PRACTICAL FIRE SAFETY GUIDANCE FOR SMALL PREMISES PROVIDING SLEEPING ACCOMMODATION

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Chapter 1: INTRODUCTION

1. This guide has been produced to assist those who have responsibility for ensuring fire safety in certain flats, maisonettes and other small premises which provide sleeping accommodation in Scotland. The *Fire (Scotland) Act 2005*, as amended, introduced changes to fire safety law in Scotland and repealed previous fire safety legislation. Sections 53, 54 and 56 of the *Fire (Scotland) Act 2005* place a duty on employers, employees, managers, owners and others in relation to fire safety. The guide may also be helpful to all other persons with a role in ensuring fire safety in premises providing sleeping accommodation.

2. Fire can pose a serious risk to the occupants of premises providing sleeping accommodation. People are vulnerable to fire when asleep and the level of risk increases at night, particularly when they are sleeping in unfamiliar accommodation. This guide will assist owners, managers, staff, landlords/managing agents and, in some cases, residents/tenants to achieve a fire safe environment in their premises and will also assist in achieving compliance with fire safety law. Fire safety risk assessment underpins the law and should be the foundation for all the fire safety measures in the premises.

3. This guidance has been prepared by the Scottish Government, and is one in a series of guidance documents aimed at offering fire safety advice for different types of premises. In Scotland, this guide supersedes the use of the following guidance documents **in respect of fire safety** in applicable flats, maisonettes and other small premises:

- *Guide to Fire Precautions in Premises used as Hotels and Boarding Houses which Require a Fire Certificate. (ISBN 0 11 341005 0)*
- *Fire safety management in Hotels and Boarding Houses (ISBN 0 11 340980 X)*
- *Fire Safety at Work. (ISBN 0 11 340905 2)*
- *Fire safety: An employer's guide. (ISBN 0 11 341229 0)*
- *Mandatory Licensing of Houses in Multiple Occupation: Guidance for Licensing Authorities (ISBN 0 7559 4240 X)*
- *Houses in Multiple Occupation: A Guide for Landlords (ISBN 0 7559 4241 8)*

4. In the event that this guide is read by persons with duties under the *Fire (Scotland) Act 2005*, as amended, and those persons feel unable to apply the guidance, then they should seek assistance from someone with sufficient technical knowledge. In this respect, the Fire and Rescue Authority or Joint Fire and Rescue Board, as principal enforcer of the legislation, cannot undertake the role. However, the authority does have a statutory requirement to provide general advice on request about issues relating to fire safety and should be able to provide information and advice which will assist dutyholders to understand their obligations under the law.

Chapter 2: SCOPE

5. The guidance in this document is applicable to general fire safety in a variety of small premises providing sleeping accommodation and which fall within the scope of Part 3 of the *Fire (Scotland) Act 2005*, as amended. While these "small premises" may share the characteristics of a domestic dwelling, for the purpose of this guide they are defined as any premises providing sleeping accommodation which comprise:

- Up to 2 storeys in height with a maximum single storey area of 200 m^2;
- 3 storeys in height with a maximum single storey area of 100 m^2 ; or
- Individual flats or maisonettes, regardless of storey height, with a maximum single storey area of 200 m^2 (other than where the whole building falls within the scope of Part 3 of the Fire (Scotland) Act 2005, as amended, such as where all flats within a block are licensable houses in multiple occupation (HMOs)).

6. The scope includes buildings or premises put to a variety of uses, such as small hotel, boarding house, hostel, HMO subject to licensing, self catering or bed and breakfast accommodation: but certain small premises used for self-catering holidays or bed and breakfast, for which there is separate guidance, are excluded from this guide.

7. Separate guides are available for medium and large premises and for specific small self-catering and bed and breakfast premises:

- '*Practical fire safety guidance for medium and large premises providing sleeping accommodation'* applies to premises which provide sleeping accommodation and which exceed the size criteria in paragraph 5;

- '*Practical fire safety guidance for small bed and breakfast and self-catering premises*' applies to premises used for self-catering holidays (to be occupied by not more than 10 persons) and bed and breakfast premises in the home of the resident operator (for not more than 8 guests) and in either case; have a means of escape from bedrooms via a traditional 'hall' with at least one exit directly to the outside; do not have letting or guest accommodation below a ground floor or above a first floor; do not act as the principal residence for paying guests; and do not have any storey area over 200 m^2 internal floor space.

8. Generally, the occupants of premises to which this guide applies can be considered in terms of three different categories:

- Short-term guests who are unfamiliar with the premises and where there is an element of control by an owner, such as in a small hotel;
- Residents (including long term guests) who have a degree of familiarity with the premises and where there may or may not be day to day control or supervision, such as in a small hostel; or
- Tenants sharing who have a degree of familiarity with the premises and where there is likely to be no other day to day control or supervision, such as in an HMO.

9. This guide is not intended to apply to premises used as a care home or for healthcare (for which there is separate guidance), or for secure accommodation or premises where persons are detained in lawful custody, such as prisons.

10. The fire safety provisions in Part 3 of the Fire (Scotland) Act 2005, as amended, take precedence over terms, conditions or restrictions in licences which relate to fire safety.

11. Where possible, this guide does not set down prescriptive standards, but provides recommendations regarding the fire safety risk assessment process, the reduction of risk and guidance on fire safety measures that can be implemented to mitigate risk. Benchmarks are offered for use to assist with assessing the adequacy of existing fire safety measures. Where existing fire safety measures fall below these benchmarks, then consideration should be given during the fire safety risk assessment as to whether this poses a risk which requires action. Where this is the case then upgrading may remove or reduce the risk. It may be reasonably practicable to upgrade to a particular benchmark in some situations but not in others. Most of the benchmarks are a modification of the Building Regulation standards and associated Technical Handbook guidance that applies to new buildings. The intent of the modification is to provide benchmarks which can be used as a comparison in existing premises.

12. It is not necessary to follow the recommendations of this guide if other fire safety risk assessment methods or fire safety measures which achieve the same end, are used. In some premises, the fire safety measures already in place may not be the same as those referred to in this guide as benchmarks, but so long as it can be demonstrated that they meet the requirement of the outcomes of the risk assessment and provide a suitable level of fire safety, they may be acceptable.

13. Where the premises are, or include a listed building (a building of special architectural or historic interest, included in a list compiled by the Scottish Ministers), there may be a need to consider the character of the building inside as well as out. Measures to prevent fire, to limit its spread, and to ensure life safety will be as necessary in a historic building as in any other. Before changes are made, advice should be obtained from the local planning authority as to whether Listed Building Consent may be required. Alternatives could be considered to some of the conventional fire safety measures set out in the benchmarks, as these may, in some cases, harm the character of historic buildings. A fire engineering approach combining automatic fire detection, fire suppression system and smoke control is recommended in the Historic Scotland Technical Advice Notes 11, 14, 22 and 28.

14. All new buildings, including premises which provide sleeping accommodation, must be designed to the mandatory standards under the *Building (Scotland) Regulations 2004.* Guidance on the design and construction of new buildings is contained in the *Scottish Building Standards Technical Handbook for Domestic Buildings* and the *Technical Handbook for Non-Domestic Buildings*. Similarly, buildings which undergo extension, structural alteration or change of use should also meet the same standards and be subject to building warrant approval, if required.

15. In many premises, existing fire safety measures have been incorporated in accordance with Building Regulations. Nothing in this guide should be interpreted as permitting a reduction in the standard of fire safety measures where they have been provided to comply with Building Regulations. It is possible for a standard higher than that required by Building Regulations to be necessary and appropriate as a consequence of a fire safety risk assessment.

Chapter 3: WHAT THE LAW REQUIRES

16. This guide and its contents constitute guidance given by the Scottish Ministers in terms of section 61(2) of the *Fire (Scotland) Act 2005*, as amended. Part 3 of the *Fire (Scotland) Act 2005,* as amended*,* and related subordinate legislation set out the fire safety duties for the majority of premises in Scotland, with the exception of private dwellings. Houses in multiple occupation (HMOs) subject to licensing under the *Civic Government (Scotland) Act 1982 (Licensing of Houses in Multiple Occupation) Order 2000* do not fall within the definition of private dwelling for the purposes of the *Fire (Scotland) Act 2005*, as amended. Premises which are not private dwellings and are used for sleeping accommodation will be subject to the Act and related subordinate legislation. In general, the legislation seeks to ensure the safety of persons (whether they are employees, occupants, residents, tenants, visitors or others) in the premises in respect of harm caused by fire, by setting out fire safety responsibilities.

17. Some premises providing sleeping accommodation, such as certain hotels; boarding houses; guest houses and bed and breakfast accommodation, required a fire certificate under previous legislation. One of the changes brought in by the *Fire (Scotland) Act 2005*, as amended, is the removal of the need for premises to be issued with a fire certificate. Where premises have previously been issued with a fire certificate, such fire certificates will have no legal force and fire safety in premises will be achieved by compliance with the legislation identified in paragraph 16 above.

18. The legal duty which is imposed by the legislation seeks to achieve safety in the event of fire and can be considered in terms of seven general requirements:

- Carrying out a fire safety risk assessment of the premises;
- Identifying the fire safety measures necessary as a result of the fire safety risk assessment outcome;
- Implementing these fire safety measures using risk reduction principles;
- Putting in place fire safety arrangements for the ongoing control and review of the fire safety measures;
- Complying additionally with the specific requirements of the fire safety regulations;
- Keeping the fire safety risk assessment and outcome under review; and
- Record keeping.

19. Guidance on complying with these requirements is considered in more detail in the remaining chapters. It should be noted that this chapter of the guidance is not intended to be a comprehensive summary of requirements under the *Fire (Scotland) Act 2005*, as amended, and related subordinate legislation. Anyone in any doubt about their legal obligations should seek their own independent legal advice.

Who Must Comply With These Duties?

