures).
- Persons who may be at risk, particularly those especially at risk.
- The actions taken, or that will be taken, to reduce the risk to people from the spread of fire and smoke (protective measures).
- The actions people need to take in case of fire including any particular arrangements with any staff such as housekeepers or other nominated people where applicable (the emergency plan).
- The information, instruction and training that has been identified that people need and how it will be given.
- Any discussions had with residents (or staff if there are any)

It is recommended that a record of the significant findings of the fire risk assessment is kept even where it is not a requirement to do so. An example template is shown in Appendix 3 which may be helpful. However, any alternative format will be acceptable provided it contains the information above.

- 10.2 An appropriate emergency plan should be put into place in case of emergency. In most residential accommodation this is unlikely to extend beyond advising residents what to do in the event of a fire or fire alarm and how to contact the fire and rescue service. In large or mixed use premises a more sophisticated plan may be necessary.
- 10.3 The responsible person must provide any employees with appropriate **information** and **training** on risks identified in the risk assessment and information on fire safety measures and procedures for the premises.
- 10.4 There is no requirement under the Order to provide training to residents but providing them with basic information on fire precautions is a simple and effective way of reducing fire risks in the premises.

11. Step 5 Review

- 11.1 The risk assessment and the general fire precautions in the premises should be reviewed regularly. There is no specific time scale for this other than where there is a reason to suspect it is no longer valid or where there has been a significant change in the premises.
- 11.2 In practice the fire precautions should be kept under constant review, where problems are identified they should be dealt with as soon as possible.

PART C: GENERAL PRINCIPLES OF FIRE RISK REDUCTION

12. INTRODUCTION :

- 12.1 Existing residential accommodation comprises a wide range of property types, occupancy arrangements and occupier type. Fire risks in the private rented sector and in particular in Houses in Multiple Occupation (HMOs) can be complex. HMOs in particular provide accommodation for people from a wide range of backgrounds and may house vulnerable or disadvantaged groups. In some HMOs there is a high occupancy turnover rate with little social interaction or cohesion between occupiers. The mix of often poor quality, low cost housing and vulnerable occupants can lead to a higher than normal risk to life.
- 12.2 With these varying factors applying it is not credible to offer a single solution to fire safety which can be applied broadly. Fire safety solutions must instead be based on the level of risk presented by an individual property and its mode and level of occupation. Often alternative solutions are available which will provide an equally acceptable level of fire safety for a particular premises and sometimes properties which are identical physically may need a different approach due to differences in the types of occupation or needs of occupiers.
- 12.3 This risk based approach is enshrined in current fire safety legislation in particular the *Housing Health and Safety Rating System* and the *Regulatory Reform (Fire Safety) Order 2005*³, see Part B of this guide.
- 12.4 However, some basic fundamental principles apply to fire safety generally and these must be applied flexibly to meet the needs of a particular property. These principles are outlined in this chapter and are brought to life in the case examples in Part D.
- 12.5 A risk assessment carried out on premises constructed or converted to a standard which would meet the building standards under the Building Regulations 1991, approved document B, is unlikely to conclude that additional fire safety measures are required. Premises constructed/converted to that standard and subsequently maintained as such are likely to have adequate fire safety measures. The exception is where the premises are occupied in a manner other than that intended under the original construction or conversion scheme e.g. occupation of a single household flat as a flat in multiple occupation or where some other additional risk has been subsequently introduced. Where a building did comply but has deteriorated significantly through lack of maintenance, damage or other alteration it may require additional measures and this guidance should be applied.
- 12.6 In view of the type of properties falling within the scope of this guide the fire safety approach adopted is to provide early warning of any fire to all occupiers and ensure they can safely evacuate the building to a place of permanent safety (total evacuation). Blocks of flats which were constructed or converted in compliance with the Building Regulations 1991, Approved Document B or equivalent may adopt a different approach such as “stay-put” as the level of compartmentation means there will be a low risk of fire spreading beyond its unit of origin.

12.7 GENERAL FIRE SAFETY PRINCIPLES

Figure C1 illustrates some general principles which underpin fire safety in a residential context.

Figure C1

Diagram here

13. ESCAPE ROUTES

- 13.1 **Introduction:** This section provides guidance on the general principles relating to escape routes and provides some examples of typical escape route solutions for different building layouts. Most residential premises covered by this guide will be considered as “normal” risk. This is based on the general assumption that the occupants are able-bodied and will be capable of using the means of escape unaided to reach a place of ultimate safety and there are no unusually high risk elements. If this is not the case or there are other factors which present a higher than normal risk then additional measures may be required.
- 13.2 Wherever possible fire risks, such as the storage of significant quantities of flammable materials and ready sources of ignition e.g. portable heaters and cooking processes, should be removed or reduced. Where this is not possible or where significant numbers of occupiers are likely to move slowly or be unable to move without assistance, where there are integral commercial uses and those with unusually poor levels of construction the risk should be regarded as “higher” and may need a higher level of fire safety protection
- 13.3 In premises where there is a low occupancy level and all the occupants are able bodied and capable of using the means of escape without assistance, where there is very little chance of a fire, few if any highly combustible or flammable materials or other fuels for a fire are present, where fire cannot spread quickly and where fire will be quickly detected so people can make their escape, then the risk can usually be regarded as ‘lower’. Similarly where the building has more than one escape route that meets certain requirements a lower level of protection may be acceptable.
- 13.4 The guidance on acceptable standards for escape routes in this guide is based upon “normal” risk.
- 13.5 When considering the safety of the existing escape route, in addition to the occupant profile, it is necessary to consider:
- the layout and complexity of the route,
 - the travel distance to a place of safety,
 - the type of construction and state of repair
 - the presence of other fire safety measures such as automatic fire detection and warning systems, emergency lighting or fire suppression systems .

Figure C2 : some risk factors to consider

Diagram here

- 13.6 When a fire starts, if there are no fire safety measures in place, the time that people have to escape before they become affected or trapped is extremely limited. The presence of fire safety measures extends this time. In practice this means the installation of some form of fire warning and detection system and an escape route which will remain unaffected by the fire for sufficient time to allow people to reach a place of safety. By necessity, the travel distance along the escape route must be limited.
- 13.7 Limiting the travel distance from rooms to a place of safety reduces the risk of people being trapped by a fire on their escape route. This guidance does not set a maximum travel distance as this should be considered in the context of overall risk. However, previous standards have suggested maximum safe distances. For example, 9 metres was considered the maximum acceptable distance from a room exit door to a place of relative safety. This is a useful reference but need not be applied as a rigid standard and may be increased or decreased depending upon the level of risk after the appropriate fire prevention measures have been put in place. When assessing travel distances, the distance should be considered from all parts of the premises to the nearest place of relative safety which is:
- a protected stairway enclosure (storey exit);
 - a separate fire compartment from which there is a final exit to a place of ultimate safety, or
 - the nearest available final exit.
- 13.8 If there is a suitable second staircase or exit or if there are additional fire safety measures e.g. an enhanced system of fire detection and warning or a water suppression system, the premises may be considered lower risk and the travel distances and levels of protection may be adjusted accordingly where this lower risk can be demonstrated.
- 13.9 In single room units or other accommodation which has an exit door leading directly to a protected stairway enclosure or a separate fire compartment from which there is a final exit to a place of ultimate safety, it will only be necessary to consider the travel distance from the furthest point within the unit to that exit door. It is unlikely that in the types accommodation covered by this guide that this distance will be so large as to have any impact on safety but if such cases do arise additional safety measures may be appropriate. In any event note that cooking facilities within these rooms should, wherever possible, be sited away from the exit door so as not to prejudice it in the event of fire.
- 13.10 In units with more than one room leading off an internal lobby or hallway (flats), the travel distance within that lobby/hallway will need to be considered. If it is unusually large or there are a large number of rooms leading off it e.g. a large flat in multiple occupation, the travel distances may necessitate making the internal lobby/hallway a fire protected route or the provision of an alternative exit or additional fire safety measures such as an enhanced fire detection and warning system or an automatic water suppression system. Doors to sleeping rooms within the unit should, wherever possible, be closer to the exit door than doors to higher risk rooms such as kitchens and communal living rooms.

13.11 In more complex buildings such as those with more than one escape route or with complex layouts, greater attention to travel distances will be required. Such situations will not usually be encountered in the type of premises covered by this guide but if so the guidance contained in "*HM Government fire safety risk assessment sleeping accommodation guide*" should be followed.

13.12 **Habitable basements**

Consideration needs to be given to the fire risk presented to occupiers of any storey below the main entry/exit level of the house and the risk that storey poses to the remainder of the house. Such storeys may be true basements or lower ground floors where the main house entry level is raised above ground and accessed via steps.

13.13 Ideally the fire separation between the basement and the ground floor should be 30 minutes fire resisting and a 30 minute fire resisting door should be fitted at the head of the basement stairs.

13.14 For single household occupancy or low risk shared houses, of no more than 2 other storeys (not counting the basement), it should be possible to accept existing construction provided it is of sound, conventional construction (i.e. plasterboard or lath and plaster ceilings) and is in good condition. In this situation it should also be possible to accept existing, well fitted and constructed solid doors within the basement, providing they are in sound condition and self closing. Solid timber doors and paneled doors of substantial construction may be adequate in these lower risk situations but flimsy constructions and hollow in-fill type doors (commonly known as "egg-box" would not be). This can be difficult to assess and expert advice may be required.

13.15 In larger shared houses and other multi-occupied premises full 30 minutes fire separation between the basement and ground floors should be expected with a self-closing 30 minute fire resisting door with intumescent strips and smoke seals fitted at the head of the stairs to the basement.

13.16 The standard of fire resistance of individual room partitions and of doors to rooms should be the same as for the remainder of the house.

13.17 Ideally a separate exit to an ultimate place of safety should be provided from the basement level. However, if this is not possible escape windows should be provided to all habitable rooms. To be acceptable, escape windows should comply with paragraph 14 and where they do not (often security measures preclude it or there is no escape from the basement well) a 30 minute protected route should be provided within the basement up to the ground floor. However, for single household occupancy and in low risk shared houses of no more than 2 other storeys (not counting the basement) it should be possible to relax the 30 minute standard as in paragraph 13.14 above.

13.18 In all cases the same level of automatic fire detection and warning system should be installed in the basement as in the remainder of the house.

13.19 **Unoccupied basements/cellars**

Unoccupied basements and cellars are often neglected or used for storage. They usually contain electrical wiring, possibly electric or gas meters and often receive little attention. The basement/cellar may be one open void without partitioning. Alternatively there may be rooms but

they may not have substantial doors and the doors may be left open and may be in disrepair. In either case any fire will quickly attack the basement/ground partition and door. Because of its location the fire will spread rapidly upwards and prejudice the escape route from the ground floor. For these reasons, generally, the fire separation between the basement and the ground floor should be 30 minutes fire resisting and a 30 minute fire resisting door should be fitted at the head of the basement stairs. However, for 2 storey single household occupancies and 2 storey low risk shared houses, if the basement is well maintained and managed it may be possible to apply the same relaxation in fire separation as in paragraph 13.14 above. In all cases smoke detection to the same standard as in the remainder of the house should be installed in basement.

13.20 Inner rooms

A room whose only escape route is through another, outer room is termed an "*inner room*" and poses a risk to its occupier if a fire starts unnoticed in that outer room (sometimes termed an "*access room*"). This arrangement should be avoided wherever possible. However, where unavoidable it may be accepted where the inner room is:

- A kitchen
- A laundry or utility room
- A dressing room
- A bathroom, WC or shower room

13.21 Where the inner room is any other type of habitable room e.g. living room, sleeping room, workroom, study etc it should only be accepted if:

- The inner room is situated on a floor which is not more than 4.5m above ground level and has access to a suitable door opening onto an alternative safe route of escape or has an escape window leading directly to a place of ultimate safety, and
- a suitable automatic smoke detection and warning system is in place (see 22 – 25).

13.22 Escape windows are only acceptable if they meet the requirements of paragraph 14.

13.23 In addition to the precautions outlined in 13.20 -13.22 above, in all cases the following additional requirements must apply for the arrangement to be acceptable:

- Outer rooms should be under the control of the same person as the inner room.
- No one should have to pass through more than one outer room while making their escape.
- The outer room should not be an area of high fire risk.

Figure C3: inner rooms (low risk non living or sleeping rooms)

Diagram here

13.24 Galleries

Gallery accommodation has become popular in open plan studios and elsewhere where space is at a premium. To be acceptable a gallery should:

- ideally be provided with an alternative exit leading to a place of safety or,

- where the gallery platform is not more than 4.5m above external ground level should have an escape window leading to a place of safety - escape windows will only be acceptable if they meet the requirements of paragraph 14.
- 13.25 Where a suitable escape window is not possible the gallery should comply with the following:
- at least 50% of the floor area of the room should be unobscured by the gallery, and
 - the distance from the foot of the egress stair from the gallery to the room exit should not exceed 3 metres, and
 - any cooking facilities within the room should be enclosed within fire resisting construction or be sited remote from the room exit and gallery egress stair.
- 13.26 In all cases a suitable automatic fire detection and warning system should be in place (see 22 – 25)

Figure C4 : gallery where escape window is not possible

Diagram here

- 13.27 In all buildings a protected escape route (staircase) is the ideal situation. However, in buildings of up to 2 storeys where the upper floor level is no more than 4.5 metres above ground level, due to the lower risk and shorter travel distance to the final exit, the provision of full 30 minute fire resisting construction along the escape route is not usually essential provided the following alternative precautions are in place:
- The stairs should lead direct to a final exit without passing through a risk room and
 - the staircase enclosure should be of sound, conventional construction throughout the route and
 - all fire risk rooms should be fitted with sound, close fitting doors of conventional construction (lightweight doors and doors with very thin panels should be avoided) and
 - all rooms used for sleeping have access to a suitable door leading to a place of relative safety or have an escape window leading to a place of ultimate safety - escape windows will only be acceptable if they meet the requirements of paragraph 14.
- 13.28 If these conditions cannot be met, and in all other property types, a full 30 minute protected route should be provided.

14. Requirements for escape windows and doors

- 14.1 Any window provided for emergency escape purposes should have an unobstructed openable area that is at least 0.33m², and have a minimum 450mm height and 450mm width. The bottom of the openable area should not be more than 1,100mm above the floor.
- 14.2 Where escape windows are being considered the responsible person and enforcing authority should be satisfied that it would be safe to use them in an emergency. They should meet the following criteria:
- They serve rooms whose floor level is no more than 4.5m from the ground

- Every room used for sleeping on the floor served has access to an escape window without entering another room
- Occupiers of the rooms served are able-bodied individuals with no specific high risk characteristics and who can reasonably be expected to exit via the window unaided
- The ground below the escape window is level and free of obstructions
- There is no basement well or other encumbrance beneath the window eg. railings, conservatory etc
- The escape window is openable from the inside without the use of a removable key
- The window or door should lead to a place of ultimate safety, clear of the building. However, if there is no practical way of avoiding escape into a courtyard or back garden from where there is no exit it should be at least as deep as the building is high.

Figure C5 : minimum requirements for escape windows

Diagram here

- 14.3 If any of the above requirements cannot be met, the use of the escape window should not be accepted and an alternative solution should be adopted.

15. PROTECTED ROUTES/STAIRS

- 15.1 A protected route is designed to remain free from smoke and fire for a time adequate to allow occupiers of the building to pass safely along it to a place of safety. The level of fire separation required between the protected route and rooms presenting a fire risk is determined by risk assessment.

- 15.2 Ideally the recommended standard of fire resistance enclosing a protected route is 30 minutes for normal risk premises. However, subject to risk assessment, in lower risk two storey properties with adequate escape windows from the first floor rooms and automatic fire detection this may be relaxed (see 13.27 and 19.6). In such cases it may be sufficient to accept sound, conventional construction throughout the route with no further requirements. Larger properties, however, will require 30 minutes protection including fire doors with smoke seals and intumescent strips. Areas of high fire risk may require 60 minutes protection. Examples of 60 minute requirement include:

- Walls/doors separating commercial uses from residential parts
- Walls/doors separating areas of high fire risk e.g. commercial kitchens, large boiler rooms, or large stores.
- Separating walls between buildings
- Basement areas without automatic fire detection

Further guidance on protected routes is given in the remainder of this section and case study examples of suitable fire safety solutions are given in Part D.

- 15.3 The protected route should be maintained free of any obstructions and/or fire risks. In particular the stair should not contain:
- Any portable electric/gas/or oil heaters.
 - Any fixed heaters using a portable heating source, such as liquefied gas.
 - Any cooking facilities.
 - Any furniture or storage.