20. The responsibility for complying with these fire safety duties in premises which provide sleeping accommodation sits with the employer/owner and other persons who have control of the premises to any extent, such as managers, landlords/managing agents, residents, tenants, contractors and volunteers working on site may also have some responsibilities. Employers are required to ensure the safety of employees so far as is reasonably practicable. This means that the sacrifice in terms of time, effort, expense, and any other disadvantages associated with the provision of fire safety measures should be weighed against the magnitude of the fire risk if they were not taken.

21. All other persons with fire safety responsibilities in respect of the premises are required to take all reasonable measures regarding the safety of persons in, or in the immediate vicinity of the premises. The fire safety responsibilities of those renting premises (or part of premises such as a room) should be considered as part of the tenancy arrangements and anyone renting the premises, such as in the case of an HMO, should make sure that they understand the extent of their responsibilities and familiarise themselves as necessary with the layout of the premises, the fire safety measures and the duties of others with responsibility for fire safety within the premises, such as the landlord/managing agent. Where premises or responsibilities are shared, each employer, owner, landlord/managing agent, resident, tenant or other person who has control over any part of the premises, is required to co-operate and co-ordinate in respect of complying with fire safety law and to inform each other of risks.

Who Enforces The Fire Safety Law?

22. The Fire and Rescue Authority or Joint Fire and Rescue Board for the area will be the enforcing authority in respect of the majority of premises to which this guide applies.

23. Enforcement officers may do anything necessary to allow them to enforce the fire safety duties, including:

- Entering premises for inspection at any reasonable time, or at any time if the officer has reason to believe that the situation is dangerous;
- Requesting information, records etc, or assistance from any persons with fire safety duties;
- Inspecting, copying or removing any relevant documents from the premises;
- Carrying out any inspections, measurements or tests considered necessary on the premises or any article or substance found on the premises;
- Taking samples of any article or substance found on the premises;
- Dismantling articles found on premises which appear likely to cause danger from fire; and
- Taking possession of an article for purposes of examination or use as evidence.

24. If the enforcing authority is dissatisfied with the outcome of the fire safety risk assessment, or the action taken, or the fire safety measures in place, it has the power to take action which could be:

- Informal action;
- Formal enforcement action which could result in the issue of an enforcement notice that requires specified action to be taken;
- In extreme cases, a prohibition notice may be issued that restricts the use of all or part of the premises until specified matters are remedied; or
- Reporting the matter for prosecution. Failure to comply with a notice issued by the enforcing authority **or** placing persons at risk by failing to carry out any duty imposed by fire safety law is an offence.

25. Enforcing authorities are required to take into account the content of this guide to assist in determining whether enforcement action may be necessary but in doing so they should have a flexible approach to enforcement and should not use the benchmarks as prescriptive standards. This would be a misinterpretation, as the objective is to use the relevant benchmarks when assessing the existing fire safety measures and the guidance provided may be a method of assisting with the reduction of the risk. Prescription is not compatible with fire safety risk assessment and all premises will be different, with each risk assessment being site specific and decisions in respect of fire safety standards should at all

times be based on judgement of risk and be justifiable, both from a compliance and an enforcement perspective.

26. Where there is disagreement with the enforcing authority on compliance issues, there is a mechanism for joint referral for third party independent determination. The enforcing authority will supply details in relevant cases. There is also a right of appeal to the court against formal enforcement action.

27. Additionally, if the premises pose a serious risk to persons in respect of harm caused by fire, or would pose such a risk if particular changes were made to the premises, the authority may issue an alterations notice that obliges the recipient to inform the enforcing authority before making specified changes to the premises.

28. In all cases, when dealing with an enforcing authority, it is important to be able to distinguish between fire safety measures that are necessary for the protection of life and which are required to comply with fire safety legislation, as opposed to any fire safety measures that provide a higher standard than is necessary to comply with fire safety legislation, such as measures provided for the protection of property or the continuation of business.

29. Fire and Rescue Service crews may visit premises to enable crew members to gain familiarisation with them in the event they are called to a fire in the premises. This type of visit is unlikely to include an assessment of compliance with fire safety law. The fact that a Fire and Rescue Service visit has taken place should not be interpreted as an endorsement of fire safety standards and procedures in the premises.

Chapter 4: FIRE SAFETY RISK ASSESSMENT

30. Employers, landlords/managing agents, managers and any persons with control to any extent of the premises providing sleeping accommodation, including its owner(s) in some cases, have duties in respect of fire safety of the premises. It is a legal requirement to carry out a fire safety risk assessment. This forms a crucial element in the overall safety policy for the premises. It is essential that the risk assessment is specific to **fire safety** and to the **premises concerned**. An overall generic risk assessment will **not** be sufficient. It is essential that the person who undertakes this fire safety risk assessment is proficient to do so.

31. Persons can be considered proficient where they have sufficient experience or knowledge, both to carry out a fire safety risk assessment and understand fully the procedures and management involved, and to undertake properly the measures referred to in this guide. Nobody knows as much about the business as those operating it. Using their knowledge and experience, they can identify key issues and practical suggestions for improvements. However, if they do not feel confident enough to undertake the fire safety risk assessment, for example, due to the complexity of the premises or the activities undertaken on them, a fire safety specialist may be commissioned.

32. This chapter explains fire safety risk assessment and sets out a step-by-step guide to the process. The method suggested shares a similar approach to that used in general health and safety guidance.

What Is A Fire Safety Risk Assessment?

33. A fire safety risk assessment is an organised and methodical look at the premises, the activities within the premises, the potential for a fire to occur and the harm it could cause to the people in and around the premises. The existing fire safety measures are evaluated and kept under review to establish whether they are adequate or if more requires to be done.

34. For the purpose of fire safety risk assessment, a **hazard** is a situation that can give rise to a fire. **Risk** has two components: the **likelihood** that a fire may occur; and the potential for a fire to cause death or injury, i.e. **consequence**. Both of these components should be considered in a fire safety risk assessment.

35. The aims of a fire safety risk assessment are:-

- To identify hazards and reduce the risk of those hazards causing harm to as low as is reasonably practicable; and
- To determine what fire safety measures and management policies are necessary to ensure the safety of people in the building should a fire occur.

How Is A Fire Safety Risk Assessment Carried Out?

36. There are five steps in the assessment process and these are shown in Figure 1.

FIRE SAFETY RISK ASSESSMENT	
1	Identify people at risk
2	Identify fire hazards Sources of ignition Sources of fuel Sources of oxygen
3	Evaluate the risk and decide if existing fire safety measures are adequate Evaluate the likelihood of a fire starting Evaluate the consequence to people from fire Implement fire safety measures · Remove or reduce fire hazards · Remove or reduce risks to people · Fire alarm · Fire-fighting equipment · Escape routes and lighting · Signs and notices · Maintenance · Effective management · Staff training
4	Record Record significant findings and action taken / action to be taken
5	Review Keep assessment under review Revise where necessary

Figure 1 Five steps of the fire safety risk assessment process

Step 1: Identify People At Risk

37. An assessment should be made of those persons at risk if a fire occurs. This involves identifying the number and location of people sleeping, using and working in the premises and other persons who frequent the premises such as visitors and contractors. In general, guests and visitors to the premises may be unfamiliar with the internal layout.

38. The maximum numbers liable to be in the building at the same time should be determined. This can be anticipated from knowledge of residency and the total number of bed spaces available.

39. Account should be taken of the lack of awareness and immaturity of any young persons employed and consideration given to employees and others who may work alone such as cleaners and anyone who may be in isolated areas such as maintenance staff.

40. Where premises accommodating guests are not continuously staffed, this should be considered in terms of the additional risk this imposes.

41. Persons who have some form of disability may have difficulty in perceiving or responding to a fire or in leaving the premises if there is a fire and this must be considered. Alterations may have been made to the premises to increase accessibility for disabled persons in order to comply with the Disability Discrimination Act. In considering staff, guests, residents, tenants and visitors, any disability and associated difficulty should be identified. Information and guidance on the evacuation of disabled persons in the event of fire is available in *Practical fire safety guidance: the evacuation of disabled persons from buildings*. Other persons may have some reason for not being able to leave the premises promptly, such as elderly persons or parents with children.

42. In some premises, such as licensed HMOs providing rehabilitation programmes (not falling within the definition of a “care home service” under the *Regulation of Care (Scotland) Act 2001*), there may be a higher probability that residents are under the influence of drugs, alcohol or medication. As a result, their mobility, awareness and understanding may be impaired. This will directly affect their ability to respond to an emergency, such as a fire. Where this is the case, then consideration should be given to the additional risks posed and the assistance which may be required by some residents in order to evacuate the premises if necessary.

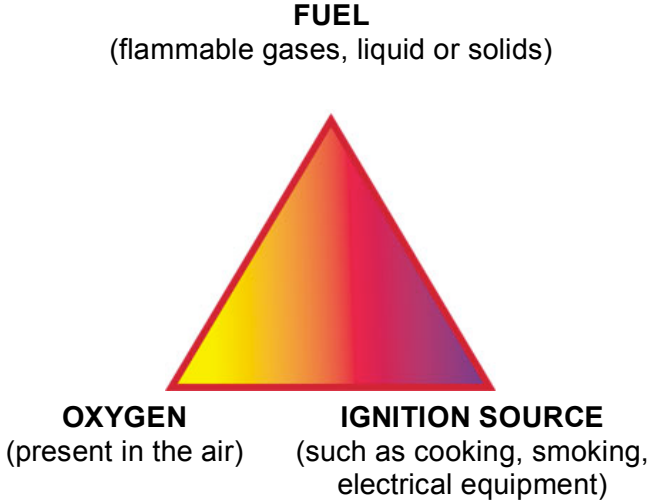
43. Any special assistance required in terms of fire safety issues can be identified when guests first register, residents are first accommodated or tenants take up a tenancy.

Step 2: Identify Fire Hazards

44. This step involves identifying potential ignition sources, the materials that might fuel a fire and the oxygen supplies which will help it burn.

45. For a fire to start, three components are needed: a source of ignition, fuel and oxygen. These components can be represented in the form of a triangle of fire as shown in Figure 2. If any one of these components is missing, a fire cannot start. Taking steps to avoid the three coming together will therefore reduce the chances of a fire occurring.

Figure 2 The triangle of fire



Identify Sources Of Ignition

46. Potential ignition sources are those where sources of heat could get hot enough to ignite material found in the premises. These sources could include:

- Smokers' material such as cigarettes, matches and lighters;
- Naked flames such as candles, gas open-flame equipment and solid fuel fires/stoves;
- Electrical, gas or oil-fired heaters (fixed or portable);
- Hot processes such as repair work by contractors;
- Cooking equipment;
- Lighting equipment such as lamps;
- Laundry equipment;
- Deliberate fire raising; and
- Faulty or misused electrical equipment.

47. Indications of 'near misses', such as scorch marks on furniture or fittings, discoloured or charred electrical plugs and sockets, cigarette burns etc, can help identify hazards.

Identify Sources Of Fuel

48. Anything that burns is fuel for a fire. Material which will burn reasonably easily and is in enough quantity to provide fuel for a fire or cause it to spread to another fuel source should be identified. This applies to contents, fixtures and fittings and also to structure and the materials used to construct or line walls and ceilings such as polystyrene or tiles. How these fuels might contribute to the spread of fire should be identified.

49. Some of the most common 'fuels' found are:

- Textiles, soft furnishings and laundry;
- Flammable liquids and solvents, such as white spirit, methylated spirit, cooking oils, disposable cigarette lighters and adhesives;
- Flammable chemicals, such as certain cleaning products;
- Stockpiles of wood/kindling used for open fires;
- Seasonal or religious occasion decorations;
- Plastics and rubber, such as video tapes and upholstered furniture;

- Waste material; and
- Flammable gases such as liquefied petroleum gas (LPG) and aerosols.

Identify Sources Of Oxygen

50. The main source of oxygen for a fire is in the air around us, such as natural air flow through doors, windows and other openings.

Step 3: Evaluate The Risk And Decide If Existing Fire Safety Measures Are Adequate

51. Step 3 of the fire safety risk assessment involves an assessment of the hazards and analysis of whether the fire safety measures taken reduce the risks posed by the hazards to an acceptable level.

Evaluate The Likelihood Of A Fire Starting

52. The chances of a fire starting will be low if there are few ignition sources and combustible materials are kept away from them. In general, fires start in one of three ways:

- **Accidentally**, such as when smoking materials are not properly extinguished or when bedside lights are knocked over.
- By **act or omission**, such as when electrical equipment is not properly maintained, or when waste is allowed to accumulate near to a heat source.
- **Deliberately**, such as intentional setting fire to external storage or rubbish bins.

53. The premises should be critically examined to identify any potential accidents and any acts or omissions which might allow a fire to start. This should include situations that may present an opportunity for deliberate ignition.

Evaluate The Consequence To People From A Fire Starting In The Building

54. Having considered the people likely to be at risk should a fire start in the building and the chances of a fire occurring, the extent of the actual risk to those people if a fire starts and spreads should be considered. In evaluating the risk to people it is necessary to consider situations such as:

- Fire starting on a lower floor affecting the escape routes for people on upper floors especially where there is only a single escape route;
- Fire developing in a space that people have to pass by to escape from the building;
- Fires that may develop in unoccupied spaces;
- Fire or smoke spreading through a building via routes such as poorly installed, poorly maintained or damaged walls, partitions, ceilings and roof voids; and
- Fire and smoke spreading through the building due to open doors, doors not fitted with self-closers, doors being wedged open or damaged doors.

55. Additionally, where the building is in multi-occupancy such as a flatted building, or is multi-use such as a mixture of offices and flats, specifically consider:

- The risk from a fire which may occur in communal parts or in another part of the building occupied by a different person; and

- The risk which a fire in the premises may pose to other occupiers of the building and any adjoining premises.

Risk Reduction

56. In implementing fire safety measures, certain principles should be considered, these are:

- Avoiding risks;
- Evaluating risks which cannot be avoided;
- Combating risks at source;
- Adapting to technical progress (as this often offers opportunities for improving working methods and making them safer);
- Replacing the dangerous with the non-dangerous or less dangerous;
- Developing a coherent fire prevention policy which covers technology, organisation of work and the influence of factors relating to the working environment;
- Giving collective fire safety protective measures priority over individual measures; and
- Giving appropriate instruction to employees or other relevant persons, such as tenants, as considered necessary.

Avoid Or Reduce The Hazards That May Cause A Fire

57. Having identified the fire hazards in Step 2, the risks should be avoided or removed if reasonably practicable to do so. If the hazards cannot be removed, measures should be taken to reduce the risks.

Remove Or Reduce Sources Of Ignition

58. There are various ways to reduce risk caused by potential sources of ignition, for example:

- Replace naked flame and radiant heaters with a central heating system;
- Restrict the movement of, and guard portable heating appliances;
- If smoking is permitted, it should be in those areas which are exempt from statutory prohibition only;
- Ensure electrical and mechanical equipment is installed, used, maintained and protected in accordance with the manufacturer's instructions;
- Ensure gas appliances are installed, used, maintained and protected in accordance with the manufacturer's instructions;
- Take precautions to avoid deliberate fire raising.
- Include instructions for proper use of cooking facilities where provided for the use of residents/tenants; and
- Consider restricting or prohibiting the use of candles and other naked flames in resident/tenant areas.

Remove Or Reduce Sources Of Fuel

59. There are various ways to reduce the risks caused by materials and substances which burn, for example:

- Ensure flammable materials are stored properly;

- Remove combustible wall and ceiling linings, such as polystyrene or carpet tiles, to reduce the surface rate of flame spread and smoke production;
- Reduce stocks of flammable and combustible materials in public areas to a minimum; and
- Develop a system for the control of combustible waste by ensuring that it is not allowed to build up and is carefully stored until properly disposed of.

Remove Or Reduce Sources Of Oxygen

60. The potential source of oxygen supplied to a fire can be reduced by:

- Closing doors and other openings; and
- Ensuring that doors are close fitting and, where appropriate, fitted with seals.

61. In some cases the action may be a precaution taken in case a fire starts, such as keeping certain doors closed.

Remove Or Reduce The Risks To People From A Fire

62. The fire risk to people should be reduced to as low as is reasonable by putting into place fire safety measures. The level of fire safety measures provided in premises should be proportional to the risk posed to the safety of the people on the premises. The higher the fire risk, the higher the standards of fire safety measures required. Fire safety law organises fire safety measures into seven groupings, which are:

- Measures to reduce the risk of fire and the spread of fire;
- Means of escape;
- Securing that the means of escape can be safely and effectively used;
- Means for fighting fires;
- Means for detecting fire and giving warning of fire;
- Arrangements for action to be taken in event of fire, including instruction and training and mitigation of the effects of fire; and
- Other measures prescribed in fire safety regulations.

Step 4: Record Fire Safety Risk Assessment Information

63. Having carried out a fire safety risk assessment in relation to the premises, the findings should, in some circumstances, be recorded, including any action taken or action still to be taken. Fire safety law requires information to be recorded where five or more employees are employed (whether they are on site or not) or the premises are subject to licensing or registration or an Alterations Notice has been issued requiring this. Recommendations in respect of recording are contained in Chapter 5.

Step 5: Review Of Fire Safety Risk Assessment

64. A review of the fire safety risk assessment should be carried out regularly. If the findings of the fire safety risk assessment are considered to be no longer valid or there has been a significant change in the matters to which it relates, such as a change to the premises that has affected the risk or the fire safety measures, the assessment should be

reviewed. Other such changes that might prompt a review include:

- A change in the number of people present or the characteristics of the occupants including the presence of people with some form of disability;
- Alterations to the building, including the internal layout;
- Significant changes to furniture and fixings; or
- Becoming aware of shortcomings in fire safety measures or potential improvements.

65. The potential risk of any proposed change should be considered before the change is introduced. If a change introduces new hazards consider the fire risk and, if significant, do whatever is needed to keep the fire risk under control. In any case the fire safety risk assessment should be kept under review to make sure that the fire safety measures remain adequate.

66. If a fire or 'near miss' occurs, this could indicate that the existing assessment may be inadequate and a re-assessment should be carried out. Identify the cause of any incident and then review and, if necessary, revise the outcome of the fire safety risk assessment in light of this experience. If the Fire and Rescue Service has attended a fire in the premises, its findings may help inform a review of the fire safety risk assessment.

Chapter 5: MANAGING FIRE SAFETY

67. A management commitment to fire safety is essential to assist with achieving suitable fire safety standards in premises and in the maintenance of a staff culture of fire safety. This chapter covers management standards that should be achieved within all premises, in respect of:

- **Fire safety policy;**
- **Emergency fire action plan;**
- **Fire safety information and training;**
- **Fire drills;**
- **Maintenance of fire safety measures; and**
- **Recording information and keeping records.**

Fire Safety Policy

68. There should be a clearly defined fire safety policy for the protection of all persons using the premises including staff, residents, tenants, guests and visitors. Factors to consider include:

- Planning, organisation and control of all matters relating to fire safety;
- Monitoring and review of the fire safety policy;
- There should be one named individual with overall management responsibility for fire safety within the premises, whether the premises are, or are not, usually staffed;
- The arrangements for carrying out and reviewing fire safety risk assessments;
- In staffed premises, there should be an adequate number of trained persons responsible for supervising and implementing the emergency fire action plan;
- In premises which are not usually staffed, such as HMOs, it is particularly important that individual owners, landlords/managing agents or other persons with fire safety responsibilities ensure that policies clearly address the needs, potential actions and where appropriate any fire safety responsibilities imposed on residents/tenants. The policy must ensure that residents/tenants and others in premises which are not usually staffed are in no doubt of the action to be taken in the event of fire and of the measures necessary to prevent an outbreak of fire;
- Preparation of an emergency fire action plan;
- All means of escape should be maintained to ensure that they can be safely used at all times;
- Maintenance and testing of all other fire safety measures;
- Training for staff or other relevant persons (such as long-term tenants), where appropriate, on fire safety and the arrangements for ensuring that this training is given;
- The need for contingency plans for when life safety systems such as fire-detection and alarm systems or sprinklers are out of order; and
- Arrangements for notifying information on risks and fire safety measures to:
    - workers from outside agencies or undertakings who are working in the premises and their employers; and
    - the parents of any child who may be employed to work on the premises.