- 15.4 Storage cupboards should not be located in protected routes unless fire resisting and kept locked shut or smoke alarms/detectors are fitted within them. The exception is for all single household accommodation and shared houses of not more than two storeys for which in most situations cupboards can be adequately managed so as not to present an additional risk and can be accepted.
- 15.5 Gas or electric meters and/or distribution boards should not be sited in escape routes. However, it may be possible to accept gas/electric meters within escape routes providing a gas meter is installed in accordance with the Gas Safety Regulations and an electric meter is installed and sited in accordance with current IEE Regulations. It is considered best practice to enclose such equipment in fire resisting construction.
- 15.6 There is usually no requirement to provide protection to bathrooms and shower rooms which open onto protected routes. Properly installed and maintained electric showers or water heaters and room sealed gas water heaters pose little additional risk. However, if the room contains open flame or electric bar space heaters, storage cupboards or other risk items then either the storage cupboards or the room itself, as appropriate, should be protected to the appropriate standard in the same way as the remainder of the route.

16. Exit doors

- 16.1 All final exit doors from multi-occupancy premises should be fitted with locks/catches which are openable by the tenants from the inside without the use of a removable key. Electrically operated locks must fail to safety (open) or have a manual over-ride in the event of power failure. It is recommended that exit doors from bedsit units and flats are also openable from inside without the use of a removable key. Where security locks are fitted they must be of the type with a suitable internal thumb-turn to facilitate this. To ensure security any glazed panels within the door or adjacent to it should be replaced with security glazing or protected in another way from intruders where these locks are fitted.

17. SECONDARY MEANS OF ESCAPE

- 17.1 In certain larger buildings and those with certain higher risk characteristics, a secondary means of escape will be required e.g. a six storey bedsit-type HMO or a five storey bedsit-type HMO which does not have fire protecting lobbies to the risk rooms.
- 17.2 For the purposes of this guidance the term "*secondary means of escape*" refers to a second, alternative means of escape from the building other than the usual escape route used day-to-day to enter or exit the premises.
- 17.3 Typically a secondary means of escape will comprise an external staircase down the rear or side elevation of the building. On occasion, secondary means of escapes have been created comprising a door through a separating wall or across a roof walkway into the common parts of another building which then has a protected route leading to a place of safety. Such arrangements are undesirable and should be "designed out" wherever possible. If no other arrangement is possible then this is usually only acceptable when the two adjoining buildings are

under the same ownership/management unless additional fire safety measures are in place to compensate for the additional risk eg. an automatic water suppression system. To be acceptable a secondary means of escape should meet the following requirements:

- Have access from the common parts of the building, not solely from rooms, bathrooms or WCs (where impracticable special arrangements may be made with the agreement of the LHA)
- Terminate at ground floor level at a place of ultimate safety
- Entire length of the secondary means of escape to be passable without the use of a key or other tool
- Access preferably by a standard door but where impracticable via an opening of at least 800mm x 540mm.
- Fixed walkways will be required across any roofs and the roof area beneath should be 60 minutes fire resisting
- Walkways and staircases should have conventional and emergency lighting throughout their route to the standards outlined in paragraphs 26 – 28.

17.4 Stairs comprising secondary means of escape should comply with the following:

- Clear width : minimum 600mm , preferred 800mm
- Pitch 30 – 42 degrees from horizontal (optimum 35 degrees)
- Going (depth of tread from front to back) 225-300mm (optimum 250mm)
- Rise (vertical distance between treads) 100mm-220mm (optimum 175mm)
- Treads to be flat and non-slip
- Handrails required on both sides (840-1000mm height)
- Minimum headroom clearance 1.5m (2m perpendicular height preferable)

Further details are contained in BS 5395, Parts 1 and 3.

17.5 Fixed or removable vertical ladders, pull-down ladders and unconventional devices such as lowering lines, cradles etc are not suitable as secondary means of escape.

18. External stairways (other requirements)

18.1 To be an acceptable secondary means of escape, any external stairway should ideally be protected from the effects of fire along its full length. Except for those serving non-risk rooms, doors or windows adjacent to the route and vertically below it should where possible be protected. Doors should be fire resisting and self closing. Windows should be of fire resisting construction and if possible fixed shut. However, in reality this will be impracticable if the windows serve habitable rooms. In such cases the risk will need to be assessed. If a fire in the room could prejudice both the internal escape route and the secondary escape route at the same time the risk will be unacceptable and alternative measures will be required if the room is to remain in habitable use. Alternatives might include additional fire resisting lobby protection internally, re-siting of the risk windows, mechanical ventilation to the room or the provision of a water suppression system. If acceptable alternatives cannot be provided the room may need to be converted to low risk use e.g. bathroom/WCs. Research on the effects of fire from openings on external escape routes suggests the sensitive area is approximately 1.8m horizontally as shown in Figure C6 below. These dimensions should be treated with some flexibility according to the risk presented.

- 18.2 The external stairway should be protected from the weather so that the treads do not become slippery or if that isn't possible a regular maintenance schedule should be in place and non-slip tread surfaces fitted. A cyclical re-painting schedule to prevent weather decay should be in place. Stairways should have conventional and emergency lighting throughout their route to the standards outlined in paragraphs 26 - 28.

Figure C6: Protected zone around an external secondary means of escape

Diagram here

19. FIRE SEPARATION AND COMPARTMENTATION

- 19.1 In addition to providing a protected escape route it is necessary to restrict the spread of fire and smoke from one unit of accommodation to another, this is termed compartmentation. Fire resisting construction enclosing each unit of accommodation creates a compartment which will contain fire and smoke within it for a period of time leaving adjacent units free from the effects of fire thereby allowing their occupants to evacuate.
- 19.2 The recommended standard of fire separation in the types of premises of normal risk covered by this guide is generally 30 minutes. Where the fire risk assessment identifies specific higher risks then a higher standard of fire resistance may be required (usually 60 minutes) or additional fire safety measures should be installed. Examples of 60 minute requirement will include:
- Walls/doors separating commercial uses from residential parts
 - Walls/doors separating areas of high fire risk e.g. commercial kitchens, large boiler rooms, or large stores.
 - Ductwork
 - Separating walls between buildings
- 19.3 Types of construction which meet the 30 minutes fire resistance standard are those tested to the relevant part of BS 476 or BS EN 13501. This usually comprises solid walls or timber stud partitions of a particular construction (with adequately fixed 12.5 mm plasterboard and skim coat). However, many other proprietary constructions and products are available which have been tested to these standards and have a valid test certificate demonstrating 30 or 60 minutes fire resistance.
- 19.4 In general,
- Walls and partitions separating individual units of accommodation should be constructed to provide a minimum of 30 minutes fire resistance.
 - Protected routes should be fully enclosed at all points by construction providing a minimum fire resistance of 30 minutes fire resistance.
- 19.5 Existing partitions of standard construction with adequately fixed 12.5 mm plasterboard with skim coat on correctly sized and spaced timbers and in good condition can be expected to achieve a nominal fire resistance of 30 minutes and should be acceptable.

- 19.6 In many existing buildings, constructions will be encountered which are of a lesser standard e.g. 9mm plasterboard partitions or original lath and plaster construction. It may be considered impracticable and uneconomic to replace such partitions as a matter of routine whenever encountered. Where they are in sound condition and in good repair they may be acceptable in lower risk premises i.e. single household occupancy or shared houses of no more than two storeys, with no particularly vulnerable, high risk occupants. Their acceptability there is conditional upon other fire safety measures being in place to the standards recommended in this guidance (Parts C and D), and the provision of suitable escape windows or doors (see 14). If these lower standard constructions are to be considered in premises of higher risk than those described in this paragraph it must only be within the context of the overall fire risk assessment which includes the provision of compensatory fire safety measures such as an enhanced standard of automatic fire detection and warning system, an automatic water suppression system, secondary means of escape etc.
- 19.7 Particular care must be taken with walls and partitions enclosing protected routes to ensure that they will restrict the passage of smoke and fire. Any openings around pipes, services or ducts that pass through fire resisting construction should be fire stopped with materials of at least the same level of fire resistance as the structure itself. Many proprietary fire stopping products are available but only those which provide the appropriate fire resistance when tested to the relevant part of BS 476 or BS EN 13501, are acceptable. Any services (such as cables) constructed of combustible materials, or materials likely to melt or be affected by fire, should be enclosed within fire resisting construction and be fire stopped to restrict the passage of smoke and fire.

20. Floor/ceiling partitions

- 20.1 In most premises covered by this guide floor/ceiling partitions between units of accommodation should provide a standard of fire resistance of 30 minutes. The exception is those above areas of high fire risk which should provide 60 minutes. Also floor/ceiling partitions between any basement or cellar and the ground floor escape route should provide 60 minutes resistance but this may be reduced to 30 minutes where the basement/cellar has automatic fire detection and warning system to the standard recommended in paragraphs 27-30.
- 20.2 Inspection of the floors/ceilings as part of the fire risk assessment will determine the suitability of existing construction. Generally ceilings constructed with 12.5mm plasterboard with skim coat and in sound condition will be adequate. Other proprietary constructions will be encountered and it will be necessary to consult the manufacturers' fire test report to determine their standard of fire resistance and suitability.
- 20.3 Ceilings such as those constructed from 9mm plasterboard or lath and plaster (in sound condition) can be expected to provide a lower standard of fire resistance. However, this may be acceptable as part of an overall fire risk assessment in lower risk premises such as single household occupancy and shared houses of no more than three storeys with no specific higher risk factors present. Where a system of automatic fire detection and warning is installed to a standard recommended in paragraphs 22 - 25, this lower level of protection may be acceptable in other property types where the overall fire risk assessment allows.

- 20.4 Ceilings which are not in entirely sound condition, particularly lath and plaster type, should be replaced or upgraded to provide 30 minutes resistance. This can be achieved by:
- Removal and replacement of existing ceiling with standard 12.5mm and skim construction or alternative product/construction providing 30 minutes resistance and subject to a satisfactory fire test report,
 - Providing additional protection below the ceiling,
 - Providing additional protection within the floor space above the ceiling.
- 20.5 There are a number of acceptable methods and products available for upgrading ceilings/floors. For new installations only those accompanied by a valid test report should be accepted. The report will specify the fire resistance which will be achieved by the upgrading method. This is essential for all upgrading methods but particularly so where proprietary products are being considered. Careful scrutiny of the fire test report is essential before acceptance. Particular attention should be paid to any suspended ceilings. Several products are available which provide adequate fire resistance and which are accompanied by acceptable test reports but not all suspended ceilings are intended to do so. Often they are installed for aesthetic reasons and may conceal a ceiling beneath which has collapsed or is damaged. In such cases the overall construction may provide little fire resistance. Where suspended ceilings already exist, ideally a test report should be required from the installer/manufacture. Where this is not forthcoming a judgment will need to be made following detailed inspection and specialist advice may be required.
- 20.6 Suspended ceilings which do meet an acceptable standard must be well maintained as they are easily damaged in many cases.

21. Fire doors

- 21.1 Where fire resisting partitions are required, any doorways within them must be fitted with fire resisting door assemblies providing a fire resistance at least to the same standard as the requirement for the partition itself i.e. 30 minute partitions will require a 30 minute fire resisting door, 60 minute partitions a 60 minute door.
- 30 minute doorsets are specified as FD30 (or E 30)
 - 60 minute doorsets are specified as FD60 (or E 60)
- The 30 or 60 figures denote the integrity performance time of the doorset in minutes. A letter "S" after the figure (e.g FD30S or "Sa" e.g. E30 Sa) denotes a requirement for smoke seals to be fitted so as to restrict the passage of smoke, including cold smoke.
- 21.2 Most timber fire doors will need intumescent seals fitted. The type and location of the seals varies with the door design and the manufacturer's instructions should be followed.
- 21.3 Fire doors should be installed and maintained in accordance with BS 8214.
- 21.4 In most multi-occupancy situations fire resisting doors should be fitted with approved self-closing devices. The exception is doors to rooms within individual single-household dwellings. Doors within houses or flats occupied by a single household will not usually require self-closers. Doors to rooms within larger flats in multiple occupation and larger shared houses may require self-

closers within the context of an overall fire risk assessment. Entrance doors to flats will always require them.

- 21.5 In lower risk premises where a full 30 minute protected route is not being required (see 13.27 and case study examples in Part D) it should be possible to accept existing, well fitted and constructed solid doors, providing they are in sound condition. Solid timber doors and paneled doors of substantial construction may be adequate in these lower risk situations but flimsy constructions and hollow in-fill type doors (commonly known as “egg-box” would not be). This can be difficult to assess and expert advice may be required.
- 21.6 The specification for the doorset on site should be identical to that specified in the test report for the doorset which will be available from the manufacturer or supplier. Variations in any detail from the test specification may adversely affect the performance of the door. When new fire doors are to be provided, ideally an entire doorset construction should be fitted thereby overcoming potential problems with fitting doors to frames of a different specification to that in the test construction. However, it is recognized that in some existing buildings of substantial construction this requirement may cause practical difficulties. If this is the case it may be possible to fit new fire doors to existing frames. This will, however, only be acceptable if the frames are of sound construction, in good condition and of material and dimensions not less than those of the frame detailed in the test report.
- 21.7 The upgrading of non-fire resisting door assemblies should be avoided wherever possible. The practice is generally impractical and uneconomic and is reliant upon strict adherence to an approved specification and upon a high standard of workmanship. Replacement with suitable, purpose designed and tested doorset constructions is always preferable. However, it is accepted that for aesthetic reasons it may be necessary to undertake upgrading rather than replacement. This will apply in buildings of special architectural interest and certainly in listed buildings where it is important to maintain the appearance or original features of the door. In non-listed buildings where there is no legal requirement to maintain the features of the door, property owners may still want to do so for aesthetic reasons. Whilst undesirable from a practical and fire safety viewpoint, upgrading may be acceptable subject to strict conditions. Not all doors are suitable for upgrading so before undertaking upgrading the subject door must be assessed for suitability by a suitably qualified person. Where the door is of a common construction and to a specification which has been previously subjected to a fire test and been considered suitable for upgrading, a standard method of upgrading may be specified. If the door type is unconventional it will need a specific assessment by a suitably qualified person who will issue an assessment report. The assessment report will specify the upgrading measures required.
- 21.8 There are several acceptable methods of upgrading available. They are restricted to those which have been successfully subjected to fire tests. Details of these are available from trade organizations such as “TRADA” and from English Heritage and in other practical and technical guides. Whatever method of upgrading is being considered it must be one which is accompanied by a valid and complete test report or an assessment report from a suitably qualified person. The report will specify the fire resistance which will be achieved by the upgrading method. This is essential for all upgrading methods but particularly so where proprietary products are being considered and careful scrutiny of the report is essential before acceptance. When considering a report it is imperative that the door being considered for upgrading is of a design and

specification corresponding to the door in the report. When the upgrading is carried out the specification on site must correspond in all respects to that specified in the test or assessment report including the specifications for intumescent strips, smoke seals, self-closers and ironmongery. Variations may adversely affect the performance of the door.

- 21.9 Where existing upgraded doors are encountered and no test reports or records are available it may be impossible to determine the likely performance of the door. In these cases if following detailed inspection a sound comparison cannot be made with a tested and approved upgrading method, tested on a door of similar construction and dimensions, then in higher risk properties it may be necessary to replace the door.

22. FIRE DETECTION AND ALARM SYSTEMS



- 22.1 The presence of a suitable, properly installed and maintained automatic fire detection and warning system will alert occupiers to the presence of a fire in its early stages and enable them to evacuate to a place of total safety before the escape routes become blocked by smoke or affected directly by fire. The system should awake people who are sleeping who may otherwise be asphyxiated by smoke before being able to escape. It will also alert to the presence of a developing fire in any hidden areas such as boiler rooms, storerooms, cellars and any other potentially unoccupied but risk area before that fire affects the escape route.
- 22.2 The type of system to be provided in a particular premises is dependent upon risk. A small single family house will only require a relatively simple provision of smoke alarms. Larger properties will require greater coverage and large HMOs with a larger number of detectors will require a more sophisticated system with an integrated control panel and alarm sounders. Virtually all residential premises where people are sleeping will require some form of automatic fire detection and warning system.
- 22.3 The type of system installed should be in accordance with the recommendations of BS 5839, part 6. This details different grades of system and extent of coverage and recommends an appropriate system based on the risk the premises presents. Relatively simple systems will be satisfactory for smaller, low risk premises but larger houses and HMOs will require a more sophisticated automatic system. In bedsit HMOs and blocks of self-contained flats a mixed system is usually recommended where the escape routes and common parts are protected by an interlinked system of alarms or detectors and the individual units have a separate stand-alone system to alert a sleeping occupant of fire in their own unit of accommodation. This has the benefit of reducing nuisance/false alarms throughout the whole property caused from activities such as cooking within any one unit.

22.4 BS 5839: Part 6 The design, installation and servicing of fire detection and alarm systems in dwellings is unlike BS 5839 Part 1 **The design and installation of fire detection and alarm systems** in that it is not a prescriptive standard designed for commercial premises but is based on the principles of fire risk assessment. It should be treated with flexibility. The standards recommended in Part 6 Table 1 are to be regarded as base guidelines. Those recommendations will be appropriate for a premises of normal risk but where the risk is assessed to be lower or higher than normal then a higher or lower provision of detection and warning may be appropriate.

23. BS 5839, part 6 risk assessment criteria

23.1 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 e.g. tenants who have impaired hearing
- There is no risk low enough to negate the need for some form of detection & warning system in the house

23.2 Specific considerations:

- In the UK in 2005 over 50% of all the fatalities in accidental dwelling fires occurred in the room where the fire originated.
- Around 30% of fatal accidental fires start in bedrooms.
- 21% of fatal accidental fires start in kitchens
- According to UK statistics for 2005, the greatest risk of death/injury from an accidental dwelling fire in the UK fire is at night.
- In accidental dwelling fires in the UK fires resulting from smoking are the most common cause of death and the second most common cause of fire. In a high number of cases, the item first ignited is furniture or bedding.
- Space heating appliances are responsible for a high number of deaths in accidental dwelling fires.
- Fires from electrical appliances/wiring cause 7% of deaths in accidental dwelling fires in the UK.
- Elderly people and children are at significantly greater risk of death from fire in the UK.

These principles and statistical facts inform the fire risk assessment and should be taken into account when recommending a system for a particular property.

24. Design considerations/grades of system

24.1 BS 5839: Part 6 grades fire detection and alarm systems for residential premises according to the complexity of the system. For the purpose of specifying fire detection and alarm systems and the associated engineering design parameters there are six grades. In this guidance Grade A and Grade D are most relevant but all six grades are described here in table C2 for completeness.

Table C2 : Grades of automatic fire detection and warning systems as specified in BS 5839, part 6 : 2004

<p>Grade A : 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. This comprises a system of electrically operated smoke and/or heat detectors, which are linked to a control panel. The control panel must conform to current British Standard 5839 Part 4 (or equivalent). In general the system must incorporate manual call points, which should be located next to final exits and in larger multi-storey properties on each landing. The alarm signal must achieve sound levels of not less than 65dB (A) in all accessible parts of the building and not less than 75dB (A) at all bed heads when all doors are shut, to arouse sleeping persons.</p>
<p>Grade B : 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.</p>
<p>Grade C : A system of fire detectors and sounders (which may be combined in the form of smoke or heat 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.</p>
<p>Grade D : A system of one or more mains powered smoke (or heat) alarms each with integral battery 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. There is no control panel.</p>
<p>Grade E : 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.</p>
<p>Grade F : A system of one or more battery powered smoke alarms. These are not recommended in HMOs.</p>

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

24.2 Mixed Grade Systems

Installations where more than one alarm system is installed to serve the whole building 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].

24.3 Level of protection: types of system

BS 5839: Part 6: 2004 recommends various levels of coverage for detection within premises, based on risk. These are outlined below in Table C3.

Table C3 : Levels of coverage of automatic fire detection and warning systems as specified in BS 5839, part 6 : 2004

LD1 coverage: A system installed throughout the dwelling incorporating detectors in all circulation spaces that form part of the escape routes from the dwelling, and in all rooms and areas in which fire might start, other than toilets, bathrooms and shower rooms.
LD2 coverage: A system incorporating detectors in all circulation spaces that form part of the escape routes from the dwelling, and in all rooms or areas that present a high fire risk to occupants.
LD3 coverage: A system incorporating detectors in circulation spaces that form part of the escape routes from the dwelling only.

25. Guidance on grade and coverage of fire detection and warning systems within various types of existing residential premises

25.1 As outlined above when specifying a system it is necessary to follow the principles of fire risk assessment. The design and complexity of the system should reflect the risk presented by the subject property and the type of occupier.

25.2 The recommendations for system design outlined in Table D4 below are based on a broad risk assessment using data sourced from BS 5839 : Part 6 : 2004. The recommendations constitute an acceptable benchmark and will, in the majority of cases, provide a reasonable level of protection. However, individual characteristics of the subject property must always be considered before specifying a particular system. The recommendations below are based on properties considered to present a normal risk for their type. They will have a suitable level of protection to the escape route and adequate other fire precautions as recommended in this guidance. If the property under consideration 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 or other fire safety measures compared to those recommended in this guide, then it may be considered appropriate to recommend a higher standard of fire detection and warning or provide additional fire safety measures as appropriate to the case. For clarification of the use of the term "storey" see glossary.

Table C4 : Recommended grade and coverage of automatic fire detection and warning system for various categories of existing residential premises (normal risk)

Single household occupancy up to 2 storeys	Grade D : LD3 coverage (interlinked)
Single household occupancy 3 or 4 storeys	Grade D : LD3 coverage.
Single household occupancy 5 or 6 storeys	Grade A : LD3 coverage.
Shared house HMO of up to 2 storeys (shared cooking facilities)	Grade D : LD3 coverage + additional detection to the kitchen and any cellar containing a risk (interlinked)
Shared house HMO of 3 or 4 storeys (shared cooking facilities)	Grade D : LD3 coverage + additional detection to the kitchen, lounge and any cellar containing a risk (interlinked)
Shared house HMO of 5 or 6 storeys (shared cooking facilities)	Grade A : LD2 coverage (detection in all risk rooms ie. bedrooms, kitchen and

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	lounge) (interlinked)
Bedsit HMO (lets) of 1 or 2 storeys with individual cooking facilities within bedsits.	A mixed system: <ul style="list-style-type: none"> ○ Grade D: LD2 coverage in the common areas and heat detectors in bedsits (interlinked) ○ Grade D smoke alarm in each bedsit to protect the sleeping occupants of the bedsit (non-interlinked)
Bedsit HMO (lets) of 3 or 4 storeys with individual cooking facilities within bedsits.	A mixed system: <ul style="list-style-type: none"> ○ Grade A: LD2 coverage in the common areas and heat detectors in bedsits (interlinked) ○ Grade D smoke alarm in each bedsit to protect the sleeping occupants of the bedsit (non-interlinked)
Bedsit HMO (lets) of 5 or 6 storeys with individual cooking facilities within bedsits.	A mixed system: <ul style="list-style-type: none"> ○ Grade A: LD2 coverage in the common areas and heat detectors in bedsits (interlinked) ○ Grade D smoke alarm in each bedsit to protect the sleeping occupants of the bedsit (non-interlinked)
2 storey house converted to self-contained flats (prior to 1991 Building Regulations, Approved document B standard)	A mixed system: <ul style="list-style-type: none"> ○ Grade D: LD2 coverage in the common areas and a heat detector in each flat in the room/lobby opening onto the escape route (interlinked) ○ Grade D : LD3 coverage in each flat (non-interlinked smoke alarm in the room/lobby opening onto the escape route) to protect the sleeping occupants of the flat.
3 or 4 storey house converted to self-contained flats (prior to 1991 Building Regulations, Approved document B standard)	A mixed system: <ul style="list-style-type: none"> ○ Grade A: LD2 coverage in the common areas and a heat detector in each flat in the room/lobby opening onto the escape route (interlinked) ○ Grade D : LD3 coverage in each flat (non-interlinked smoke alarm in the room/lobby opening onto the escape route) to protect the sleeping occupants of the flat.
5 or 6 storey house converted to self-contained flats (prior to 1991 Building Regulations, Approved document B standard)	A mixed system: <ul style="list-style-type: none"> ○ Grade A: LD2 coverage in the common areas and a heat detector in each flat in the room/lobby opening

	<p>onto the escape route (interlinked)</p> <ul style="list-style-type: none"> ○ Grade D : LD3 coverage in each flat (non-interlinked smoke alarm in the room/lobby opening onto the escape route) to protect the sleeping occupants of the flat.
Building converted partly into self contained flats and partly into bedsits or non-self-contained lets	<p>A mixed system:</p> <ul style="list-style-type: none"> ○ Apply the appropriate recommendation for each unit of accommodation from this table and the appropriate whole house system based on the storey height.
Flat in multiple occupation (FMO) occupying a single storey of a building (any level and regardless of date of construction/conversion)	Grade D : LD3 coverage + additional detection to the kitchen

26. LIGHTING OF ESCAPE ROUTES



- 26.1 When a fire occurs people will be escaping in haste and in a probable state of distress or even panic. At night when they have been awoken abruptly they may be disorientated. With this in mind the staircase and escape route must be adequately lit.
- 26.2 In common escape routes including stairways, conventional artificial 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 during the day in areas that do not have the benefit of daylight. Many buildings will, in addition, require emergency escape lighting in the escape route. These will include:
- large buildings with long escape routes
 - buildings with a complex layout
 - buildings with no natural lighting along the escape route
 - buildings with vulnerable occupiers or those posing a specific risk
- 26.3 In most single household properties conventional lighting arrangements should be adequate, subject to the above conditions. However, in very large single household properties (4 to 6 storeys) emergency escape lighting may be required if the escape route is complex or and/or there is no effective borrowed light.

- 26.4 In shared houses conventional lighting arrangements should be adequate, subject to the above conditions.
- 26.5 In HMOs of up to two storeys conventional lighting arrangements should be adequate, subject to the above conditions. All HMOs of 3 or more storeys should be provided with emergency escape lighting throughout the escape route.
- 26.6 The recommendations for lighting of escape routes outlined in Table C5 below are based on a broad risk assessment. The recommendations constitute an acceptable benchmark and will, in the majority of cases, provide a reasonable level of safety. However, the recommendations are based on buildings considered to present a normal risk for their type. They will have a suitable level of protection to the escape route and adequate other fire precautions as recommended in this guidance. Some buildings will, in addition, require a higher specification of lighting in the escape route. These will include:
- buildings with a complex layout
 - buildings with no natural lighting along the escape route
 - buildings with vulnerable occupiers or those posing a specific risk
- For these buildings adjust the specification or provide additional fire safety measures as appropriate to the case. For clarification of the use of the term “storey” see glossary.

Table C5 : Recommendations for lighting of escape routes for various categories of existing residential premises (normal risk)	
Single household occupancy up to 2 storeys	Conventional lighting Emergency escape lighting maybe appropriate if route complex and there is no effective borrowed light
Single household occupancy 3 or 4 storeys	
Single household occupancy 4 to 6 storeys	
Shared house HMO of up to 2 storeys (shared cooking facilities)	Conventional lighting and emergency escape lighting if route is long or complex and there is no effective borrowed light
Shared house HMO of 3 or 4 storeys (shared cooking facilities)	
Shared house HMO of 5 or 6 storeys (shared cooking facilities)	
Bedsit HMO (lets) of 1 or 2 storeys with individual cooking facilities within bedsits.	Conventional lighting
Bedsit HMO (lets) of 3 or 4 storeys with individual cooking facilities within bedsits.	Conventional lighting and emergency escape lighting
Bedsit HMO (lets) of 5 or 6 storeys with individual cooking facilities within bedsits.	
2 storey house converted to self-contained flats (prior to 1991 Building Regulations, Approved document B standard)	
3 storey house converted to self-contained flats (prior to 1991 Building Regulations, Approved document B standard)	Conventional lighting (and emergency escape lighting if risk requires)

4, 5 or 6 storey house converted to self-contained flats (prior to 1991 Building Regulations, Approved document B standard)	Conventional lighting and emergency escape lighting
2 storey building converted partly into self contained flats and partly into bedsits or non-self-contained lets	Conventional lighting (and emergency escape lighting if risk requires)
3 storey building converted partly into self contained flats and partly into bedsits or non-self-contained lets	
4, 5 or 6 storey building converted partly into self contained flats and partly into bedsits or non-self-contained lets	Conventional lighting and emergency escape lighting
Flat in multiple occupation (FMO) occupying a single storey of a building (any level and regardless of date of construction/conversion)	Conventional lighting
Flat in multiple occupation (FMO) occupying more than one storey of a building (any level and regardless of date of construction/conversion)	Conventional lighting (and emergency escape lighting if risk requires – may also be required in the common escape route).

27. Conventional lighting to escape route

27.1 For conventional lighting most existing arrangements will be adequate with the following conditions:

- Lighting switches/controls should be obvious and simple.
- Switches should be located on every landing in a convenient and conventional position.
- A dedicated lighting circuit should be installed so that the use of any one switch/control anywhere along the route will illuminate the entire escape route.

27.2 If push button, slow release lighting switches are to be used, careful consideration must be given to the duration setting of the lighting switches. This should be assessed according to risk i.e. the distance of travel to a safe place or final exit, the height of building, the complexity of the escape route and mobility of the occupiers. Where occupiers have limited mobility, time release switches should be avoided. In all other cases the duration must be adequate to allow a normal, orderly escape from the building and incorporate a large margin of error.

27.3 Theft of light bulbs from common areas is a problem experienced in some properties. If this is likely to be a problem, bulb holders with a different fitting to those within the accommodation units should be used e.g. screw-type holders. This is good practice and should be standard in bedsit-type HMOs (lets).

28. Emergency escape route lighting

28.1 Where considered necessary, emergency escape lighting must be designed to comply with BS 5266.

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- 28.2 It will automatically illuminate upon the failure of the power supply to the conventional artificial lighting when it must:
- illuminate the escape route to assist the occupants to move easily to exits and a place of safety
 - highlight any hazards such as stairs and changes in floor level or direction
 - Enable easy identification of any fire alarm call points and fire fighting equipment throughout the escape route
- 28.3 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 power failure within the lighting circuit that could be hazardous.
- 28.4 The source of the supply should be from the same local fuse as the conventional escape route lighting so that in the event of that fuse failing, causing the normal lighting to fail, the emergency lighting will be brought into operation in the same locality.
- 28.5 In most cases self-contained, non-maintained luminaires providing three hour duration will be adequate. Non-maintained luminaires remain unlit when the conventional lighting power supply is healthy. When it fails the luminaire provides power to its own lamp from its own battery and illuminates. Restoration of the conventional lighting power supply switches off the emergency luminaire and recharges its battery.
- 28.6 Emergency lighting systems are categorized as maintained or non-maintained followed by their duration of illumination. So a non-maintained system with 3 hour duration will be categorized as NM/3.
- 28.7 The power supply to the luminaires should be designed to prevent unauthorised disconnection but it must incorporate a suitable means for simulating a mains failure (i.e. test switch).
- 28.8 The mounting height of luminaires will be governed by the physical characteristics of the building. They should be mounted as low as possible but at least 2 m above floor level measured to the underside of the luminaire.
- 28.9 Luminaires should be sited in the following positions:
- near any intersection of corridors
 - above each final exit door
 - near each change of direction (other than on a stairway)
 - within each stairway so that each flight of stairs receives direct light
 - near any change of floor level
 - outside any secondary escape exit if the street lighting is poor
 - near each fire alarm call point
 - near fire fighting equipment

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

The route should be reasonably uniformly lit.

28.10 It is essential that the emergency lighting system is routinely inspected and tested in accordance with BS 5266. 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. (see 43)

29. FIRE FIGHTING EQUIPMENT (PORTABLE)



29.1 The provision of fire blankets and simple extinguishers can be useful in restricting the development and spread of small fires in their early stages. However for larger fires and safe, effective fire fighting, users must be trained to know how to hold and use a fire blanket and how to discharge any fire extinguisher provided. They should be trained to know what type of fire an extinguisher is safe to be used on, how to tackle a fire safely with an extinguisher and when to give up and get out. The installation of extinguishers can lead to problems if they are not properly maintained or where equipment is discharged through malice or horseplay. Unless a fire is very small, the best advice is to evacuate the building to a place of safety and call the Fire and Rescue Service. For the reasons above extinguishers are not recommended inside units of accommodation unless there are resident staff within the premises who are trained in their use e.g. a caretaker, housekeeper, warden or such like. However, in order to provide a facility for extinguishing very small fires a simple multi-purpose extinguisher is recommended in the common parts on each floor. It is not practical to train tenants in the use of extinguishers but basic advice should be offered at the start of each new tenancy.

29.2 Fire blankets are recommended in kitchens of all premises covered by this guide including single household occupation.

29.5 Fire blankets should:

- comply with BS 6575 or equivalent
- be of "light duty" type which are capable of dealing with small fires such as cooking fires or fires involving clothing
- be sited in the vicinity of the fire hazard in a location that is easily accessible (usually in rooms with cooking facilities e.g. kitchens and bedsits with cooking facilities)
- be mounted on the wall approximately 1.5m high away from the cooking facility and closer to the room exit

29.6 Subject to paragraph 29.1 above, if the fire risk assessment concludes that fire extinguishers are to be provided the following should apply.