Emergency Fire Action Plan

69. It is a management responsibility to have in place both an emergency fire action plan and arrangements to implement the plan. In premises where staff are not usually present, the owner or landlord/managing agent should ensure that an emergency fire action plan is in place and that arrangements have been made to implement the plan and make

guests/residents/tenants aware of these arrangements. The evacuation of all persons, including disabled persons, is a responsibility of the employer, owner or landlord/managing agent, whether the premises are usually staffed or not, and is one which cannot be delegated to the Fire and Rescue Service. For further information in respect of unstaffed premises, see paragraph 83.

70. There should be a written emergency fire action plan which sets out the action that staff/guests/residents/tenants and any other people in the premises should take in the event of a fire. It should be kept on the premises, be available in a format understood by all, as well as being known by staff/guests/residents/tenants and forming the basis of any training and instruction provided. The extent of training and instruction necessary for members of staff will potentially be more detailed than that necessary for a long-term resident or tenant and may be relatively minimal for an overnight guest. It may only be necessary to ensure that any overnight guest is made aware of the fire procedure detailed in a written fire action plan within their bedroom. The plan should also be available for inspection by the enforcing authority.

71. The purpose of the plan is:

- To ensure that the people on the premises know what to do if there is a fire; and
- To ensure that appropriate action is taken in the event of fire and that the premises can be safely evacuated.

72. In drawing up the emergency fire action plan, the results of the fire safety risk assessments should be considered along with the need for procedures for all occupants of the premises including disabled people.

73. The plan should set out details of the procedures to be followed by staff/guests/residents/tenants (and any other persons present on the premises) in the event of fire. It should be specific to the premises and should include:

- How people will be warned if there is a fire;
- What staff/guests/residents/tenants should do if they discover a fire;
- What staff/guests/residents/tenants should do in the event of a fire;
- The arrangements for calling the Fire and Rescue Service;
- The specific action to be taken by the person in charge (if one has been appointed for the premises or building) when the fire alarm activates or a fire is discovered;
- The procedure to be followed to evacuate the premises, taking into account any personal emergency egress plans;
- Where persons should assemble or be taken after they have left the premises and procedures for checking whether the premises have been evacuated;
- Arrangements for fighting fire by staff or other relevant persons (such as tenants, where appropriate);
- Any equipment, including cooking equipment, or power supplies that need to be stopped or isolated if there is a fire; and
- Procedures for meeting the Fire and Rescue Service on its arrival and notifying it of the circumstances of the incident and whether all persons are accounted for.

74. The needs or assistance required by any disabled staff member or disabled person who uses the premises should be discussed with the individual. An individual personal emergency egress plan (PEEP) for each of these persons should be established. A PEEP should contain details of special evacuation arrangements. More information about the use of PEEPs is available in *Practical fire safety guidance: the evacuation of disabled persons from buildings*.

75. In general, **lifts** should not be used for evacuation though some lifts may be designed for evacuation of disabled persons. If lifts are to be used for evacuation, this should be agreed and co-ordinated with the Fire and Rescue Service.

Fire Safety Information And Training

76. It is essential that staff or other relevant persons, such as tenants, know what they have to do to safeguard themselves and others on the premises and to have an awareness of the importance of their actions. This includes risk reduction, maintenance of fire safety measures and action if there is a fire.

77. All staff (including volunteers and temporary staff) or other relevant persons, such as tenants, should be given an appropriate level of information and instruction on the fire safety measures to be taken or observed on the premises. Where necessary, appropriate information and training should be tailored to the needs of each category of occupier. The specific fire safety training needs of any young persons employed should be considered. Training or instruction should be provided as soon as possible after each relevant person takes up appointment or residence and regularly, at predetermined intervals after that, to ensure that they remain familiar with procedures. Information should be given to staff, or other relevant persons, whenever there is a change in the risk from fire, where changes have been made to the emergency fire action plan or other fire safety measures, or where working practices or people's responsibilities have changed.

78. Staff or other relevant persons, such as tenants, who have a supervisory role should be given details of the findings of the fire safety risk assessments and should receive training which will enable them to discharge their specific responsibility.

79. Where staff or any other relevant person, such as a tenant, may require to physically move or assist persons during an evacuation, they should receive training on the method of achieving this and should be familiar with the use of any evacuation aids or equipment provided for this purpose.

80. Written instructions should be concise, comprehensible and relevant and should be reviewed and updated as new working practices and changes are introduced. Inclusive employment policies mean that staff with differing levels of capability may be present in premises and the fire safety risk assessments should consider whether further instruction or guidance is necessary for those staff, to ensure that the evacuation strategy is appropriate and understood by everyone. Instructions will need to be given to people delegated to carry out particular tasks, such as daily or weekly fire equipment checks.

81. Instruction and training for staff should take place during working hours. The information and instruction should be in a form that can be understood, taking account of those with differing abilities such as hearing or sight impairment, those with learning difficulties and those who do not use English as their first language. Suitable arrangements for the provision of instruction and training for any relevant person with fire safety duties who is not a staff member, such as a tenant, should also be devised and implemented as necessary.

82. All training should support the fire safety strategy and emergency fire action plan, be verifiable and be supported by management records as evidence that adequate training has

been given. Fire safety training should be specific to the premises and should include the following:

- The action to take on discovering a fire;
- How to raise the alarm and what happens then;
- The action to take upon hearing the fire alarm;
- The significant findings of the fire safety risk assessments;
- The measures that have been put in place to reduce the risk from fire;
- The identity of people nominated with responsibilities for fire safety;
- Any special arrangements for serious and imminent danger to persons from fire;
- The procedures for alerting guests/residents/tenants and others;
- The arrangements for calling the Fire and Rescue Service;
- The measures in place to ensure a safe escape from the building and how they will operate;
- The personal emergency egress plans for disabled persons;
- The evacuation procedures for everyone in the building to reach an assembly point at a safe place;
- The fire prevention and fire safety measures and procedures in the premises and where they impact on staff/guests/residents/tenants and others in the building;
- The location and, where appropriate, the use of fire-fighting equipment;
- The location of the escape routes, especially those not in regular use;
- How to open all doors on escape routes, including the use of any emergency fastenings (and locks where appropriate);
- The importance of keeping fire doors closed to prevent the spread of fire, heat and smoke;
- The importance of good housekeeping;
- The risks from flammable materials used or stored on the premises;
- The precautions to be taken to minimise and control the risks, with particular attention to their role in reducing and controlling fuel and ignition sources; and
- How to stop any equipment or isolate power supplies where necessary in the event of a fire.

83. Where premises are not usually staffed the dutyholder (such as the owner or landlord/managing agent) has a responsibility to ensure that guests/residents/tenants know how to evacuate the building in the event of fire. This may be achieved by providing the guests/residents/tenants with verbal and/or written information on arrival about the layout of the premises, the fire safety measures in place and the duties of any others with responsibility for fire safety on the premises. It may be beneficial to re-iterate this information to guests/residents/tenants as necessary, regardless of whether the premises are staffed or not.

Fire Drills

84. The extent of fire drills will, depending on individual circumstances found in the range of premises covered by this guide, vary in terms of their complexity. However, in the majority of premises which fall within the scope of this guide, it is anticipated that any fire drill / procedure would be relatively straightforward in terms of its content and implementation. Drills should be tailored to suit the needs of different occupancies and should be aimed at ensuring all of those persons with responsibilities relating to fire know exactly what is required of them before any fire occurs.

85. Fire drills should be carried out to check that staff and other relevant persons, understand the emergency fire action plan (including all relevant personal emergency egress

plans), to ensure that they are familiar with operation of the emergency fire action plan, to evaluate effectiveness of the plan and to identify any weaknesses in the evacuation strategy.

86. The frequency of drills for each building will be different and should reflect the level of risk but generally fire drills should take place at least once a year. Where there is more than one escape route, the drills should assume conditions in which one or more of these are obstructed by smoke. The fire routine should be rehearsed as fully as circumstances allow.

87. In some premises, such as small bed and breakfast establishments, which provide limited sleeping accommodation for guests with only family members/single member of staff operating the business, it may be impractical to carry out a full evacuation of premises, particularly where guests are likely to move on after a one night stay. Nonetheless, it is essential that :

- Family/staff members with duties to perform following discovery of a fire or actuation of a fire alarm are aware of their duties; and
- Family/staff members carry out their own modified “fire drill” periodically to ensure that their role in any emergency fire procedure is tested in practice. In addition, a discussion of fire safety issues, including guest evacuation, should be considered.

88. For leased holiday home accommodation where staff are not usually present, a fire drill may not always be necessary or practical, particularly where such accommodation has a simple layout and is only used for that purpose for short periods on a self-catering basis. That notwithstanding, all relevant fire safety measures, such as the fire escape plan, should be highlighted to the resident as part of the arrangements for hire and there should be a system in place to ensure that the fire alarm system is tested regularly for as long as the premises are used for that purpose.

89. Where premises have residents or tenants staying for longer periods, such as in some small hotels/boarding houses or HMOs, the residents or tenants should be made fully aware of emergency procedures which should be tested by a fire drill involving a full evacuation of the premises concerned.

90. Where there is the possibility that someone may misinterpret the fire drill and call the Fire and Rescue Service, it may be appropriate to inform the Fire and Rescue Service prior to the commencement and on conclusion of a drill in order to alert it to the exercise and so prevent its unnecessary attendance.