29.7 Fire extinguishers should:

- comply with BS EN 3-7

- be maintained in accordance with BS 5306-3 (see 40.7)
- be appropriate to the risk

29.11 Extinguishers should be located as follows:

- on a dedicated stand or hung on wall brackets with the handle approximately 1.5m from floor level
- close to the exit position from each floor
- not obstructed by opening doors and not in recesses out of sight
- away from heaters or areas where they may be subject to damage
- so as not to cause obstruction

30. AUTOMATIC WATER SUPPRESSION SYSTEMS



- 30.1 Interest in the use of water suppression systems for domestic premises is growing in the UK. The use of these systems in the United States and other parts of the world has proven their value in saving lives and indeed reducing damage caused to property by fire. A water suppression system will detect, give warning, control, contain and often extinguish a fire.
- 30.3 The traditional concerns expressed regarding damage from accidental activation of water suppression systems can largely be discounted. The quantity of water discharged by a suppression head when activated in a fire is significantly less than that necessarily disgorged in fire fighting by the Fire and Rescue Service. In general, a water suppression system will use between 1/100th and 1/1000th of the water used by the Fire and Rescue Service (source RSA). *Statistics show that accidental operation occurs in 1 in 16 million cases. (Source: West Midlands Fire Service Guidance Document for Design Freedoms in Houses in Multiple Occupation incorporating Residential Sprinkler Systems)*
- 30.4 It is recommended serious consideration be given to the role water suppression systems can play in existing residential accommodation. Traditionally the main barrier to their installation has been cost. Whilst cost effective in new-build property or when installed during major refurbishment, the retro-fitting of water suppression systems in existing, occupied residential accommodation will need a considered cost/benefit analysis. Having said this, the wider benefits of suppression and the cost savings resulting from any design freedoms offered in respect of other fire safety measures may work in their favour.

31. General description

- 31.1 A water suppression system is designed to cover a predetermined floor area. Fire suppression system supply pipes are permanently charged with water, fed from the domestic water main or storage tanks. Fire suppression heads are fitted to the system of supply pipes and each is an independent unit and operates only if a fire causes it to do so.

31.2 Suppression heads are fitted with small thermal elements that are activated solely by heat. The thermal element is set to operate at a fixed temperature, not less than 30 °C above ambient temperature, which makes it very unlikely to operate other than in a fire condition. The exception is malicious operation and if the fire risk assessment indicates this is likely, a water suppression system may not be appropriate. In the majority of fires just one suppression head is operated which is often sufficient to deal with the fire.

32. Potential uses

32.1 There is potential for water suppression system to be fitted in all types of existing residential accommodation. The decision to do so will be based on:

- A cost/benefit analysis of the overall benefit gained from their provision against the cost of installation and maintenance
- The practicability of their installation
- The extent of design freedoms available in terms of reduced compensatory provision of other fire safety measures
- Their potential for fulfilling a need where traditional fire safety measures cannot be provided to the full recommended standard e.g. where extended travel distances cannot be reduced to the recommended maximum, fire protecting lobbies cannot be installed etc

32.2 When considering a water suppression system regard must be had to the adequacy of the water supply and mains water pressure. If interruptions to supplies are possible or the water pressure is low or fluctuates then additional measures such as pumping and water storage may be required or indeed the installation may not be feasible.

33. Potential design freedoms

33.1 Water suppression systems are not a fire safety solution in themselves. In isolation they cannot provide an acceptable level of fire safety in residential accommodation to meet the requirements of current legislation (see Appendix 1). However, as part of a comprehensive overall fire risk assessment they can be a key component in the overall solution and contribute to a safe building. In particular the provision of a suitable water suppression system can in some circumstances allow for relaxed provision of certain other fire safety measures (but not all). Some examples of design freedoms which have been applied include reduced fire separation/compartimentation, an alternative to a secondary means of escape where impracticable, extended travel distances, relaxed requirements for inner rooms etc. The provision of automatic fire detection and warning systems cannot be relaxed as a trade off as adequate early warning of a fire is always essential.

33.2 These trade-offs or “design freedoms” are not prescribed in any statutory guidance and must be agreed with the relevant Local Housing Authority, Building Control Authority and Fire and Rescue Authority for each individual case. Each case will have different factors to consider and must be considered on its own merits. A blanket approach to the allowance of design freedoms should not be applied.

34. Standards for water suppression systems

- 34.1 Where a water suppression system is agreed upon, its design, installation and maintenance should be in accordance with BS 9251:2005 or other equivalent standard approved by the enforcing authority. Approval of the type of system and its design should be sought from the enforcing Authority prior to installation.
- 34.2 Installation should be carried out only by experienced sprinkler contractors who are suitably qualified and registered with an appropriate Sprinkler Association or third party accreditation scheme such as "LPS 1048 Scheme Requirements for Certificated Sprinkler Installers, Supervising Bodies and Supervised Installers". The installer must provide information to the landlord as detailed in clause 6.3.2 of BS9251:2005.

More detailed guidance on water suppression systems can be found in :

"A Guide to Automatic Water Suppression Systems (AWSS) and their Practical Application - The Chief Fire Officers Association"

35. FIRE SAFETY SIGNS AND NOTICES

- 35.1 In most residential premises of average size and normal risk, fire safety signs and notices will not be required. However, in larger premises or those with complicated layouts or with alternative exits the fire risk assessment is likely to indicate some need for signage. The need for clear information should be balanced with the desire to maintain a homely environment. The excessive provision of signage can create an "institutional" feel to a building which is undesirable in premises which are people's homes.
- 35.2 When determining whether fire safety signage should be provided consideration should be given to the following criteria when carrying out the fire risk assessment; -
- are all occupiers likely to be familiar with the escape route?
 - which route offers the shortest travel distance?
 - are there any changes in direction in corridors, stairways and open spaces which form part of the escape route?
 - will people ever need to exit the building by a different route from which they entered?
 - is there a choice of escape routes?
 - are there any areas where confusion may occur when exiting the building?
 - is there an external secondary means of escape to a place of safety?
 - are there any facilities or equipment provided for fire safety that may need appropriate signage?
- 35.3 These considerations will determine whether fire safety signage is necessary. In general this will mean that signage will not be necessary in single family houses of any type or in smaller shared houses and HMOs with single, simple escape routes. However, if confusion is likely for any reason the final exit(s) should be provided with a sign. In larger HMOs (of more than 3 storeys), those with complex or unusual layouts and those with multiple exits, signage will be required. In particular the following situations will require directional signage:
- the final exit

- in cases where there is more than one exit
- where there is a secondary means of escape (e.g. external staircase or roof level exit)
- where there is a change of direction and the onward escape beyond it is not visible
- where there is any potential for confusion

- 35.4 Any fire fighting equipment which is obscured from view should be indicated with a sign.
- 35.5 Generally in a domestic setting, the placing of fire door signage on room doors is unpopular and unnecessary. However, fire resisting doors across escape routes and doors to communal kitchens and other communal rooms in HMOs should be marked "Fire Door Keep Shut" (see figure C9). This provision can be relaxed in normal risk shared houses.
- 35.6 Doors to cupboards, stores, boiler rooms etc opening onto the escape route should be marked "Fire Door Keep Locked Shut"
- 35.7 Where fire safety signs are provided they should be provided in accordance with BS 5499 and The Health and Safety (Safety Signs and Signals) Regulations.
- 35.8 To comply, signs must be pictographic (e.g. Figures C7 and C8). The pictogram can be supplemented by text to make the sign easily understood but it cannot contain only text. "Pictogram-only" and "Pictogram-with-text" sign types should not be mixed in the same premises. Whilst either type of sign is acceptable the pictogram-with-text type (C7 below) is thought to be more readily understood.

Figure C7 : directional escape sign (pictogram with text)

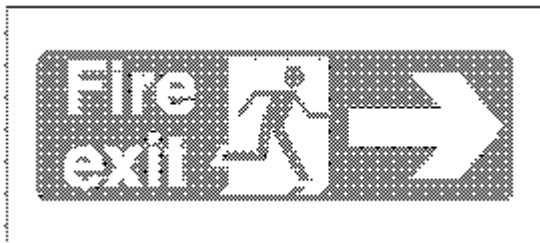


Figure C8 : directional escape sign (pictogram only)

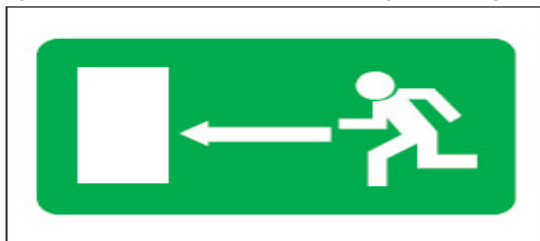


Figure C9 : Notice for fire resisting doors



- 35.9 Escape signs should meet the following criteria:
- They should provide clear, unambiguous information to enable people to safely leave a building in an emergency.
 - Every escape route sign should, where necessary, incorporate, or be accompanied by, a directional arrow. Arrows should not be used on their own.
 - Signs should be positioned so that a person escaping will always have the next escape route sign in sight.
 - Signs should be fixed above the door in the direction of escape and not be fixed to doors, as they will not be visible if the door is open.
 - Signs mounted above doors should be at a height of between 2.0m and 2.5m above the floor.
 - Signs on walls should be mounted between 1.7m and 2.0m above the floor.
 - Mounting heights greater than 2.5m may be used for hanging signs, e.g. in large open spaces or for operational reasons, but care should be taken to ensure that such signs are both conspicuous and legible. In such cases larger signs may be necessary.
 - Signs within the same premises should follow a consistent design pattern or scheme throughout.
 - Signs should be sited at the same height throughout the escape route, as far as is reasonably practicable.

36. SURFACE FINISHES

- 36.1 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 of walls, 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. Arson is a particular problem in this respect. Fires started deliberately can be particularly dangerous because they generally develop much faster and are often intentionally started in escape routes in multi-occupancy buildings which offer easier access.
- 36.2 In single household occupancy and lower risk shared houses the household will have exclusive control of the escape route and as such the risk is low. No specific measures will therefore be required in respect of surface finishes. However, good practice recommendations would be to reduce the risk further by avoiding combustible surface finishes within the escape route.
- 36.3 In multiple-occupancy buildings the risk is far higher and combustible surface finishes should not be permitted within the escape route and should as far as is practicable also be avoided in other locations. However, in two-storey buildings with suitable escape windows from all risk rooms (see

14), in buildings where there is a second staircase or secondary means of escape which meets certain standards (see paragraphs 17 - 18) or if there are additional fire safety measures such as a water suppression system the premises may be considered lower risk and the precautions outlined below in respect of surface finishes and floor coverings could be varied.

36.4 Materials are classified for combustibility and surface spread of flame by BS 476: Parts 6 and 7 or under the European system by BS EN 13501-1.

36.5 Fire spread across surface finishes is classified as set out in table C6 below with Class 0 being the most resistant and Class 3 the least. Only Classes 1-3 (and Class 0) or A-D are suitable in multi-occupied residential accommodation. Table C5 outlines their suitability for each location.

Table C6 : Suitable classes of surface finish in certain locations in multi-occupied residential buildings	
<p>Class 0, B s3, d2. These are non-combustible materials and materials of limited combustibility, such as brickwork, concrete, plasterboard and plastered finishes.</p>	<p>Acceptable in all locations, including protected routes, circulation routes, escape routes and stairways.</p>
<p>Class 1, C s3, d2. These include timber, particleboard, hardboard and surfaces covered with heavy flock wallpaper, providing they have been treated with flame retardant materials.</p>	<p>Acceptable in rooms.</p> <p>Not accepted on escape routes and stairways.</p>
<p>Class 3, D s3, d2. These include those specified in Class 1, with the addition of thermosetting plastics and surfaces covered with polystyrene wall and ceiling tiles.</p>	<p>Acceptable in small rooms and parts of other rooms if the total area does not exceed more than one half of the floor area up to a maximum of 20m².</p> <p>Not accepted on escape routes and stairways.</p>

36.6 It is very difficult to identify the classification of existing coverings on-site unless the trade name of the product can be traced. Table C6 illustrates acceptable locations for materials and products commonly encountered.

36.7 Multiple layers of gloss paint

Surfaces may be found where multiple layers of paint have been applied. These surfaces may present a risk. Therefore it is recommended that the paint is removed from locations requiring a Class 1 (or C s3, d2) classification. Proprietary products may be available which can cover the paint thereby providing an acceptable classification for the surface. These should only be used subject to a satisfactory fire test report but may not be suitable for areas subject to heavy wear and tear.

37. FLOOR COVERINGS

- 37.1 Floor coverings throughout the protected route (ie. 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 or the European equivalent.
- 37.2 BS 5287 "Specification for assessment and labelling of textile floor coverings tested to BS 4790" specifies how these tested floor coverings should be labelled.
- 37.3 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% wool, 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 or the European equivalent above as low radius of fire spread (up to 35mm). Suppliers/manufacturers will be able to confirm.

38. SPECIAL PROVISIONS RELATING TO "BACK-TO-BACK-HOUSES"

- 38.1 In certain areas of the Country there remain a significant number of "back-to-back" houses. These houses typically back directly onto one another at the party wall and have other houses either side. This means there is only one exit from the house and the escape route inevitably passes through a risk room. This arrangement should be avoided wherever possible but it is recognised that significant numbers of these houses do still exist and they make a valuable contribution to affordable housing supply in their areas. Any risk assessment carried out on a back-to-back house will identify higher than normal risk and will recommend special fire precautions accordingly. Back-to-back houses are restricted to certain areas of the Country and LHAs and FRAs have developed local fire safety solutions for the types of houses in their areas taking account of local building design and local need. Because of this specialist nature it is not appropriate to offer complete solutions to apply nationally here as layouts and situations vary and the risk assessment must take account of this and recommend solutions as appropriate. Whilst some basic solutions are outlined here for the sake of completion, local guidance may be more comprehensive.
- 38.2 For guidance, solutions for back-to-back houses will inevitably rely heavily on the following main principles:
- The provision of suitable escape windows (see paragraph 14). Because of the design of this type of house it may not be possible provide more than one escape window from the first floor. Where this is the case and the escape window is from a habitable room, the door to that room must not be fitted with locks.
 - A suitable Automatic Fire Detection and Warning system (see paragraphs 17 - 18). The grade and coverage of the system will depend on the risk the house presents.
 - An appropriate degree of fire separation between the ground floor and the upper floors. Full 30 minute separation will usually be appropriate with a FD30S fire door at the foot of the stairs leading from the ground floor to the first floor.
 - Where a basement or cellar exists the guidance in 13.12 – 13.19 should be applied with higher standards of separation as appropriate in the higher risk back-to-back properties.

38.3 Where the conditions for escape windows cannot be met (see 19) other solutions will need to be adopted and may include the construction of a 30 minute protected escape route inside the house, 60 minute separation between the ground and first floors, the installation of a water suppression system (see paragraphs 30 - 34), and setting of conditions relating to facilities for calling the Fire and Rescue Authority in an emergency.

A sample case study is given in Part D at paragraph 47 (D15).

38.4 **This type of housing presents a particular risk and some LHAs and FRAs may require alternative solutions including higher standards where appropriate.**

39 MIXED COMMERCIAL AND RESIDENTIAL USE

39.1 Often residential accommodation is situated above or within commercial premises. Any fire in the commercial premises will affect the residential parts and at night may not be noticed until well developed. The risk assessment will assess how high the risk from the commercial premises is but it may be significantly higher than the risk from the residential parts e.g. where the accommodation is above a pub, restaurant or dry cleaners.

39.2 Generally there should be 60 minute imperforate separation between the two uses. In lower risk commercial premises it may be possible to reduce this to 30 minutes where there is an automatic fire detection system in the commercial parts which is linked to the residential system. In higher risk premises even where 60 minute separation is achieved it may still be appropriate to provide an automatic fire detection system linked to the residential system.

39.3 In some cases imperforate separation proves impracticable to achieve e.g. some accommodation above pubs. In these cases compensatory measures should be considered such as fire protecting lobbies between the two uses, a secondary means of escape or in high risk situations a water suppression system in the commercial premises.

40. MANAGEMENT AND MAINTENANCE OF FIRE SAFETY

40.1 Whatever physical fire safety measures are provided in residential accommodation their effectiveness will only be as good as their management and maintenance. Whilst single household dwellings will generally be self-managing, HMO accommodation will require on-going attention to ensure fire safety measures remain effective. This section outlines management and maintenance measures applicable to HMOs. The responsible person (e.g. the licensee, landlord or managing agent) is responsible for ensuring that the day to day management of fire safety in the premises is properly undertaken and that essential routine maintenance and emergency repairs are properly carried out. This is not only common sense and good practice but an obligation in law for those premises to which *The Management of Houses in Multiple Occupation Regulations 2006* and the *FSO* apply (see Appendix 1, paragraphs A46 and A51).

40.2 The level of management attention required will be determined as part of the fire risk assessment. Detailed recommendations are to be found in the *Fire Safety Risk Assessment Sleeping Accommodation Guide: HM Government*. These recommendations may be appropriate

in very large and complex buildings but not all will apply fully for the average residential accommodation, of normal risk covered by this guide.

40.3 Guidance on best practice in fire safety management can be found in BS 5588, Part 12: 2004. *Fire precautions in the design, construction and use of buildings - Managing fire safety* but the following points as a minimum should be expected in any acceptable fire risk assessment as a minimum:

40.4 Escape routes

- Must be free from obstruction at all times and regular checks should be made to guarantee this.
- There should be no storage within the routes
- There should be no trip hazards such as trailing electrical leads or worn carpets.
- In most cases fire resisting doors should be effectively self-closing to engage their latches with no obstructions or hindrances such as catching carpets etc. The exception to this is individual room doors within flats. The use of self-closers in this situation has proved to be ineffective. The flat entrance door will require a self-closer. All doors should however be close fitting as designed. No fire doors should be propped or wedged open. Any damage to fire doors should be noted and repaired. Any damaged or missing smoke seals must be replaced like-for-like.