91. When carrying out the fire drill it may be helpful to:

- Circulate details concerning the fire drill and inform all staff and others (where necessary) of their duty to participate;
- Ensure that any equipment which is in use, such as cookers, can be made safe by isolating or turning off controls, where appropriate;
- Inform visitors if they are present; and
- On occasion, have a fire drill when staffing levels are at their minimum.

92. The pre-planned procedure for checking that all persons have evacuated, should be carried out. In some cases this will involve a roll call being carried out, for example by using a guest register, as soon as possible at the designated assembly point(s), noting any persons who are unaccounted for. In a fire evacuation this information would need to be passed to the Fire and Rescue Service on arrival. The results of the fire drill should be recorded.

93. Throughout the fire drill, the person in charge and any nominated observers should pay particular attention to:

- Inappropriate actions such as stopping to collect personal items etc;
- Difficulties experienced by people with disabilities;
- Communication difficulties with regard to the roll-call and establishing that everyone is accounted for;
- The use of frequently used routes instead of the nearest available escape routes;
- Difficulties with the opening of doors; and
- Doors not being closed as people leave rooms.

Maintenance Of Fire Safety Measures

94. In all premises, including those not usually staffed, emergency routes and exits, fire-fighting equipment, fire alarm, escape route lighting, Fire and Rescue Service facilities and other fire safety measures should be kept in efficient working order and be covered by a suitable system of maintenance. There should be regular checks, periodic servicing and maintenance and any defects put right as quickly as possible. Some systems and equipment will be the subject of a British Standard which will likely contain recommendations in respect of maintenance and testing. Experience in individual premises, **especially premises which are not usually staffed**, may show that there is a need to vary the suggested frequencies. Additionally, residents/tenants in such premises, which could include HMOs or leased holiday home accommodation, may have some responsibilities as a result of their tenancy agreement or lease. It may be appropriate for residents/tenants to carry out some basic tests and checks, in the absence of the owner or landlord/managing agent, subject to them being proficient to do so. However, responsibilities are likely to be restricted to some daily and/or weekly tests and checks only. Residents/tenants should be encouraged to notify the landlords/managing agents of any deficiencies in fire safety measures, such as inoperative smoke detectors or broken door closers, as soon as possible. Landlords/managing agents should have a system to resolve deficiencies identified by individual tenants or by their normal routine inspection programme. The examples below of testing and maintenance are not intended to be prescriptive and other testing regimes may be appropriate where this can be justified. Six monthly and annual tests will normally be carried out by a person with specialist knowledge, possibly by entering into a service contract. The following are examples of checks and tests that should be carried out:

95. Daily:

- Walk through premises and check escape routes to ensure they are clear of obstructions and combustible materials and that self-closing doors are not wedged open; and
- Where provided, check any fire alarm control panel and indicating equipment to ensure the system is active and fully operational.

96. Weekly:

- Where a BS 5839: Part 6 Grade A or D fire alarm system has been installed, then test the system by activating the test facility. Where manual call points are fitted, then test the system by activating a manual call point, usually by inserting a dedicated test key. This will check that the control equipment is capable of receiving a signal and in turn, activating the warning alarms. It is good practice to test the alarm at the same time each week. During a test, the alarm should not operate for too long so that there can be a ready distinction between a test and an unplanned actuation. Where the

system is connected to an alarm receiving centre, the centre should be notified prior to testing and on completion of the test;
- Where appropriate, a check should be made to determine that the testing of the fire alarm also results in the operation or disabling of any linked features;
- Check that all safety signs and notices are legible;
- Check escape routes, and test exit locking mechanisms such as panic bars and push pads; and
- Ensure that fire door self-closing devices operate effectively.

97. Monthly:

- Functional tests of all escape route lighting systems should be at an appropriate time when, following the test, they will not be immediately required. However, some modern systems have self-testing facilities that reduce routine checks to a minimum. Depending on the type of installation certain routine checks and routine maintenance work may be able to be done in house. Test methods will vary. Further maintenance may need to be carried out by a service engineer;
- Carry out brief visual check of fire extinguishers to ensure there are no obvious faults; and
- Fire doors should be checked to ensure they are in good working order as follows:
  - Inspect doors for any warping or distortion that will prevent the door from closing flush into the frame;
  - Check any fire-resisting glazed panels are in good condition and secure in their frame; and
  - Check that intumescent strips and smoke seals are in good condition.

98. Six monthly:

- A person with specialist knowledge of fire-warning and automatic detection systems should carry out six-monthly servicing and preventive maintenance on the fire alarm.

99. Annual:

- Maintenance of portable fire extinguishers;
- Annual discharge test of escape route lighting; and
- Annual checks, inspection and test of sprinkler system (where fitted).

Recording Information And Keeping Records

100. Information and records as necessary to comply with the legislation should be kept and made available for inspection. The information recorded should in itself offer proof that a suitable fire safety risk assessment has been carried out. Information should be recorded in respect of:

- The significant findings from the fire safety risk assessment;
- The resulting fire safety measures and action to be taken;
- Persons who are especially at risk; and
- Fire safety arrangements for the effective planning, organisation, control, monitoring and review of the fire safety measures.

101. Records of the maintenance and testing recommended in paragraphs 94 to 99 above, should be made and retained. It is for management/landlord/the managing agent to determine how long they wish to retain this type of record, but for the purposes of audit by

the enforcing authority, records for a minimum period of three years should be available. Records can be kept in either an electronic or paper based format.

Chapter 6: REDUCING THE LIKELIHOOD OF FIRE

102. This chapter provides further information which will assist in evaluating the risk from fire and its prevention. A long-term workable and effective strategy should be developed to reduce hazards and the likelihood of a fire starting. At its simplest this means separating flammable and combustible materials from ignition sources. Advice under the following headings is given in this chapter:

- **Housekeeping and storage;**
- **Storage and use of dangerous substances;**
- **Safe use of equipment;**
- **Electrical;**
- **Smoking;**
- **Managing building work and alterations;**
- **Particular hazards in escape routes;**
- **Fire raising; and**
- **Furniture, textiles and bedding.**

Housekeeping And Storage

103. All reasonable provision should be made to reduce the possibility of fires occurring due to accidental ignition. Control of combustible materials should be achieved by attention to good housekeeping principles; this can reduce the likelihood of fire. Combustible materials are not just those generally regarded as highly combustible, but all materials that will readily catch fire. By carefully considering the type of material, the quantities kept and the storage arrangements, the risks can be significantly reduced. If a considerable quantity of combustible waste material is generated then a formal plan should be developed to manage this effectively. Some of the practices which should be followed are:

- The storage of equipment, furniture or excess materials should be in designated areas only;
- Storage of combustible materials should not be permitted in electrical switch rooms, or any other room or space containing a fixed source of ignition;
- The stacking of linen, paper or plastic packaging in stores should be in an orderly manner;
- Storage of any description should not be permitted in escape stairs or corridors unless within a locked cupboard which is separated by fire-resisting construction and with fire-resisting doors;
- Regular checks and cleaning should be carried out to prevent the accumulation of rubbish in “out of sight” spaces;
- There should be control and frequent disposal of packaging, waste and other combustible rubbish and storage external to the building should be well away from external walls or overhanging eaves;
- Bins (particularly wheeled bins) and storage containers which are used outside the building should not be kept in a position next to the building or under overhanging eaves and if capable of being readily moved, they should be secured to prevent this. In some cases where fire raising is a problem, bins may be fitted with locks; and
- Within certain premises, such as HMOs, there may be a requirement to provide appropriate waste storage and disposal facilities for residents/tenants/guests.

Storage And Use Of Dangerous Substances

104. Certain substances and materials are by their nature, flammable, oxidising or potentially explosive. These substances are controlled by other legislation in addition to fire safety law, in particular the *Dangerous Substances and Explosive Atmospheres Regulations 2002*. The principles of safe handling and storage are:

- Avoid the use of flammable materials and liquids wherever possible or substitute flammable substances and materials with less flammable ones;
- Reduce the quantity of dangerous substances to the smallest reasonable amount necessary for use;
- Correctly store dangerous substances, for example in a fire-resisting enclosure. All flammable liquids and gases should ideally be locked away, and segregated if necessary, to reduce the chance of them being involved in a fire or used in deliberate ignition;
- Ensure good ventilation to allow any flammable vapours to be dispersed; and
- Ensure that all staff/residents/tenants are aware of the fire risk of dangerous substances present and the precautions necessary to avoid danger.

105. **Aerosols** are liable to explode if involved in a fire, causing spread and intensification of fire and possibly damaging doors so that they fail to function in restricting the spread of fire and smoke. These potential consequences should be taken into account and appropriate storage and disposal arrangements put into place for aerosols, taking into account the quantities involved and manufacturers' instructions. Storage should be away from escape routes and no storage should be allowed in areas containing fixed sources of ignition such as electrical distribution boards in cupboards. They should never be stored or placed in damp areas (such as under sinks) where the container might corrode causing the canister to rupture when picked up, or on windowsills in direct sunlight or next to heat sources, however minor, where they may overheat and burst.

106. **Flammable liquids** present a particularly high fire risk. For example, a leak from a container of flammable liquid may produce large quantities of flammable vapours. These vapours can travel large distances, increasing the likelihood of their reaching a source of ignition well away from the original leak, such as a room containing heating plant and/or electrical equipment on automatic timers. The risk is reduced by ensuring the storage and use of flammable liquids is carefully managed and that materials contaminated with flammables are properly disposed of.