40.5 Automatic fire detection and warning systems

BS 5839 Part 1, Section 6 contains recommendations for regular, routine testing of AFD systems as follows:

Grade A systems

- Routine testing - At least one detector or call point in each zone should be tested weekly to ensure correct operation of the system. Any defect should be recorded in the log book and action taken to correct it.
- Routine maintenance – a six monthly service should be carried out by a competent person, usually a specialist alarm engineer under a maintenance contract. It entails a full test to ensure compliance as specified in with BS 5839 Part 1 Section 6 and it should be recorded in the log book and a periodic inspection and test certificate issued.

Grade D and E systems

- Routine testing - these systems should be tested every month by use of the test button on the smoke alarm
- Routine maintenance - All alarms should be cleaned periodically in accordance with the manufacturer's recommendations.

All systems

- It is recommended that all detectors should be tested at least once every year to ensure that they respond to smoke. Tests should not involve the use of open flame or any form of smoke or aerosol that could contaminate the detection chamber or the electronics of the detector. Suitable test aerosols are available. This is usually carried out by a specialist alarm engineer under a maintenance contract.

40.6 It is recognised that the above arrangements represent the ideal and whilst they may be possible in buildings with a resident landlord or with a dedicated caretaker or housekeeper, in most situations for premises covered by this guide such arrangements may be impracticable. Where this proves to be the case tenants should be given clear instructions on how to test Grade D or E alarms within their dwelling using the test button and clear recording and reporting instructions for any faults or false alarms on the system. Grade A systems are more specialist and resident testing will be inappropriate unless there is a trained individual in the property. Clear fault and false alarm reporting arrangements should be put in place and the responsible person or his/her agent should respond to reports at the earliest opportunity.

40.7 Fire blankets and extinguishers

- Where provided, these should be checked periodically to make sure they are in place and available for use. Extinguishers must be tested on an annual basis, and in accordance with the manufacturer's instructions.

40.8 Artificial lighting

- Conventional staircase lighting must be working properly throughout at all times. Any blown bulbs should be replaced and all switches should be working. If timer switches are fitted the duration should be checked and adjusted if necessary.
- Any emergency escape lighting should be serviced and maintained in accordance with BS 5266-8: 2004 (BS EN 50172: 2004) *Emergency escape lighting systems*. This contains detailed recommendations which include inspections and tests to be carried out down to a daily basis. For large, complex HMOs (e.g. 5 or 6 storeys) or premises with a specific high risk factor e.g. persistent vandalism problems, those with complex escape routes and no effective borrowed light, the full recommendations may be appropriate. However, in most average sized premises with normal risk, the following regime with a procedure for responding to reports of defects should be adequate:
 - an annual discharge test in accordance with the requirements of BS 5266, Part 8. This must be carried out by a competent person, usually a lighting engineer under a maintenance contract. It entails a full test to ensure compliance with BS 5266, Part 8 and it should be recorded in the log book and a periodic inspection and test certificate issued.

40.9 Water suppression systems

- Where provided, the responsible person must ensure that any water suppression system is fully maintained and ready for use at all times. The landlord should enter into a maintenance contract with a competent person or company to maintain the system in accordance with clause 7 (maintenance) of BS9251.
- The responsible person is responsible for ensuring that the system is fully functional at all material times and any defects are rectified as soon as possible.
- The responsible person should check the pressure gauge readings monthly and record these readings in the Systems Log Book. Any significant fluctuations or pressure readings below the agreed system design must be rectified immediately.
- The System Log Book must also be used to record all actuations, testing, maintenance, system faults and any remedial action.

40.10 Gas installations

- The Gas Safety (Installation and use) Regulations require that gas installations and appliances receive a gas safety check annually. It must only be carried out by a CORGI registered engineer. The findings must be recorded and the records kept for at least two years.

40.11 Electrical installations

- All electrical equipment should be installed and maintained by a competent person and should be inspected periodically by a competent electrical engineer. Every five years is recommended.

40.12 Information and training

- Each occupier should be given specific advice on fire prevention and fire safety in the home. This should be given at the start of each new tenancy and reviewed periodically. Suitable advice can be found in Annex 1 of BS 5588, Part 12 '*Advice to occupiers of domestic residential buildings*' and advice is also available from local fire and rescue authorities. Information should include:
 - an explanation of the escape routes particularly where secondary means of escape is provided
 - how the fire detection and alarm system operates and what to do if it activates
 - how and when to reset the fire alarm system
 - if extinguishers or fire blankets are provided training in their application and safe use
 - avoidance of false alarms
 - how and when to call the fire brigade
 - how to report defects
 - the importance of maintaining clear escape routes, free of storage
 - the importance of keeping fire doors closed, not propped or wedged open
 - smoking and cooking safety
 - gas safety advice
 - safe storage and disposal of refuse
 - the safe use of escape windows where appropriate

40.13 Record keeping

- It is recommended that a property log book is kept and all routine maintenance and servicing activity, as recommended in this guide, is recorded in it along with all reported defects and remedial action taken including false alarms. Model log books may be available from landlords associations or via landlord accreditation schemes.

PART D: SOME RISK BASED CASE STUDIES OF FIRE SAFETY SOLUTIONS IN CERTAIN CATEGORIES OF RESIDENTIAL ACCOMMODATION

41. INTRODUCTION

41.1 This chapter considers some commonly encountered types of residential premises and provides some suggested fire safety solutions which could be applied to achieve a reasonable and acceptable standard of fire safety in each. In each case the solutions are based on a fire risk assessment. If the fire safety measures recommended are applied to buildings of similar risk, those buildings should meet the requirements of the legislation applying to them as outlined in Appendix 1 and should satisfy the requirements of the enforcing authorities under the *Fire Safety Protocol*. If the recommendations of this guide are applied, no additional works should be necessary to meet any of the requirements.

The recommendations in this chapter must be read in conjunction with Part C which gives more details on individual provisions and applies some conditions to these recommendations.

41.2 The solutions recommended here are considered to be the most conventional and practical solutions for most situations. There is no obligation to adopt these exact particular solutions and it is possible that the relevant requirement can be met in some other way. However, any alternative arrangement will need to achieve at least an equivalent level of fire safety and the responsible person will need to demonstrate that is the case. The interaction between the individual fire safety measures is key. Where a higher standard of protection is provided than recommended here it may be possible to provide a compensating lower standard in some other respect and vice-versa. For example, in lower risk premises a reduced level of fire separation may be acceptable if a higher standard of fire detection and warning system is provided. Equally the installation of a fixed water suppression system (sprinkler system) may allow a reduced standard of fire separation. Variations on such themes will need to be considered on their merits and agreement will need to be sought from the relevant enforcing Authority.

41.3 The examples in this section assume a “normal” level of risk. They assume:

- Occupiers are able-bodied and capable of evacuating the building unaided.
- Occupiers are not from any particular vulnerable group e.g. persons having impaired sight or hearing, elderly or frail persons, persons with alcohol or drug dependences,
- There are no particular high risk factors present in the building e.g. commercial uses, large storage areas, the use of open fires etc

Where this is not the case and higher risk factors are present higher levels of fire safety precautions may be required.

41.4 The descriptions of the various categories of residential premises covered in this chapter will not necessarily exactly match every situation and professional judgment will be necessary where variations occur. For clarification of the use of the term ‘storey’ see glossary. This chapter contains case studies for the following categories of premises:

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- Single occupancy accommodation
- Shared houses
- Bedsit-type HMOs
- Buildings converted to self-contained flats
- Flats in multiple occupation

42. SINGLE HOUSEHOLD OCCUPANCY

Houses, flats and maisonettes occupied by persons living as a single household. The term 'household' means either a single person or members of the same family who are living together. This includes people who are married or living together as married (including those in same-sex relationships). "Family" means specific relatives i.e. parents, grandparents, children (and step-children), grandchildren, brothers, sisters, uncles, aunts, nephews, nieces or cousins. Foster children are also treated as part of their parents' household.

Case study D1 : Single household occupancy of no more than two storeys	
Escape routes	<p>No requirement for protected route*.</p> <ul style="list-style-type: none"> ✓ Sound, conventional construction* ✓ Travel distances are not excessive. ✓ Suitable escape door or escape windows to bedrooms and living rooms* <p>No requirement for fire doors*.</p> <ul style="list-style-type: none"> ✓ Sound, well constructed and close fitting, conventional doors required*
Fire separation	<p>No requirement for additional fire resistance</p> <ul style="list-style-type: none"> ✓ walls and floors of sound, traditional construction. <p>If a basement/cellar is present 30 minute separation between the cellar and the ground floor escape route is the ideal but see paragraph 13.14 re. existing construction.</p>
Fire detection and alarm systems	<p>Grade D, LD3 system</p> <ul style="list-style-type: none"> ✓ Interlinked mains wired smoke alarms with integral battery back-up located in the escape route at ground and first floor levels ✓ Additional interlinked smoke alarms with integral battery back-up located in any cellar
Lighting of escape routes	<p>No requirement for emergency escape lighting</p> <ul style="list-style-type: none"> ✓ Conventional artificial lighting required
Fire-fighting equipment	<p>No requirement</p> <ul style="list-style-type: none"> ✓ recommended good practice to provide a fire blanket
Fire safety signs and notices	<p>No requirement</p>
Surface finishes and floor coverings	<p>No requirement</p>
Management and maintenance of fire safety	<ul style="list-style-type: none"> ✓ Recommended that all doors are kept closed at night ✓ see section 40

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* where escape windows/doors are not provided, construction standards are low or the travel distances exceed the recommendation, a 30 minute protected route should be provided

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Case study D2 : single family houses of 3 or 4 storeys	
Escape routes	<p>No requirement for protected route*.</p> <ul style="list-style-type: none"> ✓ Sound, traditional construction* ✓ Travel distances are not excessive <p>No requirement for fire doors*.</p> <ul style="list-style-type: none"> ✓ Sound, well constructed and close fitting, conventional doors required
Fire separation	<p>No requirement for additional fire resistance</p> <ul style="list-style-type: none"> ✓ walls and floors of sound, traditional construction. <p>If a basement/cellar is present 30 minute separation between the cellar and the ground floor escape route required.</p>
Fire detection and alarm systems	<p>Grade D, LD3 system</p> <p>Interlinked mains wired smoke alarms with integral battery back-up located in the escape route at all floor levels</p>
Lighting of escape routes	<p>No requirement for emergency escape lighting</p> <ul style="list-style-type: none"> ✓ Conventional artificial lighting
Fire-fighting equipment	<p>No requirement</p> <ul style="list-style-type: none"> ✓ recommended good practice to provide a fire blanket
Fire safety signs and notices	<p>No requirement</p>
Surface finishes and floor coverings	<p>No requirement</p>
Management and maintenance of fire safety	<ul style="list-style-type: none"> ✓ Recommended that all doors are kept closed at night ✓ See section 40

* where construction standards are low or the travel distances exceed the recommendation, a 30 minute protected route should be provided

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Case study D3 : Single household occupancy of 5 or 6 storeys	
Escape routes	<p>30 minute protected route.</p> <ul style="list-style-type: none"> ✓ 30 minute fire resisting construction ✓ FD30S doors to all risk rooms ✓ Travel distances are not excessive <p>Secondary means of escape from top 2 floors</p>
Fire separation	<p>No requirement for additional fire resistance generally</p> <ul style="list-style-type: none"> ✓ walls and floors of sound, traditional construction. <p>Lateral fire resisting separation of the top 2 floors from the remainder of the house</p> <p>If a cellar is present 30 minute separation between the cellar and the ground floor escape</p>
Fire detection and alarm systems	<p>Grade A, LD3 system</p> <p>Interlinked mains wired smoke alarms with integral battery back-up located in the escape route at every floor level</p>
Lighting of escape routes	<p>No requirement for emergency escape lighting</p> <ul style="list-style-type: none"> ✓ Conventional artificial lighting required
Fire-fighting equipment	<p>No requirement</p> <ul style="list-style-type: none"> ✓ recommended good practice to provide a fire blanket
Fire safety signs and notices	No requirement
Surface finishes and floor coverings	No requirement
Management and maintenance of fire safety	<ul style="list-style-type: none"> ✓ See section 40

43. SHARED HOUSES

There is no legal definition for this category as in legal terms, shared houses fall within the definition of HMO (see 7.0-7.5). However, although they are HMOs it is recognised that they will usually present a lower fire safety risk than traditional bedsit-type HMOs (lets). For the purposes of this guide shared houses are described as HMOs which have been rented by an identifiable group of sharers as opposed to separate lone individuals or a number of couples/families. These are typically small groups of students, work colleagues or friends. Tenants will have exclusive use of certain rooms, usually the bedrooms, but share the kitchen, dining facilities, bathrooms, WCs etc and there is often a communal living room. There will be a significant degree of social interaction between the tenants. There is often a single, joint tenancy agreement but not necessarily so. As with each category of premises shared houses will sometimes be encountered which present a higher risk than assumed here and in such case a higher standard of fire safety may be appropriate.

Case study D4 : Shared house of no more than two storeys	
Escape routes	<p>No requirement for protected route*.</p> <ul style="list-style-type: none"> ✓ sound, traditional construction required* ✓ travel distances are not excessive ✓ suitable escape door or escape windows to bedrooms and living rooms* ✓ escape route should not pass through risk rooms <p>No requirement for fire doors*.</p> <ul style="list-style-type: none"> ✓ sound, well constructed and close fitting, conventional doors required*
Fire separation	<p>No requirement for additional fire resistance</p> <ul style="list-style-type: none"> ✓ walls and floors of sound, traditional construction. <p>If a basement/cellar is present 30 minute separation between the cellar and the ground floor escape route is the ideal but see paragraph 13.14 re. existing construction.</p>
Fire detection and alarm systems	<p>Grade D, LD3 system</p> <ul style="list-style-type: none"> ✓ Interlinked mains wired smoke alarms with integral battery back-up located in the escape route at all floor levels ✓ Additional interlinked heat alarm with integral battery back-up located in the kitchen ✓ Additional interlinked smoke alarm with integral battery back-up located in the lounge ✓ Additional interlinked smoke alarms with integral battery back-up located in any cellar
Lighting of escape routes	<p>No requirement for emergency escape lighting</p> <ul style="list-style-type: none"> ✓ Conventional artificial lighting required
Fire-fighting equipment	<p>Fire blanket to be provided in the kitchen</p>
Fire safety signs and notices	<p>No requirement</p>

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Surface finishes and floor coverings	No requirement
Management and maintenance of fire safety	<ul style="list-style-type: none">✓ Recommended that all doors are kept closed at night✓ See section 40

* where escape windows/doors are not provided, construction standards are low or the travel distances exceed the recommendation, a 30 minute protected route should be provided

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Case study D5 : Shared house of three or four storeys	
Escape routes	30 minute protected route. <ul style="list-style-type: none"> ✓ 30 minute fire resisting construction ✓ FD30S doors to all risk rooms ✓ Travel distances are not excessive
Fire separation	No requirement for additional fire resistance <ul style="list-style-type: none"> ✓ walls and floors of sound, traditional construction. If a cellar is present 30 minute separation between the cellar and the ground floor escape route..
Fire detection and alarm systems	Grade D, LD3 system <ul style="list-style-type: none"> ✓ Interlinked mains wired smoke alarms with integral battery back-up located in the escape route at each floor level ✓ Additional interlinked heat alarm with integral battery back-up located in the kitchen ✓ Additional interlinked smoke alarm with integral battery back-up located in the lounge ✓ Additional interlinked smoke alarms with integral battery back-up located in any cellar
Lighting of escape routes	Emergency escape lighting required only if the route is long or complex or where there is no effective borrowed light Conventional artificial lighting required
Fire-fighting equipment	Fire blanket to be provided in the kitchen
Fire safety signs and notices	Signage only required if the escape route is complex
Surface finishes and floor coverings	No requirement
Management and maintenance of fire safety	<ul style="list-style-type: none"> ✓ See sections 40

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Case study D6 : Shared house of five or six storeys	
Escape routes	<p>30 minute protected route.</p> <ul style="list-style-type: none"> ✓ 30 minute fire resisting construction ✓ FD30S doors to all risk rooms ✓ Travel distances are not excessive <p><u>5 storey</u> Lobby protection to all floors except the top floor or secondary means of escape from top floor</p> <p><u>6 storey</u> Lobby protection to all floors except the top floor and secondary means of escape from top 2 floors</p>
Fire separation	<p>No requirement for additional fire resistance generally</p> <ul style="list-style-type: none"> ✓ walls and floors of sound, traditional construction. <p>Lateral fire resisting separation of the top floor (in 5 storey), top 2 floors (in 6 storey), from the remainder of the house</p> <p>If a cellar is present 30 minute separation between the cellar and the ground floor escape</p>
Fire detection and alarm systems	<p>Grade A, LD2 system</p> <ul style="list-style-type: none"> ✓ detection throughout common parts and all risk rooms including bedrooms, living rooms, kitchen (heat detection) and any cellar
Lighting of escape routes	<p>Emergency escape lighting required</p> <p>Conventional artificial lighting required</p>
Fire-fighting equipment	<p>Fire blanket to be provided in the kitchen</p>
Fire safety signs and notices	<p>Signage only required if the escape route is complex</p>
Surface finishes and floor coverings	<p>No requirement</p>
Management and maintenance of fire safety	<ul style="list-style-type: none"> ✓ See section 40

44. BEDSIT-TYPE HMOs (LETS)

These are HMOs which have been converted to a number of separate non-self contained bedsit lettings or floor-by-floor lets. Typically there will be individual cooking facilities within each bedsit but alternatively there may be shared cooking facilities or a mixture of the two. Toilets and bathing/washing facilities will mostly be shared. There is unlikely to be a communal living or dining room. Each bedsit or letting will be let to a separate individual(s) who will live independently with little or no communal living between tenants. Each letting will have its own individual tenancy agreement and there will usually be a lock on each individual letting door.

Case study D7 : Bedsit-type HMO (lets) of no more than two storeys	
Escape routes	<p>30 minute protected route.</p> <ul style="list-style-type: none"> ✓ 30 minute fire resisting construction ✓ FD30S doors to all risk rooms ✓ Travel distances are not excessive <p>See note 1</p>
Fire separation	30 minute fire separation between units of accommodation throughout
Fire detection and alarm systems	<p>Mixed system Grade D, LD2 system</p> <ul style="list-style-type: none"> ✓ Interlinked mains wired smoke alarms with integral battery back-up located throughout the escape route <p>Where cooking facilities are sited within the bedsits</p> <ul style="list-style-type: none"> ✓ Interlinked heat alarms with integral battery back-up located in each bedsit ✓ Additional non-interlinked smoke alarm with integral battery back-up located in each bedsit <p>Where cooking facilities are sited in shared kitchen, not within bedsits</p> <ul style="list-style-type: none"> ✓ Interlinked smoke alarms with integral battery back-up located in each bedsit ✓ Interlinked heat alarms with integral battery back-up located in each communal kitchen ✓ Additional interlinked smoke alarms with integral battery back-up located in any cellar
Lighting of escape routes	<p>Emergency escape lighting required only if the route is long or complex or where there is no effective borrowed light</p> <p>Conventional artificial lighting required</p>
Fire-fighting equipment	Fire blanket to be provided in each bedsit with cooking facilities and in shared kitchens
Fire safety signs and notices	Signage along escape route if the escape route is complex
Surface finishes and floor	<ul style="list-style-type: none"> ✓ See sections 36 - 37

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coverings	
Management and maintenance of fire safety	✓ See section 40

Note 1: A protected route is the preferred (ideal) option. However, in 2 storey, normal risk HMOs the provision of suitable escape windows or doors from all bedsit rooms may be acceptable in lieu of a full protected route, provided the escape route is of sound, traditional construction and sound, well constructed, close fitting, conventional doors are fitted and travel distances are not excessive.

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Case study D8 : Bedsit-type HMO (lets) of 3 or 4 storeys	
Escape routes	30 minute protected route. <ul style="list-style-type: none"> ✓ 30 minute fire resisting construction ✓ FD30S doors to all risk rooms ✓ Travel distances are not excessive
Fire separation Fire detection and alarm systems	30 minute fire separation between units of accommodation throughout Mixed system Grade A, LD2 system <ul style="list-style-type: none"> ✓ Smoke detectors located throughout the escape route Where cooking facilities are sited within the bedsits <ul style="list-style-type: none"> ✓ Interlinked heat detectors located in each bedsit ✓ Additional Grade D, non-interlinked smoke alarm with integral battery back-up located in each bedsit Where cooking facilities are sited in shared kitchen, not within bedsits <ul style="list-style-type: none"> ✓ Interlinked smoke detectors located in each bedsit ✓ Heat detectors located in each kitchen ✓ Additional interlinked smoke alarms with integral battery back-up located in any cellar
Lighting of escape routes	Emergency escape lighting required Conventional artificial lighting required
Fire-fighting equipment	Fire blanket to be provided in each bedsit with cooking facilities and in shared kitchens See 29.1
Fire safety signs and notices	Final exit sign Signage along escape route if the escape route is complex
Surface finishes and floor coverings	<ul style="list-style-type: none"> ✓ See sections 36 - 37
Management and maintenance of fire safety	<ul style="list-style-type: none"> ✓ See section 40

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Case study D9 : Bedsit-type HMO (lets) of 5 or 6 storeys	
Escape routes	<p>30 minute protected route.</p> <ul style="list-style-type: none"> ✓ 30 minute fire resisting construction ✓ FD30S doors to all risk rooms ✓ Travel distances are not excessive <p>5 storey Lobby protection to all floors except the top floor or secondary means of escape from top floor</p> <p>6 storey Lobby protection to all floors except the top floor and secondary means of escape from top 2 floors</p>
Fire separation	<p>30 minute fire separation between units of accommodation throughout</p> <p>30 minute fire separation across the stairway between second and third floors and between fourth and fifth floors</p>
Fire detection and alarm systems	<p>Mixed system Grade A, LD2 system</p> <ul style="list-style-type: none"> ✓ Smoke detectors located throughout the escape route <p>Where cooking facilities are sited within the bedsits</p> <ul style="list-style-type: none"> ✓ Heat detectors located in each bedsit ✓ Additional Grade D, non-interlinked smoke alarm with integral battery back-up located in each bedsit <p>Where cooking facilities are sited in shared kitchen, not within bedsits</p> <ul style="list-style-type: none"> ✓ Smoke detectors located in each bedsit ✓ Heat detectors located in each kitchen ✓ Additional interlinked smoke alarms with integral battery back-up located in any cellar
Lighting of escape routes	<p>Emergency escape lighting required</p> <p>Conventional artificial lighting required</p>
Fire-fighting equipment	<p>Fire blanket to be provided in each bedsit with cooking facilities and in shared kitchens</p> <p>See 29.1</p>
Fire safety signs and notices	<p>Final exit sign</p> <p>Directional signage along escape route</p>
Surface finishes and floor coverings	<ul style="list-style-type: none"> ✓ See sections 36 - 37
Management and	<ul style="list-style-type: none"> ✓ See section 40

maintenance of fire safety	
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45. HOUSES/BUILDINGS CONVERTED TO SELF-CONTAINED FLATS

Houses or buildings converted into self-contained flats where the conversion did **not** (and does not) meet the building standards under the Building Regulations 1991. Buildings which **were** converted to a standard meeting those regulations and which still meet them are not included here as they will not require additional fire safety measures unless occupied in a manner other than intended under the original conversion scheme (e.g. occupation of a flat as a flat in multiple occupation (see section E) or where an additional risk has been introduced post-conversion.

Case study D10 : 2 storey building converted into self-contained flats	
Escape routes	30 minute protected route. <ul style="list-style-type: none"> ✓ 30 minute fire resisting construction ✓ FD30S doors to rooms opening onto escape route ✓ FD30 doors (self closers not required) to risk rooms within flats ✓ Travel distances are not excessive
Fire separation	30 minutes fire resistance between flats throughout
Fire detection and alarm systems	A mixed system: <ul style="list-style-type: none"> ✓ Grade D: LD2 coverage in the common areas and a heat detector in each flat in the room/lobby opening onto the escape route (interlinked) ✓ Grade D : LD3 coverage in each flat (non-interlinked smoke alarm in the room/lobby opening onto the escape route) to protect the sleeping occupants of the flat.
Lighting of escape routes	Emergency escape lighting required Conventional artificial lighting required
Fire-fighting equipment	No requirement <ul style="list-style-type: none"> ✓ recommended good practice to provide a fire blanket
Fire safety signs and notices	No requirement
Surface finishes and floor coverings	<ul style="list-style-type: none"> ✓ See sections 36 - 37
Management and maintenance of fire safety	<ul style="list-style-type: none"> ✓ See section 40

*1 Where the fire risk assessment identifies higher than normal risk, the LD2 interpretation of "rooms or areas that present a high fire risk to occupants" may include living rooms, bedrooms

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and kitchens within the flats thereby providing automatic detection in these rooms in addition to the common parts and internal entrance hall/lobby within flats.

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Case study D11: 3 or 4 storey building converted into self-contained flats	
Escape routes	30 minute protected route. <ul style="list-style-type: none"> ✓ 30 minute fire resisting construction ✓ FD30S doors to rooms opening onto escape route ✓ FD30 doors (self closers not required) to risk rooms within flats ✓ Travel distances are not excessive
Fire separation	30 minute fire separation between units of accommodation throughout
Fire detection and alarm systems	A mixed system: <ul style="list-style-type: none"> ✓ Grade A: LD2 coverage in the common areas and a heat detector in each flat in the room/lobby opening onto the escape route (interlinked) ✓ Grade D : LD3 coverage in each flat (non-interlinked smoke alarm in the room/lobby opening onto the escape route) to protect the sleeping occupants of the flat.
Lighting of escape routes	Emergency escape lighting required Conventional artificial lighting required
Fire-fighting equipment	No requirement but see 29.1 <ul style="list-style-type: none"> ✓ recommended good practice to provide fire blankets in kitchens to flats
Fire safety signs and notices	Final exit sign Directional signage along escape route
Surface finishes and floor coverings	<ul style="list-style-type: none"> ✓ See sections 36 - 37
Management and maintenance of fire safety	<ul style="list-style-type: none"> ✓ See section 40

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Case study D12 : 5 or 6 storey building converted into self-contained flats	
Escape routes	30 minute protected route. <ul style="list-style-type: none"> ✓ 30 minute fire resisting construction ✓ FD30S doors to rooms opening onto escape route ✓ FD30 doors (self closers not required) to risk rooms within flats ✓ Travel distances are not excessive
Fire separation	30 minute fire separation between units of accommodation throughout 30 minute fire separation across the stairway between second and third floors and between fourth and fifth floors
Fire detection and alarm systems	A mixed system: <ul style="list-style-type: none"> ✓ Grade A: LD2 coverage in the common areas and a heat detector in each flat in the room/lobby opening onto the escape route (interlinked) ✓ Grade D : LD3 coverage in each flat (non-interlinked smoke alarm in the room/lobby opening onto the escape route) to protect the sleeping occupants of the flat.
Lighting of escape routes	Emergency escape lighting required Conventional artificial lighting required
Fire-fighting equipment	No requirement but see 29.1 <ul style="list-style-type: none"> ✓ recommended good practice to provide fire blankets in kitchens to flats
Fire safety signs and notices	Final exit sign Directional signage along escape route
Surface finishes and floor coverings	<ul style="list-style-type: none"> ✓ See sections 36 - 37
Management and maintenance of fire safety	<ul style="list-style-type: none"> ✓ See section 40

DIAGRAM AS PER D11 BUT WITH LATERAL SEPARATION OF TOP 2 FLOORS

46. FLATS IN MULTIPLE OCCUPATION

Any self-contained flat which is occupied by three or more persons who do not form a single household. Fire safety standards will be enforceable under the Housing Health and Safety Rating System and some transitional and additional HMO licensing schemes.

Case study D13 : Flat in multiple occupation occupying a single storey	
Escape routes	<p>No requirement for protected route</p> <ul style="list-style-type: none"> ✓ original, sound, traditional construction ✓ travel distances are not excessive ✓ escape route should not pass through risk rooms <p>No requirement for fire doors.</p> <ul style="list-style-type: none"> ✓ sound, well constructed and close fitting, conventional doors required <p>(Note : in converted or purpose built flats 30 minute construction and fire doors are likely to be in place)</p>
Fire separation	- -
Fire detection and alarm systems	<p>Grade D : LD2 coverage</p> <ul style="list-style-type: none"> ✓ smoke alarm with integral battery back-up located in internal hallway/lobby to flat and in the shared kitchen (interlinked)
Lighting of escape routes	Conventional artificial lighting required
Fire-fighting equipment	Fire blanket to be provided in the shared kitchen
Fire safety signs and notices	No requirement
Surface finishes and floor coverings	<ul style="list-style-type: none"> ✓ See sections 36 - 37
Management and maintenance of fire safety	<ul style="list-style-type: none"> ✓ See section 40

Case study D14 : Flat in multiple occupation occupying more than one storey	
Escape routes	30 minute protected route. <ul style="list-style-type: none"> ✓ 30 minute fire resisting construction ✓ FD30 doors (self closers not required) to risk rooms within flats ✓ Travel distances are not excessive
Fire separation Fire detection and alarm systems	- - Grade D : LD2 coverage <ul style="list-style-type: none"> ✓ smoke alarm with integral battery back-up located in internal hallway/lobby to flat and in the shared kitchen and shared lounge (interlinked)
Lighting of escape routes	Conventional artificial lighting required Emergency escape lighting required if there is no effective borrowed light
Fire-fighting equipment	Fire blanket to be provided in the shared kitchen
Fire safety signs and notices	No requirement
Surface finishes and floor coverings	<ul style="list-style-type: none"> ✓ See sections 36 - 37
Management and maintenance of fire safety	<ul style="list-style-type: none"> ✓ See section 40

47. BACK TO BACK HOUSES

These houses typically back directly onto one another at the party wall and have other houses either side. This means there is only one exit from the house and the escape route inevitably passes through a risk room.

Case study D15 : 3 storey back-to-back shared house with up to four occupiers. The stairs exit via the living room and the kitchen is off the living room.	
Escape routes	30 minute protected route at first and second floor level. <ul style="list-style-type: none"> ✓ 30 minute fire resisting construction ✓ FD30S doors (self closers not required) to risk rooms on first and second floors and to kitchen ✓ Escape window from first floor ✓ Travel distances are not excessive
Fire separation	30 minute fire separation between ground and first floors FD30S fire door across staircase between ground and first floor.

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Fire detection and alarm systems	Grade D, LD3 system <ul style="list-style-type: none"> ✓ Interlinked mains wired smoke alarms with integral battery back-up located in the escape route at all floor levels ✓ Additional interlinked heat alarm with integral battery back-up located in the kitchen ✓ Additional interlinked smoke alarm with integral battery back-up located in the lounge ✓ Additional interlinked smoke alarms with integral battery back-up located in any cellar
Lighting of escape routes	Conventional artificial lighting required
Fire-fighting equipment	Fire blanket to be provided in the shared kitchen
Fire safety signs and notices	No requirement
Surface finishes and floor coverings	✓ See sections 36 - 37
Management and maintenance of fire safety	✓ See section 40

If the stairs descend via the kitchen a higher standard of AFD system may be more appropriate so as to give warning at the earliest opportunity. Where the requirements for an escape window (see 14) cannot be met, alternative precautions may include construction of a 30 minute protected route through the house to the final exit, 60 minutes fire separation between ground and first floors and conditions relating to arrangements for calling the Fire and Rescue Authority e.g. a fire alarm linked to the Fire Brigade or to a monitoring agency. The installation of a water suppression system may also be considered in such high risk cases.

APPENDIX 1: LEGISLATION, STATUTORY AND NON STATUTORY GUIDANCE

- A.1 Introduction:** This appendix provides a general overview of fire safety legislation for existing residential accommodation. It aims to provide a general working knowledge for the reader and set the context for this fire safety guidance. It does not provide an in-depth, detailed knowledge of the legislation or cover all details. References to further, detailed reading are provided and those seeking detailed legal guidance are recommended to refer to those signposted references and seek specialist legal advice.
- A.2 The repeal of the Fire Precautions Act 1971 and the Housing Act 1985 altered dramatically the way fire safety in existing residential accommodation is regulated. These old Acts have been replaced by new legislation which for the purposes of this guidance are in the main, the Housing Act 2004 and the Regulatory Reform (Fire Safety) Order 2005 (FSO).
- A.3 The Housing Act 2004 introduced the Housing Health and Safety Rating System (HHSRS) and licensing provisions for houses in multiple occupation (HMOs). The HHSRS is the principal tool for assessing fire safety risk and regulating standards in all types and tenures of residential accommodation. HMO licensing conditions provide specific regulation of fire safety standards in HMOs. Guidance under this legislation for housing providers and Local Housing Authorities is contained in both the Housing Health and Safety Rating System Operating Guidance and secondary legislation.
- A.4 The Regulatory Reform (Fire Safety) Order 2005 places duties on housing providers to risk assess fire safety in their properties, to take adequate precautions to reduce that risk and to manage that risk which remains. The duties apply throughout a range of property types but in HMOs, flats and maisonettes and sheltered accommodation in which personal care is not provided they apply only within the common areas although housing providers need to consider the risk created within the private areas too. These duties are enforced by Fire and Rescue Authorities. Guidance for housing providers and Fire and Rescue Authorities is contained in "HM Government Fire Safety Risk Assessment Sleeping Accommodation Guide" although the recommendations contained in this guide should produce an equivalent level of safety.
- A.5 So in respect of Houses in Multiple Occupation, flats and maisonettes and sheltered accommodation in which personal care is not provided the new regulatory framework provides for dual enforcement between Local Housing Authorities under the Housing Act 2004 and Fire and Rescue Authorities under the Regulatory Reform (Fire Safety) Order 2005.
- A.6 In view of the dual enforcement regime there is a clear need for consistent and coherent joint working arrangements between Local Housing Authorities and Fire and Rescue Authorities when applying the two sets of legislation. Uncoordinated regulation places a burden on housing providers, leads to confusion, duplication and unnecessary expense. With this in mind, in May 2007, the Fire Safety Housing Working Group published a *'Protocol between local housing authorities and fire and rescue authorities to improve fire safety'*⁴. This received Ministerial support from Baroness Andrews OBE and Angela Smith MP and established a framework for joint working between the two sets of Authorities. The protocol is being adopted by authorities around the Country and has improved working arrangements and brought about a more co-ordinated approach. The protocol is included in this guidance at Appendix 2.