107. Under normal circumstances, **Liquefied Petroleum Gas (LPG)** is explosive and is heavier than air. Cylinders or cartridges should be stored and used in the open air outside the building. Particular care should be taken to minimise the possibility of involvement in a fire. LPG naked flame, portable gas or exposed element heaters should not be used indoors. Where in exceptional circumstances LPG cylinders are used indoors, such as due to failure of normal heating, only Butane should be used (Propane may be necessary for building work). Cylinders and cartridges should be kept upright in a safe place where they cannot be interfered with and away from stairways, exit doors and places where they might obstruct means of escape. They should not be beside any heat, source of ignition or readily ignitable material or be used in basements or cellars. Further guidance on the safe storage, and use, of LPG is available from the supplier or the Liquefied Petroleum Gas Association.

Safe Use Of Equipment

108. Lack of preventative maintenance increases the likelihood of fire starting in equipment. Common causes of fire in equipment are:

- Inadequate cleaning of equipment such as tumble driers;
- Allowing extraction equipment in kitchens to build up excessive grease deposits; and
- Disabling or interfering with automatic or manual safety features and cut-outs.

109. A capable person should adequately and regularly maintain equipment including cooking and heating equipment. Appropriate signs and instructions on safe use may be necessary.

110. Individual heaters where provided, should be fixed in position, installed and guarded and used in accordance with the manufacturers' instructions.

Electrical

111. Electrical equipment is a significant cause of accidental fires. The main causes include:

- Overheating cables and equipment due to overloading or loose connections;
- Incorrect installation or use of equipment;
- Damaged or inadequate insulation on cables or wiring;
- Combustible materials being placed close to electrical equipment which may give off heat (heat may be generated when equipment is operating normally or when equipment becomes hot due to a fault or inadequate ventilation); and
- Arcing or sparking by electrical equipment.

112. All electrical equipment should be installed and maintained in a safe manner. If there is any doubt about the safety of electrical installations, consult an electrician. Where portable electrical equipment is used, including items brought into the premises by staff/residents/tenants, then the potential for defects can be reduced if it undergoes portable appliance testing at suitable intervals.

113. An effective programme of planned preventative maintenance for all fixed installations and portable appliances should be implemented for the premises, with an agreed procedure for reporting faults. Once reported, action should be taken to repair any faults as quickly as possible or otherwise ensure that the equipment is made safe:

- Instruction should be available for all equipment;
- Only correctly fused extension leads should be used and should be positioned to avoid a tripping hazard;
- Ensure correct wiring of plugs and correct fuse ratings; and
- Electrical equipment should only be used for its intended purpose.

Smoking

114. Careless use of cigarettes and other smoking materials is a common cause of fire. Disposal of smoking materials also needs to be done with care. A cigarette can smoulder for some time, especially when surrounded by combustible material. Many fires are started several hours after smoking materials have been emptied into waste bags and left for future disposal.

115. In each case, premises should have a clearly defined smoking policy for residents, tenants, staff, guests and visitors. Policies should take account of the whole premises, including any areas where the statutory prohibition on smoking does not apply.

116. Where smoking by guests/residents/tenants is permitted, sufficient quantities of suitably placed ashtrays should be provided. Ashtrays should be emptied at least daily into a metal container and taken outside. Ashtrays should not be emptied into plastic waste bags which are then left inside for disposal later. Inspections of smoking areas should be made at regular intervals with staff, residents, tenants and guests being vigilant for any sign of scorch marks or burning and to ensure that smokers' materials which have been discarded are removed and that they will not ignite other materials. Where smoking takes place in external areas, consideration should be given to minimising the risk of combustible materials being ignited.

Managing Building Work And Alterations

117. Fires often occur when buildings are undergoing refurbishment or alteration, therefore before any building work or decoration starts, the fire safety risk assessment should be reviewed and additional risks likely to be introduced, considered and evaluated. Lack of pre-planning can lead to haphazard co-ordination of fire safety measures.

118. The impact of the building work on the general fire safety measures should be continuously monitored. Only allow the minimum materials necessary for the work in hand within or adjacent to the building. Additional hazards associated with building work can include:

- Hot work such as soldering, roof repair and paint stripping;
- Use of temporary electrical equipment;
- Blocking or obstruction of escape routes including external escape routes;
- Loss of normal storage facilities;
- Fire safety equipment, such as automatic fire detectors becoming affected;
- Fire-resisting partitions being breached or fire-resisting doors being wedged open; and
- Increased risk from quantities of combustible materials and accumulated waste.

119. Any areas where hot work is undertaken should be frequently inspected during the first 30 minutes after the work is completed, and again 30 minutes later to ensure that materials are not smouldering.

120. The content of skips or refuse containers may be subject to deliberate ignition; these containers should therefore not be sited against or close to a building.

Particular Hazards In Escape Routes

121. If a fire were to occur in an escape route or spread to material in the escape route, this would be a particularly difficult and threatening situation preventing occupants from escaping. Corridors and stairways that form part of escape routes should be kept clear and hazard free at all times. Items that may be a source of fuel or ignition should not be located on any corridor or stairway that will be used as an escape route (reduction in escape route width may also be an issue). Such items include:

- Portable heaters;
- Gas cylinders for supplying heaters;
- Cooking appliances;

- Upholstered furniture;
- Coat racks;
- Gas pipes, meters, and similar fittings;
- Electrical equipment;
- Seasonal decorations; and
- Combustibles, such as refuse, laundry and catering supplies.

Fire Raising

122. The possibility of deliberate fire raising should be considered as a component of fire safety risk assessment particularly in areas with a known history of vandalism or fire-setting. Fires started deliberately can be particularly dangerous because they may develop rapidly and may be intentionally started in escape routes. Appropriate security measures, including the protection of stored materials, the efficient and prompt removal of rubbish and security against unauthorised entry or access (such as the use of door entry systems), can do much to alleviate this particular problem.

Furniture, Textiles And Bedding

123. The choice of furniture, textiles and bedding can influence the ease of ignition and growth of a fire. It is recognised that some premises may contain period items of significant monetary, sentimental or historic value which, due to their age, will not comply with modern British Standard requirements. Where such items are not replaced, this should be taken into account when carrying out the fire safety risk assessment and other steps taken to reduce the potential for a fire to start and develop. Generally, however, those items which are supplied in premises should, wherever possible, meet the following benchmarks:

- **Upholstered furniture** complying with the Furniture and Furnishings (Fire) (Safety) Regulations 1988, as amended, and BS 5852 or BS EN 1021: Part 1;

- **Textile fabrics for curtains** (including nets, linings and blackout curtains) complying with BS 5867: Part 2: Type B or BS EN ISO 6940 and BS EN ISO 6941;

- **Blankets** complying with BS 5866 or BS 7175: Section 3;

- **Continental quilts/duvets and pillows** complying with BS 7175: Section 2. Quilt covers complying with BS 5815: Part 3; and

- **Mattresses** complying with BS 6807.

Chapter 7: RESTRICTING THE SPREAD OF FIRE AND SMOKE

124. To reduce the risk to persons if there is a fire, it is necessary to consider how to control or restrict the spread of fire and smoke. The majority of people who die in fires are overcome by the smoke and gases. To evaluate the risk to people in premises requires a basic appreciation of the way fires grow and how smoke and poisonous gases can spread through a building. A fire in a building can generate smoke that is thick and black, obscures vision, causes great difficulty in breathing, and can block the escape routes. Smoke is a serious threat to life which should not be underestimated.

125. Fire is spread by three methods:

- Convection;
- Conduction; and
- Radiation

126. Fire and smoke spread by **convection** is the most dangerous and causes the major proportion of injuries and deaths. When fire starts in an enclosed space such as a building, the smoke rising from the fire becomes trapped by the ceiling and then spreads in all directions to form an ever-deepening layer over the entire room space. The smoke will pass through any holes or gaps in the walls, ceiling and floor into other parts of the building. The heat from the fire gets trapped in the building and the temperature rises.

127. Some materials, such as metal can absorb heat readily and transmit it to other rooms by **conduction**, where it can set fire to combustible items that are in contact with the heated material. **Radiation** transfers heat in the air in the same way that an electric bar heater heats a room. Any material close to a fire will absorb the heat until the item starts to smoulder and then burn.

128. In this chapter, restricting the spread of fire is considered under the headings of:

- **Fire separation;**
- **Doors;**
- **Fire spread through cavities;**
- **Fire spread on internal linings;**
- **Fire spread on external walls; and**
- **Fire spread from neighbouring buildings.**

129. The protection of fire spread into escape routes is covered in Chapter 8.

Fire Separation

130. To limit the severity of fire, a building may be divided into different fire-resisting areas by fire-resisting doors, walls and floors which will provide a physical barrier to a fire. The intention is to confine the fire to the area of origin, avoiding the spread of fire, products of combustion, smoke, heat and toxic gases. **Information on the fire protection of common stairs, corridors and escape routes can be found in Chapter 8.**

131. Where buildings or parts of buildings are **in different occupation** this poses particular problems in terms of fire safety, as one occupier does not usually have any control over the working practices of their co-occupiers. The purpose of fire separation is to restrict fire spread between different occupancies. Where the premises adjoin or are part of a larger

building, such as where it is semi-detached, in a terrace or within a flatted property, the potential for an outbreak of fire in the neighbouring building or occupancy ultimately spreading to the premises should be considered. The following are benchmarks against which existing provision can be compared.

132. To maintain integrity in buildings **in different occupation**, there should be no openings or doors in separating walls and, ideally, every part of a separating wall or separating floor should be of materials that are non-combustible and which achieve a medium duration (60 minutes) fire-resistance or higher. However, if combustible materials have been used in existing premises, they should achieve the same fire-resistance as indicated above.

133. In buildings with a basement (including those in single occupation), any basement storey should be separated from the storey above by at least short duration (30 minutes) fire-resisting construction.

134. A separating wall or separating floor with at least short duration (30 minutes) fire-resistance should be provided between an integral or attached garage and a unit of residential accommodation in the same occupation.

135. Every **lift well** should be enclosed by separating walls with a medium duration (60 minutes) fire-resistance. Where the lift well does not extend the full height of the building, the lift well should form a junction with a separating floor with a medium duration (60 minutes) fire-resistance. A separating wall is not needed between a lift well and a protected zone. Where a lift is installed, the landing controls and lift car controls should be of a type that do not operate on heat or pressure resulting from a fire.