A.7. THE HOUSING ACT 2004: Part 1: THE HOUSING HEALTH AND SAFETY RATING SYSTEM (HHSRS)

A.8 Part I of the Act introduced the Housing Health and Safety Rating System (HHSRS). This is the Government's new approach to the evaluation of the potential risks to health and safety from any deficiencies identified in dwellings. 29 categories of potential hazard are considered, one of which, hazard 24, is fire. The HHSRS, although not in itself a standard, has been introduced as a replacement for the previous Housing Fitness Standards which were contained in sections 604 and 352 of the Housing Act 1985, both now repealed. Detailed guidance on the principles and application of the HHSRS are contained in "*Housing Health and Safety Rating System Operating Guidance*⁵" and "*Housing Health and Safety Rating System Enforcement Guidance*⁶" from the Department for Communities and Local Government.

A.9 The underlying principle of the HHSRS is that –

Any residential premises should provide a safe and healthy environment for any potential occupier or visitor.

To satisfy this principle, a dwelling should be designed, constructed and maintained with non-hazardous materials and should be free from both unnecessary and avoidable hazards. This holds true for the hazard of fire. The HHSRS provides a means of assessing dwellings which reflects the risk from any hazard, and allows a judgment to be made as to whether that risk, in the particular circumstances, is acceptable or not. For the purposes of the HHSRS, the assessment is solely about the risks to health and safety. The feasibility, cost or extent of any remedial action is irrelevant to the assessment. Some deficiencies may be quickly, easily and cheaply remedied but while such deficiencies are present the threat to health or safety can be considerable.

A.10 The principle of the HHSRS is the assessment of risk presented by a dwelling based on:

- the likelihood of an occurrence that could cause harm (in this case uncontrolled fire and associated smoke)
- the probable severity of the outcomes of such an occurrence.

The system uses a formula to generate a numerical score which allows comparison of different hazards - the higher the score, the greater the risk.

A.11 Under the HHSRS the fire hazard covers threats from exposure to uncontrolled fire and associated smoke in a dwelling. It includes injuries from clothing catching alight on exposure to an *uncontrolled* fire, but does not include injuries caused by clothing catching alight from a *controlled* fire or flame, which may be caused by reaching across a gas flame or an open fire used for space heating.

A.12 The HHSRS is evidence-based. It is supported by extensive reviews of available literature and by detailed analyses of statistical data on the impact of housing conditions on health. The data used

to make a fire hazard assessment is based on averages relating to persons aged 60 years or over who died or were injured in a house or flat fire in England and Wales in the years 1997, 1998 and 1999. The statistics are based on the number of such persons dying in fires as reported by Coroners, on the number of casualties and persons rescued at all fires attended by the Fire and Rescue Services and the number of additional persons injured from uncontrolled fire or flames, reported by the Home Accident Surveillance System. There is a strong evidence base for the production of fire accident statistics and due to large sample sizes we can have a high confidence level for the statistical averages. This statistical evidence is summarised in the Fire Hazard Profile (24) section of the *HHSRS Operating Guidance*⁵ and these are intended to inform professional judgment.

A.13 The guidance given in Parts C and D of this LACORS guidance has regard to the evidence and advice contained in Fire Hazard Profile (24) of the *HHSRS Operating Guidance*⁵

A.14 Assessing fire hazard under the Housing Health and Safety Rating System

The *HHSRS Operating Guidance* details how to make an assessment of the Fire Hazard presented by a particular dwelling. The guidance offers the following information:

Potential for harm from fire: This sets out how the hazard of uncontrolled fire and associated smoke can affect health, outlining typical illnesses or injuries which may result from exposure to it. The prevalence of the hazard, and typical numbers of people affected nationally each year, are identified. The national statistical averages for the likelihood and spread of harms are given in a table, together with the average hazard scores. The averages are given for eight different ages and types of dwellings, and for all dwellings.

Causes: This section discusses potential sources of hazard from fire based on statistical evidence. It also discusses the contribution to a hazard which could be attributed to dwelling features and to human behaviour. This helps assess whether any deficiencies identified in the dwelling could mean that the likelihood or spread of harms deviates from the averages for the particular age and type of dwelling.

Preventive measures and the Ideal: This gives an indication of measures and the optimum standard intended to avoid or minimise the hazard – that is, the optimum current at the time of preparation of the *Operating Guidance*⁵, January 2004. This is informed by relevant British Standards (BS5588, BS5839, BS5446) and UK Building Regulation Approved Document B.

Relevant matters affecting likelihood and harm outcome: To assist enforcement officers a check-list of dwelling features which may affect the likelihood and the severity of the outcome is given.

A.15 For multi-occupied buildings, the assessment is made for each individual **dwelling** including its associated shared rooms/areas, and its access and escape route, not the building as a whole. This means that different hazard ratings can be expected for dwellings within the same building depending, amongst other things, on the location of the dwelling unit within the building and any deficiencies to the individual dwelling. For example, a bedsit on the ground floor close to the final exit from the building would not be assessed the same as a bedsit on the third floor, where the

means of escape is the internal staircase (even if both bedsitting rooms are identical apart from location). If a fire occurred, the harm caused to a victim of the third storey bedsit would be more severe than the person in the ground floor bedsit because there would be a greater distance of travel to safety than from the ground floor bedsit.

A.16 The HHSRS uses judgments made by the inspector based on an inspection of the dwelling, to generate a numerical score.

A.17 The procedure requires two judgments from the inspector. These are an assessment of:

- the likelihood, over the next twelve months, of an occurrence that could result in harm to a person aged 60 years or over (the vulnerable group); and
- the range of potential outcomes from such an occurrence.

A.18 The judgment of the likelihood made by the inspector involves taking account of the conditions (deficiencies) identified during the inspection, in particular whether those conditions will increase or reduce the average likelihood of an occurrence.

A.19 Using the two judgments, the HHSRS Formula detailed in the *Operating Guidance*⁵ is used to generate a numerical Hazard Score for the Fire hazard at the subject premises. The numerical Hazard Score is a representation of the inspector's judgment rather than a precise statement of the risk. The scores potentially range from 0.2 to 1 million. In order to make this wide range manageable and to avoid too strong a focus on precise numerical scores, hazard bands have been devised which group ranges of scores which can then be used for comparison. There are ten Hazard Bands (A to J), with Band J being the safest, and Band A being the most dangerous.

A.20 The band into which a dwelling falls in respect of the fire hazard can then be used:

- to inform a landlord's decision as to whether action should be taken to reduce the hazard and to prioritise actions across a property portfolio.
- to inform the enforcing authority's decision as to what, if any, enforcement action should be taken in respect of the property.

A.21 Worked examples of HHSRS assessments of fire hazard can be found on the LACORS website. [webLINK](#)

A.22 Action Following Hazard Assessment

The enforcing authority for the Housing Act 2004 is the Local Housing Authority (LHA), the local Council. The Act gives LHA's powers to intervene where they consider housing conditions to be unacceptable, on the basis of the impact of hazards on the health or safety of the most vulnerable potential occupant. Having carried out an assessment for the hazard of fire under HHSRS and where a significant hazard exists the LHA must decide what, if any, action is appropriate.

LHAs are encouraged to adopt and publicise clear local enforcement policies and to comply with the The Regulators Compliance Code which provides a basis for fair, risk-based, practical and enforcement. It is based on the principle that anyone likely to be subject to formal enforcement

action should receive clear explanations of what they need to do to comply and have an opportunity to resolve difficulties before formal action is taken.

- A.23 In many cases notification of the existence of a hazard to the landlord by the LHA will be all that is required as the landlord will take the appropriate action to reduce the hazard to an acceptable level. Guidance on how to do so can be found in Parts D and E of this guide. However, where an informal approach does not resolve matters the Authority must consider what action is appropriate.
- A.24 Where a Category 1 hazard is identified ie. a Band A, B or C hazard (one which scores 1000 or more under the HHSRS assessment outlined above) the Local Authority must take action to reduce the risk – it is under a statutory duty to do so (under section 5 of the Act).
- A.25 Where a Category 2 hazard exists ie. a Band D – J hazard (one which scores less than 1000 under the HHSRS assessment outlined above) the Local Authority has a power to Act but are not under a duty to do so (under section 7 of the Act).
- A.26 For both categories of hazard the enforcement options available are as follows:

Serve an improvement notice (section 11 or 12)

This requires the responsible person (usually the landlord or HMO licence holder) to carry out works which will at least remove the category one hazard.

Make a prohibition order (section 20 or 21)

This prohibits the use of **part** or **all** of the premises for various specified reasons.

Serve a hazard awareness notice (section 28 or 29)

This is purely advisory action where the authority notifies the person responsible of the need for improvements.

Note: Demolition Orders and Clearance Areas are not discussed here.

- A.27 In addition to the above the following enforcement options are also available for Category 1 hazards only:

Take emergency remedial action (section 40) or make an emergency prohibition order (section 43)

Local authorities have discretion to take emergency enforcement action against Category 1 hazards which present an imminent risk of serious harm to occupiers. In such circumstances, authorities will themselves take remedial action to remove a hazard and recover reasonable expenses or they will be able to prohibit the use of all or part of a property. The owner of a property will be able to appeal, but any appeal will not prevent the action from being taken or the prohibition being put into effect. These provisions may only be used where there is a Category 1 hazard; the hazard involves an imminent risk of harm to any of the occupiers of those or other residential premises and no management order is in force under Part 4. It is a criminal offence to contravene an emergency prohibition order.

A.28 Statement of reasons

Whichever type of action the Local Authority considers appropriate it must prepare a statement of reasons why it decided on that particular type of action rather than any other type.

A.29 Right of appeal

Except for Hazard Awareness Notices the recipient of any of the above enforcement actions has a right of appeal to the Residential Property Tribunal (RPT). Further details are available on RPT website at www.rpts.gov.uk

A.30 Consultation with Fire and Rescue Authorities

Before talking any of the actions outlined above in respect of a fire hazard in an HMO or in the common parts of flats, the Local Authority must consult with the Fire and Rescue Authority. For emergency remedial action or emergency prohibition this requirement applies only so far as it is practical to do so before taking those measures (Section 10).

A.31 Further reading

- Housing Act 2004
- Housing Health and Safety Rating System Operating Guidance⁵
- Housing Health and Safety Rating System Enforcement Guidance⁶

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Eland House
Bressenden Place
London
SW1E 5DU
Telephone: 020 7944 4400
Website: www.communities.gov.uk

A.32. THE HOUSING ACT 2004 : PART 2 : LICENSING OF HOUSES IN MULTIPLE OCCUPATION

A.33 Introduction: The definition of House in Multiple Occupation (HMO) is contained in section 254 of the Housing Act 2004. The definition is complex and for detailed understanding the Act itself should be studied. For general purposes the definition can be summarised as follows.

A.34 A building or part of a building is an HMO if it meets every condition specified in one or more of four tests or is subject to an HMO declaration:

The standard test

- a) it consists of one or more units of living accommodation which are not self-contained flats;
- b) the living accommodation is occupied by persons who do not form a single household;
- c) the living accommodation is occupied by persons as their only or main residence;

- d) their occupation of the living accommodation constitutes the only use of that accommodation;
- e) rents are payable or other consideration is provided in respect of at least one of those person's occupation;
- f) two or more of the households who occupy the living accommodation share one or more basic amenity or the living accommodation is lacking in one or more basic amenity.

The self-contained flat test

A self-contained flat which meets all of (b) to (f) above.

The converted building test

A converted building consisting of one or more units which are not self-contained flats and

- a) the living accommodation (the building) is occupied by persons who do not form a single household;
- b) the living accommodation is occupied by persons as their only or main residence;
- c) their occupation of the living accommodation constitutes the only use of that accommodation;
- d) rents are payable or other consideration is provided in respect of at least one of those person's occupation

Converted blocks

A converted block of self-contained flats converted to construction standards which did not comply with the requirements of the Building Regulations 1991 (SI 1991/2768) and

- a) less than two thirds of the flats are owner-occupied.
- b) the living accommodation is occupied by persons who do not form a single household;
- c) the living accommodation is occupied by persons as their only or main residence;
- d) their occupation of the living accommodation constitutes the only use of that accommodation;
- e) rents are payable or other consideration is provided in respect of at least one of those person's occupation

HMO declarations

Where it is unclear whether households are occupying the building as their only or main residence, the LHA can declare the building to be an HMO to remove any doubt.

The LHA must serve a notice on the landlord or manager of the property within seven days of the decision to make the declaration.

A building is an HMO if it :

- is occupied by more than one household and where more than one household shares – or lacks – an amenity, such as a bathroom, toilet or cooking facilities
- is occupied by more than one household and which is a converted building – but not entirely self-contained flats (whether or not some amenities are shared or lacking)
- is converted self-contained flats, but does not meet as a minimum standard the requirements of the 1991 Building Regulation, and at least one third of the flats are privately rented
- an HMO declaration has been made by the Local Authority under section 255 of the Housing Act 2004.

A.36 The term 'household' means either a single person or members of the same family who are living together. This includes people who are married or living together as married (including those in same-sex relationships). "Family" means specific relatives i.e. parents, grandparents, children (and step-children), grandchildren, brothers, sisters, uncles, aunts, nephews, nieces or cousins. Foster children are also treated as part of their parents' household.

A.37 The term "occupied" includes occupation by asylum seekers and migrant and seasonal workers, as a refuge by persons escaping domestic violence or by students in higher or further education.

A.38 Schedule 14 of the Act exempts the following categories from the HMO definition:

- Buildings controlled or managed by public sector bodies i.e.
 - local housing authorities
 - registered social landlords
 - Police authorities
 - Fire and rescue authorities
 - Health service bodies
- Buildings occupied principally by students in full time education and which are managed by the educational establishment in question in conformity with any code approved under section 233 of the Act.
- Buildings occupied by religious communities which is occupied principally for the purposes of a religious community whose principal occupation is prayer, contemplation, education or the relief of suffering (this category excludes converted block of flats to which section 257 applies).
- Owner occupied buildings
- Buildings occupied by only two persons
- Buildings regulated by other legislation as specified in schedule 1 to *The Licensing and Management of Houses in Multiple Occupation and Other Houses (Miscellaneous Provisions)(England) Regulations 2006 (SI 373 : 2006)*

A.39 Licensable HMOs

If the above definition determines a property is HMO, it is then necessary to consider whether it requires licensing . There are two ways in which Part 2 licensing may apply to an HMO.

- 1) HMOs that fall within a mandatory licensing scheme. These are schemes which Local Authorities must operate under the duty contained in section 55 of the Act. The categories of HMO which fall within mandatory licensing are prescribed in *The Licensing of Houses in Multiple Occupation (Prescribed Descriptions) (England) Order 2006*. These are all HMOs comprising three storeys or more and occupied by five or more persons living in two or more separate households, unless the HMO has been temporarily exempted by the Local Authority, or is being managed by them under a management order.
- 2) HMOs in areas that are designated by the Local Authority as subject to additional licensing schemes (under section 56 of the Act). In these cases the categories of HMO covered and the parts of the Local Authority district covered will be determined by the particular scheme. It will be necessary to contact the relevant Local Authority to ascertain which categories of HMO require licensing and in which parts of the district under their scheme.
- 3) Finally, some Local Authorities may operate “selective licensing” schemes within parts of their district under Part 3 of the Act. The parts of the Local Authority district covered will be determined by the particular scheme and it will be necessary to contact the relevant Local Authority to ascertain these details.

A.40 Suitability for licensing in respect of fire safety

The Local Authority cannot approve an application for an HMO licence until it is satisfied that the HMO is reasonably suitable for occupation (section 64). It cannot be satisfied of this unless the HMO meets prescribed standards under section 65. The prescribed standards are contained in *Statutory Instrument 2006 No. 373, The Licensing and Management of Houses in Multiple Occupation and Other Houses (Miscellaneous Provisions) (England) Regulations 2006*. The standards require that “Appropriate fire precaution facilities and equipment must be provided of such type, number and location as is considered necessary”. No further guidance is given. If an HMO meets the relevant standards in this guidance the Local Authority should be satisfied that appropriate fire precaution facilities and equipment are provided and the HMO is reasonably suitable for occupation in terms of fire safety and there is no impediment to granting the licence in fire safety terms.

A.41 Licence conditions relating to fire safety

Mandatory licence conditions

When granting a licence the local Authority must attach certain mandatory conditions. These are laid down in schedule 4 to the Act as follows:

“A licence under Part 2 or 3 must include the following conditions..... conditions requiring the licence holder –

- (a) to ensure that smoke alarms are installed in the house and to keep them in proper working order;*
- (b) to supply the authority on demand, with a declaration by him as to the condition and positioning of such alarms.”*

This is the only fire safety related mandatory condition. It should be applied to all licences alongside any relevant discretionary conditions as determined by the fire risk assessment of the premises.

Discretionary licence conditions

Section 67 of the Act gives Local Authorities the discretion to attach such other conditions to an HMO licence as it considers appropriate in relation to a number of specified matters. These include :

“conditions requiring facilities and equipment to be made available in the house for the purpose of meeting standards prescribed under section 65” (see 7.7 above).

“conditions requiring, in the case of any works needed in order for any such facilities or equipment to be made available or to meet any such standards, that the works are carried out within such period or periods as may be specified in, or determined under, the licence”

So, Local Authorities may grant a licence with a condition attached that certain fire safety works are carried out within a specified period of time to satisfy them that the HMO is reasonably suitable for occupation in terms of fire safety under section 64 (i.e. “ensuring appropriate fire precaution facilities and equipment are provided of such type, number and location as is considered necessary”).

A.42 Two other considerations are important in terms of HMO fire safety licence conditions.

Where a category 1 or 2 hazard is identified in a licensable HMO the Act is clear that the appropriate enforcement route to remove it is via Part 1 (HHSRS). However, this rule does not preclude Local Authorities from attaching fire safety conditions as described above to the licence even if this brings about the same result. This is dealt with in section 67:

“ 67. (4) As regards the relationship between the authority’s power to impose conditions under this section and functions exercisable by them under or for the purposes of Part 1 (“Part 1 functions”)—

(a) the authority must proceed on the basis that, in general, they should seek to identify, remove or reduce category 1 or category 2 hazards in the house by the exercise of Part 1 functions and not by means of licence conditions;

(b) this does not, however, prevent the authority from imposing licence conditions relating to the installation or maintenance of facilities or equipment within subsection (2)(c) (section 65 prescribed standards for appropriate fire precaution facilities and equipment), even if the same result could be achieved by the exercise of Part 1 functions;

A.43 In practice, as a rule, where an authority encounters a significant fire hazard (category 1 or 2) in a licensable HMO it should seek to remove or reduce it using Part 1 of the Act (HHSRS). However, when granting a licence for an HMO it must satisfy itself that there are appropriate fire precaution facilities and equipment in the house. Where that is not the case it may attach a condition to the licence requiring works to ensure these facilities and equipment are installed within a specified time period. This practice will benefit landlords as well as the authority because relying solely on the mandatory licence condition described in paragraph 7.8.1 above, may not provide adequate fire safety to meet the section 65 requirement and may leave a category 1 hazard in place which will require further remedial works in the near future when the Local

Authority discharges its duty to remove it under the Act. Achieving a comprehensive and reasonable standard of fire safety via the licensing condition will avoid works being carried out which will have to be upgraded or reversed in a relatively short period of time.

- A.44 A note of caution must be exercised in relation to licence conditions requiring works within the common parts of premises. Article 43 of *The Regulatory Reform (Fire Safety) Order 2005* states that any condition applied in the common parts of premises to which the Order applies shall have no effect. Whilst it is acknowledged that neither legislation holds primacy, any licence condition may have no effect where a properly conducted risk assessment has indicated a higher level of provision is necessary. In view of this the terms of the "*Protocol between Local Housing Authorities and Fire and Rescue Authorities to improve fire safety*" should be followed in all cases when establishing licence conditions requiring works within the common parts of premises to which the Order applies.
- A.45 For properties falling within the HMO definition, but outside the scope of licensing, enforcement of fire safety standards will fall under Part 1 of the Housing Act 2004 and the *Regulatory Reform (Fire Safety) Order 2005*, and again the terms of the protocol should be followed.

A.46 HMO management regulations

- A.47 *The Management of Houses in Multiple Occupation (England) Regulations 2006* apply to all HMOs whether licensable or not. The exception is converted blocks of flats to which section 257 of the Housing Act 2004 applies. i.e. houses or buildings converted into self-contained flats where the conversion did not (and still does not) comply with the building standards under the Building Regulations 1991 and less than two-thirds of the flats are owner-occupied - separate Regulations apply to these.
- A.48 Regulation 4 places specific duties on managers of HMOs in respect of fire safety. The manager must ensure that:
- all means of escape from fire in the HMO are kept free from obstruction and maintained in good order and repair,
 - any fire fighting equipment and fire alarms are maintained in good working order,
 - all notices indicating the location of means of escape from fire are displayed in positions within the HMO that enable them to be clearly visible to the occupiers (unless the HMO has four or fewer occupiers).
- A.49 Regulation 10 places specific duties on occupiers of HMOs in respect of fire safety. Every occupier of the HMO must:
- conduct himself in a way that will not hinder or frustrate the manager in the performance of his duties;
 - allow the manager, for any purpose connected with the carrying out of any duty imposed on him by these Regulations, at all reasonable times to enter any living accommodation or other place occupied by that person;
 - provide the manager, at his request, with any such information as he may reasonably require for the purpose of carrying out any such duty;
 - take reasonable care to avoid causing damage to anything which the manager is under a duty to supply, maintain or repair under these Regulations;

- comply with the reasonable instructions of the manager in respect of any means of escape from fire, the prevention of fire and the use of fire equipment.

A.50 There is no provision for service of notice requiring works to remedy management failings under these Regulations but failure to comply with the Regulations is a criminal offence under section 234(3) of the Housing Act 2004 and carries a level five fine on conviction (maximum £5,000 per offence).

A.51. The Regulatory Reform (Fire Safety) Order 2005

A.52 The FSO applies to any place but Article 6 specifically states that it does not apply to domestic premises. (The prohibition order power is available though for domestic premises except for those occupied as a single private dwelling). Domestic premises are defined in the Order as premises occupied as a private dwelling.

So in this context, the FSO does apply to:

- the common parts of HMOs
- the common parts of flats and maisonettes
- the common parts of sheltered accommodation
-

but not to the individual flats, maisonettes, bedsits or residential units themselves. For these types of premises the FSO is enforced by the local Fire and Rescue Authority but they must consult the Local Housing authority before taking enforcement action.

A.53 The FSO places a duty on the responsible person to take such general fire precautions as will ensure, as far as is reasonably practicable, the safety of all relevant persons. Relevant persons include anyone lawfully on the premises and those in the vicinity of the premises who would be affected by any fire at the premises. All persons within an HMO are likely to be considered relevant persons. The responsible person is the person having control of the premises so will usually be the landlord or manager of the premises.

A.54 General fire precautions include, where necessary:

- measures to reduce the risk of fire occurring
- measures to reduce the spread of any fire through the premises
- measures in relation to the means of escape
- measures to ensure the means of escape can be safely used at all times
- fire fighting measures
- means of fire detection and warning
- action to be taken in the event of fire
- mitigating the effects of fire

A.55 In order to comply with the duties imposed by the FSO the responsible person must carry out a fire risk assessment to identify what fire hazards exist at the premises and what measures have been taken or will be taken to minimize the risk. The risk assessment must pay particular attention to those at special risk e.g. disabled persons, elderly persons, children or those with special needs. Any other specific risks should be noted e.g. the presence of dangerous

substances at the premises. These details should be recorded and are known as "significant findings". They must be recorded if the premises is a licensed HMO or there are five or more people employed by the business as a whole (not necessarily at the subject premises). A fire risk assessment must be carried out irrespective of the requirement to record the significant findings. The responsible person must ensure a competent person(s) carries out any necessary fire prevention or protection works identified by the risk assessment i.e. someone with enough training and experience, knowledge and other qualities to be able to implement the measures properly. This could be the responsible person him/herself in many cases. The responsible person must also give all tenants and other relevant persons information on risks identified in the risk assessment and information on fire safety measures and procedures for the premises. All fire safety measures at the premises must then be subject to a proper system of maintenance by a competent person so as to be kept in efficient working order and in good repair. The risk assessment must be regularly reviewed to ensure it is kept up to date.

A.56 *"In practice, it is very unlikely that a properly conducted fire risk assessment, which takes into account all the matters relevant for the safety of persons in case of fire, will conclude that no fire precautions (including maintenance) are necessary".* **Regulatory Reform (Fire Safety) Order Guidance Note No. 1: Enforcement: Communities and Local Government**

A.57 The relevant enforcement agencies are defined in article 25 of the FSO but in the types of premises covered by this guide this will usually be the Fire and Rescue Authority. Inspectors enforce the provisions of the FSO and have certain powers to require information and to enter premises. Enforcement actions which may be taken under the Order are as follows:

Serve an alterations notice (article 29)

This is used where the Fire and Rescue Authority consider premises to be high risk or to have the potential of becoming high risk should alterations be made or change of use occur. It requires the responsible person to notify the Authority before making any such changes.

Serve an enforcement notice (article 30)

Where the Fire and Rescue Authority is of the opinion that the responsible person has failed to comply with any provision of the FSO or are dissatisfied with the risk assessment or action taken under it, it may serve an enforcement notice on that person specifying the steps required to remedy the failure.

Serve a prohibition notice (article 31)

Where the Fire and Rescue Authority is of the opinion that the use of a premises involves or will involve a risk to relevant persons so serious that use of the premises ought to be prohibited or restricted it may serve a prohibition notice.

Note: The article 31 prohibition notice power is unique in that it can be applied to any, or all, parts of the premises covered by this guide including the individual units of accommodation, whereas all other powers under the FSO apply only to the common parts.

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- A.58 Failure to comply with any duty imposed by the FSO or the requirements of an alterations notice, enforcement notice or prohibition notice is a criminal offence under article 32 of the FSO and carries a level 3 or 5 fine on conviction. There is a right of appeal to a Magistrates Court against any notice.
- A.59 Parts C and D of this LACORS guide give guidance on how to comply with the general fire safety duties required under the FSO as well as meeting other regulatory requirements.
- A.60 **More detailed guidance on compliance with The Regulatory Reform (Fire Safety) Order 2005 can be found in:**

HM Government fire safety risk assessment sleeping accommodation guide

Download from <http://www.communities.gov.uk/publications/fire/firesafetyrisk4>

APPENDIX 2: PROTOCOL BETWEEN LOCAL HOUSING AUTHORITIES AND FIRE AND RESCUE AUTHORITIES TO IMPROVE FIRE SAFETY

To be included in final guidance document

APPENDIX 3: EXAMPLE FORM FOR RECORDING SIGNIFICANT FINDINGS FROM THE FIRE RISK ASSESSMENT (alternative formats are acceptable)

Risk Assessment – Record of significant findings		
Risk assessment for Building:	Assessment undertaken by	
Location:	Date:	Completed by:
Sheet number Floor/area:	Signature:	Use:
Step 1 – Identify fire hazards		
Sources of ignition	Sources of fuel	Sources of oxygen
Step 2 – People at risk		
Step 3 – Evaluate, remove, reduce and protect from risk		
(3.1) Evaluate the risk of the fire occurring		
(3.2) Evaluate the risk to people from a fire starting in the premises		
(3.3) Remove and reduce the hazards that may cause a fire		
(3.4) Remove and reduce the risks to people from a fire		
Assessment review		
Assessment/review date	Completed by	Signature
Review outcome (where substantial changes have occurred a new record sheet should be used)		

Notes:

(1) The risk assessment record of significant findings should refer to other plans, records or other documents as necessary.

(2) The information in this record should assist you to develop an emergency plan; co-ordinate measures with other 'responsible persons' in the building; and to inform and train staff and inform other relevant persons.

GLOSSARY

Some useful fire safety terms

Area of high fire risk	Room or other area which because of its function, use or contents, presents a greater risk of fire occurring and developing than a standard risk room or elsewhere; e.g. large kitchens, boiler rooms, large storerooms and similar.
Back-up supply	See Stand-by Supply
Circulation Spaces	Passages, corridors, landings, hallways, lobbies and stairways forming part of an escape route.
Competent Person	A person suitably trained and experienced so as to be able to properly examine, test and undertake any remedial action and to present the information in a report.
Final Exit	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 effects of fire.
Fire resisting door assemblies	Complete construction of door, frame, all door hardware (and intumescent products and smoke seals where appropriate) which has been tested to prove its fire resistance performance to a particular standard.
Fire test report	The documentation received from a testing house detailing a test carried out on a particular product or construction and the fire resistance performance achieved by the product/construction in that test.
Flat in Multiple Occupation (FMO)	A self-contained flat occupied by persons who do not form a single household
Intumescent (material)	Material which swells to several times its original volume when subjected to heat. Provides fire stopping and insulating properties. Usually of volcanic origin.
NICEIC	National Inspection Council for Electrical Installation Contracting
Nuisance alarms	Alarms sounding in a system not caused by a genuine fire - may result from poor system design, occupier behaviour or a fault in the system
Pictogram	A diagram conveying a message without the use of words
Plasterboard	A board of gypsum plaster enclosed between and bonded to two paper

sheets.

Relevant persons	Relevant persons includes anyone lawfully on the premises and those in the vicinity of the premises who would be affected by any fire at the premises.
Responsible Person	A person appointed or authorised by the property owner or person having control of the property for a particular purpose e.g. to supervise and carry out routine checks of the fire alarm system.
Risk analysis	An exercise to determine the level of risk of suffering harm in the event of fire based upon a range of criteria - see Part B
Risk room	A room which because of its function, use or contents, presents a risk of fire occurring and developing, typically kitchens, living rooms and bedrooms etc – see specific risk considerations in 28.2 - also see " <i>Area of high fire risk</i> " above
Room sealed appliance	An appliance whose combustion system is sealed from the room in which the appliance is located and which obtains combustion air from a ventilated uninhabited space within the premises or from the open air outside the premises and which vents the products of combustion to open air outside the premises
Self-contained units	The meaning within this guide relates to conversion flats in single occupation with all amenities behind the front door
Soffit	Underside of staircase, balcony, architrave, arch etc.
Stand-by supply	Battery power to fire alarm or lighting systems which cut in if mains power fails
Storey	For the purposes of this guidance when counting the number of storeys the reader should count all floors from the level of the final exit to the topmost floor (include mezzanines as storeys). Where the final exit is located on the ground floor, (or raised ground floor) any lower ground floor/basement/cellar should not be counted. Therefore, a house with a basement, ground and two upper floors with its entrance/final exit at ground floor level should be counted as a three storey house. Note: this is a different convention to that in the HMO licensing definition as this guidance is considering the distance of travel to the final exit as a factor in determining fire risk.
Suitably qualified person	See Competent Person above
Test Report	See Fire Test report
Voids	Unused empty spaces within a building.

Where necessary

The Regulatory Reform (Fire Safety) Order 2005 Order requires that fire precautions should be provided (and maintained) *where necessary*. This means those which are needed to reasonably protect relevant persons from risks to them in case of fire. This will be determined by the findings of the risk assessment including the preventative measures being taken. In practice, it is very unlikely, that a properly conducted fire risk assessment, which takes into account all the matters relevant for the safety of persons in case of fire, will conclude that no fire precautions (including maintenance) are necessary.

BIBLIOGRAPHY

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LACORS – HOUSING – FIRE SAFETY

Track post consultation changes

Date	Change	Comment
26.03.08	Typo errors corrected (DASH)	
26.03.08	Appendix 1 heading inserted and index amended accordingly	
27.03.08	CLG amendments made throughout document (some remain outstanding pending discussion with CLG)	
27.03.08	Part C – fire risk assessment replaced with CLG comments. Some additional original detail retained as considered helpful to landlords. Suggested significant findings template included at Appendix 3	
07/04/08	All DASH detailed comments considered and built in	
07/04/08	HOMESTAMP & Nat HMO NETWORK comments begun	
10/04/08	Intro re-written, legislative section moved to App 1. Glossary re-written	
11/04/08	CFOA comments incorporated	
22/04/08	Steering group decision points added	
25/04/08	All drafting queries corrected	
26/04/08	Back to back houses, basements and mixed commercial added	
28/04/08	Re-numbered and re-referenced	
27/04/08	Paul Dryden's final comments added Brian Martins final comments on travel distances added W Yorks comments on back-to-back houses added	