136. Where services (pipes and cables) pass through a separating floor, wall or cavity barrier they should, where appropriate, be fitted with proprietary fire-stopping materials capable of maintaining the required fire-resistance of the floor, wall or cavity barrier.

Doors

137. A closed door may restrict fire spread by holding back fire and smoke. A fire door is rated by its fire-resistance performance under test conditions: normally 30 minutes (short duration) or 60 minutes (medium duration). This test rating is an indication of test performance and not necessarily how a door will perform in a real fire. The following are benchmarks against which existing provision can be compared.

138. In determining the fire-resistance of a door, it is necessary to consider all the doorset components including the frame, glazing, side-panels, transoms and ironmongery. The gap between the door leaf and the frame is normally fitted with intumescent strips, in either the door or preferably the frame. The strips expand in the early stages of a fire in response to heat and enhance the protection given by the door. In nearly all cases, smoke seals will be required to prevent the spread of smoke at ambient temperatures. A self-closing device complying with BS EN 1154 is a normal feature of a fire door other than for some doors such as cupboards which are kept locked when not in use.

139. Fire doors are an essential part of fire separation and for the protection of means of escape. The provision of fire-resisting doors offers protection to the escape route from a fire starting in a bedroom or other room. More modern premises may have fire doors fitted to the bedrooms in compliance with Building Regulations. In other cases existing doors may be suitable which, while not meeting the specification for a fire door, are of substantial construction and close fitting. Some existing doors may have the potential to be upgraded to

the acceptable fire-resisting standard. However, existing domestic panel doors or doors which are warped, split or have substantial gaps around them may not be suitable for upgrading.

140. Where an exit door from a room, storey or a door across an escape route has to be secured against entry, it should only be fitted with a lock or fastening which is readily operated, without a key, from the side approached by people making their escape.

141. Security measures should not compromise the ability of the occupants to escape from premises in the event of fire, the emergency fire action plan, or any potential Fire and Rescue Service operations. However, it is not intended to prohibit the use of locks (including key operated locks) to secure a room or an area of premises, when that part of the premises is unoccupied.

Fire Spread Through Cavities

142. A cavity is a concealed space enclosed by elements of a building or contained within a building element. The unseen spread of fire and smoke within concealed spaces in the structure and fabric could pose a risk to occupants.

143. The premises should be examined to see if there are any easy paths through which smoke and fire may spread. Many buildings will have void areas, possibly hidden from view, which will allow smoke and fire to spread away from its source. Areas to consider are as follows:

- Vertical shafts;
- False ceilings, especially if walls do not continue above the ceiling;
- Unsealed holes in walls and ceilings where pipe work, cables or other services have been installed;
- A roof space or attic; and
- Ventilation or extractor ducting.

144. Where it is identified that there may be a risk present in relation to the areas identified above, specialist fire safety advice should be sought.

Fire Spread On Internal Linings

145. Materials used on the surfaces of walls and ceilings can significantly affect the spread of fire and its rate of growth. The potential for fire spread on internal linings in escape routes is particularly important as rapid fire spread could prevent occupants from escaping. The internal linings of premises should be such that in the event of an outbreak of fire within the building, the development of fire and smoke from the surfaces of walls and ceilings within the area of origin is inhibited. Table 1 gives benchmarks against which existing provision can be compared. Where it is not possible or practicable to achieve the benchmarks, consideration should be given to the provision of an automatic life safety sprinkler system as detailed in Chapter 11.

Table 1: Surface linings of walls and ceilings

Rooms not more than 30 m^2 (category)	Rooms more than 30 m^2 (category)	Unprotected zone (category)	Protected zone* (category)
2/3	1	1	0

***** includes any toilet or washroom within a protected zone

Category Description:

0 Materials which may fall into this category include brickwork, blockwork, concrete, ceramic tiles, plaster finishes (including rendering on wood or metal lathes), wood-wool cement slabs and mineral fibre tiles or sheets with cement or resin binding.
1 Materials which may fall into this category are timber, hardboard, blockboard and particle board, which have been treated to achieve category 1.
2/3 Materials which may fall into this category include timber, hardboard, blockboard, particle board and certain dense timber or plywood.

146. Multiple layers of wallpaper or certain paints applied to the face of a wall or ceiling surface can increase flame spread and hence the fire growth rate. For this reason, multiple layers of paper or paints are not recommended when carrying out refurbishment work involving the re-decoration of wall and ceiling surfaces.

Fire Spread On External Walls

147. If there is combustible external wall cladding, such as timber, it will be necessary to consider the potential for an outbreak of fire within the building, or from an external source, to spread on the external walls of the building and pose a risk to occupants. Fire can spread horizontally along the face of the building and vertically up the face of the building and this can result in extensive fire spread both externally and internally.

Fire Spread From Neighbouring Buildings

148. An assessment should be made to what extent a fire may spread to the premises from a neighbouring building or structure and whether this could pose a risk to occupants. This is of particular relevance if any external wall cladding is of a combustible material. The results of the assessment should then be considered and appropriate fire safety measures put in place.

Chapter 8: MEANS OF ESCAPE

149. Once a fire has started, been detected and a warning given, everyone in the premises should be able to move or be assisted to move away from the fire to a place of reasonable safety such as a protected stair. From there they should be able to continue to escape to an unenclosed safe area beyond the premises before being affected by fire or smoke. Sufficient means of escape should be provided for persons using the premises, both in terms of the number of escape routes and capacity and in terms of protection by enclosure from fire and smoke. Escape must also be considered from external areas like enclosed yards.

150. The escape time available will depend on a number of factors, including the number of escape routes available, the travel distance to be covered, the nature of the occupants, staff availability and the speed of fire growth.

151. The number and capability of people present will influence the assessment of the escape routes. The existing escape routes must be sufficient to enable the maximum number of people likely to use the premises at any time to safely escape. The outcome of a fire safety risk assessment may necessitate an increase in the capacity of the escape routes or a restriction on the number of people in the premises.

152. In multi-occupied buildings, escape routes within premises should normally be independent of separately occupied premises; people should not have to go through another occupier's premises to escape as the route may be secured or obstructed. Where such independent escape is not possible, then a robust legal agreement may be required to ensure access at all relevant times.

153. Fire escape staircases in all premises, including common staircases in flatted accommodation, should normally be enclosed with fire-resisting materials to form a protected zone(s). This is particularly relevant where the staircase is the only escape route available. For a variety of reasons, such enclosure of common staircases may not always be readily achievable, particularly where there are a number of different owners/occupiers. Where a common staircase cannot be enclosed, consideration should be given to the suitability, or otherwise, of the use to which the premises are put.

154. Providing an appropriate number of stairs, escape routes and exits is fundamental to fire safety. The information which follows in this Chapter contains benchmarks against which existing provision can be compared. Where it is not practical to reduce travel distance or to increase the number of exits, the provision of an automatic life safety sprinkler system may be considered as an alternative (see Chapter 11).

Travel Distance

155. Travel distance may be considered as follows:

- Distance travelled **within** accommodation to the final exit, protected zone or external escape stair (see Table 2);
- Distance travelled **within** a flat/maisonette to its main entrance/exit door (see Table 2); or
- Distance travelled from the main entrance/exit door of a flat/maisonette to the final exit, protected zone or external escape stair (see Table 3).

Table 2 Maximum travel distance **within** flats/maisonettes/small premises related to available directions of travel

Use	Maximum travel distance (m) [1]	
	Single direction of travel	More than one direction of travel
Flats, maisonettes and other small premises	15	32

Table 3 Maximum travel distance **from the entrance door** of a flat or maisonette

Storey height	Maximum travel distance (m) [1]	
	Single direction of travel	More than one direction of travel
Not more than 7.5 m	7.5 [2]	32 [2]
More than 7.5 m	7.5 [3]	32 [2]
Any height with an open access deck or an open access balcony serving accommodation	40 [2]	Unlimited

Notes:
[1] The maximum travel distance is dependent on the number of different exit routes available i.e. “directions of travel”
[2] Unlimited where accommodation on a storey has an alternative exit
[3] 32 m where accommodation on the storey has an alternative exit

Inner Rooms

156. An inner room is a room where access to a circulation route can only be achieved by passing through another room (see fig 3). The following conditions should apply:

- An access room should not be of a higher fire risk than an inner room, particularly where the inner room is used as a bedroom. For example, it would be unsuitable for the access room to be a kitchen where the inner room is a bedroom;
- Where an inner room is used to provide sleeping accommodation, a smoke detector(s) capable of providing a suitable warning of fire to persons within the inner room should be provided within the access room; and
- The maximum travel distance from any point in the inner room to the exit from the access room should not exceed 15 m unless there are alternative exits from the access room.

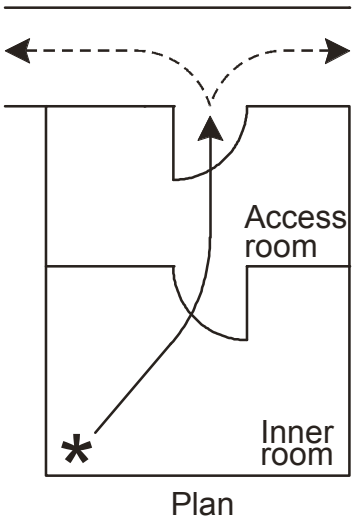


Figure 3 Single direction of escape out of an inner room and through an access room before a choice of escape routes becomes available

Escape Routes

157. Each storey and room should have a minimum of two escape routes or exits, unless otherwise indicated in the table below:

Table 4 Minimum number of storey exits / escape routes

Location/Storey Height	Number of storey exits / escape routes
Basement level	2
Flats entered from above accommodation level	2
Flats, Maisonettes and other small premises Up to 7.5 m	1
Flats, Maisonettes Over 7.5 m	2

158. An escape route should give access to a safe area beyond the building:

- Directly;
- By way of a protected zone or unprotected zone;
- By way of an unprotected zone to a protected zone;
- By way of a flat roof or access deck;
- By way of an exit to an external escape stair; or
- In the case of escape from an inner room by way of one other room but not through a place of higher fire risk.

159. An escape route should not normally be by way of a lift.

160. Where any stair, corridor or escape route serves sleeping accommodation it should be constructed of fire-resisting partitions and self-closing fire doors of at least short duration (30 minutes) fire-resistance.

161. In every storey required to have at least two escape stairs such stairs should be independent of each other. Every escape stair should give access directly to a safe area.

162. Where a building or part of a building has only one escape route by way of an escape stair, then any rooms or corridors giving access to the stair should be provided with automatic smoke detection.

163. Each escape stair should be within a protected zone which leads directly to a safe area beyond the building. A protected zone enclosing an escape stair should not enclose any room including a store room or any other ancillary rooms. The enclosing structure of the protected zone should have at least a short duration (30 minutes) fire-resistance; any door in the enclosing structure should be at least an FD 30S self-closing fire door.

164. Where an escape stair also serves a basement storey, the protected zone enclosing the escape stair in the basement storey should be separated from the protected zone containing the escape stair serving the rest of the building, by a wall or screen, with or without a door, at the ground storey floor level. The wall, screen and self-closing fire door where provided, should have a minimum of short duration (30 minutes) fire-resistance.

Escape Across Flat Roofs and Access Decks

165. An escape route across a flat roof or access deck is only acceptable provided the following criteria are met:

- Routes across flat roofs should not normally exceed 7.5 m in height;
- Routes across flat roofs should normally not be for use by members of the public;
- Any escape route across a flat roof or access deck should be unobstructed and normally be flat;
- Routes should be clearly defined and capable of being adequately illuminated across their entire length as appropriate;
- Route should have a slip free surface and be guarded with protective barriers not less than 1.1 m in height along their length including roof edge protection at the point any such route across a flat roof meets an unenclosed external staircase;
- Routes should be constructed as a fire-resisting floor with a minimum of medium duration (60 minutes) fire-resistance for a distance of 3 m on either side;
- There should be no unprotected openings such as roof exhausts/ventilators, windows or other openings, from adjacent rooftop structures, within a distance of 2 m on either side;
- Where any wall along the escape route is within 3 m of the route then it should have a minimum of short duration (30 minutes) fire-resistance up to a height of at least 1.1 m from the level of the escape route;
- An exit from a flat roof or access deck must lead directly to a place of safety via an enclosed or, alternatively, unenclosed external staircase or by other suitable means; and
- An escape route across a flat roof should be an alternative additional provision to an existing fully compliant protected staircase in any building.

External Stairs

166. External escape stairs may present additional problems to persons evacuating a building in the event of fire because the escape stair will be exposed to the possible effects of inclement weather and people who are unfamiliar with the escape routes can feel less confident using an unenclosed stair high above the ground. If external stairs are used for evacuation, then consideration should be given to weather protection measures and surfaces must be maintained free of any slip hazards. For these reasons, an external escape stair should normally only serve a building where the topmost storey height is not more than 7.5 m.

167. An external escape stair should lead directly to a safe area beyond the premises and be protected against fire from within the building in accordance with the guidance below. However, fire protection need not be provided to an external escape stair with a total rise not more than 1.6 m. External escape stairs should be constructed of non-combustible materials.

168. Every part of an external wall (including a door, window or other opening) not more than 2 m from the external escape stair, should have short duration (30 minutes) fire-resistance. However, this does not apply to a door opening from the top storey to the external escape stair. Fire protection to the wall below an escape stair should be extended to the lowest ground level. Due to the likely smoke dissipation to atmosphere, service openings including ventilation ducts not more than 2 m from the escape stair should be protected by heat activated sealing devices or systems.

Chapter 9: ENSURING THAT MEANS OF ESCAPE CAN BE USED

169. Means of escape and protected escape routes should be provided with effective lighting to allow persons to safely use these routes in the event of a fire occurring or in the event of failure of the normal lighting power supply. Signs and notices should be provided to help people identify escape routes, find fire-fighting equipment, or to provide specific information or warning about particular equipment, doors, rooms or procedures.

170. Employees, long-term residents and tenants can reasonably be expected to have an understanding of the layout of the premises, while guests and visitors will have no knowledge of alternative escape routes.

171. This chapter considers:

- **Escape route lighting;**
- **Signs; and**
- **Notices.**

Escape Route Lighting

172. The premises should be provided with lighting to the extent necessary to ensure that, in the event of an outbreak of fire within the building, illumination is provided to assist in escape and in implementing the emergency fire action plan. The following are benchmarks against which existing provision can be compared.

173. Every part of an escape route should have artificial lighting supplied by a protected circuit. However, in simple premises where borrowed lighting (for example, from fixed street lights) is found to be inappropriate following a fire safety risk assessment, it may be more appropriate to rely on self-contained lighting luminaries than to install a protected circuit to an existing lighting system.

174. If there are escape routes that are not permanently illuminated, such as external stairs, then a switch, clearly marked ‘Escape route lighting’, or some other means of switching on the lighting should be provided at the entry to that area unless there is sufficient borrowed lighting already available.

175. Escape route lighting should normally be installed to cover the following:

- Each exit door;
- Escape routes;
- Intersections of corridors;
- Outside each final exit and on external escape routes;
- Emergency escape signs;
- Staircases so that each flight receives adequate light;
- Changes in floor level;
- Windowless rooms and toilet accommodation exceeding 8 m² (excluding en-suite facilities);
- Fire-fighting equipment;
- Fire alarm call points;
- Equipment that would need to be shut down in an emergency; and
- Lifts.

176. The lighting should comply with the illumination levels specified in BS 5266: Part 1 as read in association with Part 7 and 8 (BS EN 1838).

177. Escape route lighting can be stand-alone dedicated units or incorporated into normal light fittings. Power supplies can be rechargeable batteries integral to each unit, a central battery bank or an automatic generator. Single 'stand-alone' escape route lighting units may be sufficient in some premises and these can sometimes be combined with exit or directional exit signs. The level of general illumination should not be significantly reduced by the sign.

Signs

178. In premises where there is only one escape route and the location of the escape route and fire-fighting equipment are readily apparent then fire signs may not be necessary. Where there are two escape routes a single sign indicating an alternative exit may be all that is needed. In other cases, a series of signs may be needed to indicate the direction of escape routes. The following are benchmarks against which existing provision can be compared.

179. **Escape route signs** should meet the following criteria:

- If the escape route to the nearest exit is not obvious then it should be indicated by a sign(s);
- They should provide clear, unambiguous instruction with enough information to enable people to safely leave a building in an emergency;
- Every escape route sign should, where necessary, incorporate a directional arrow. Arrows should not be used on their own;
- Escape route and exit signs should 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 m and 2.5 m above the floor. Signs on walls should be mounted between 1.7 m and 2 m above the floor.

180. Signs should be in pictogram form, the pictogram can be supplemented by text if this is considered necessary to make the sign easily understood, but an escape route sign should not use only text. Guidance is available in BS 5499: Parts 4 and 5.

181. In multi-occupied premises, co-operation between the respective occupiers, including, if necessary, the owner or landlord/managing agent should be sought to ensure that, as far as possible, all signs in the building conform to a single pattern or scheme. Where an exit cannot be seen or where a person escaping may be in doubt about an escape route, signs with directional arrows should be provided along the route.

182. **Other safety signs** should be provided to indicate non-automatic fire safety equipment if there is any doubt about its location, such as fire extinguishers that are kept in cabinets or in recesses. A number of other signs may also be necessary, such as:

- 'Fire door keep shut' or 'Fire door keep locked shut' on fire doors;
- How to operate the locking devices on doors;
- Location of sprinkler stop valve; and
- Not to use lift in event of fire.

183. All signs and notices should be illuminated to ensure they are conspicuous and legible.

Notices

184. Notices are used to provide instructions on how to use any fire safety equipment, the actions to be taken in the event of fire, and to help the Fire and Rescue Service.

185. Notices containing details of the emergency fire action plan specific to the premises should be permanently displayed in appropriate positions throughout the building. A distinction may be required between notices that are designed for visitors or guests/residents/tenants as opposed to those for staff. Notices giving full instruction for staff should also be displayed on staff notice boards. Notices for guests/residents/tenants should normally be provided in each bedroom and in common areas, where appropriate.

186. If premises regularly accommodate people whose first language is not English there may be a need to consider providing instruction in appropriate languages.

Chapter 10: MEANS FOR DETECTING FIRE AND GIVING WARNING

187. It is essential that an outbreak of fire in premises should be detected at an early stage so that the occupants are alerted and the emergency fire action plan implemented as soon as possible. The longer a fire continues undetected, the greater the risk to the safety of occupants.

188. Premises providing sleeping accommodation should be provided with a fire warning and automatic detection system. The provision of a suitable fire detection and warning system (fire alarm system) will only achieve compliance with requirements where staff and other occupants know how to respond to system operation.

189. Some of the features of a fire alarm system may be:

- **Manual call points;**
- **Automatic fire detectors;**
- **Sounders and other warning devices;**
- **Control and indicator panel;**
- **Inter-connection of fire alarm systems; and**
- **Linked operation.**

Fire Alarm Features

190. **Manual call points**, often known as 'break-glass' call points, enable a person who discovers a fire to operate the fire alarm and immediately raise the alarm and warn other people in the premises of the danger. The provision of manual call points may not always be necessary. However, where circumstances dictate that their provision is appropriate, this should be taken into account in the system design.

191. **Automatic fire detectors.** The choice of type depends on the nature of the hazard, the required speed of system response and the need to avoid false alarms. The common types of automatic fire detector are heat detectors and smoke detectors.

192. **Sounders** are provided to alert occupants and should be capable of rousing them from sleep. It is possible that automatic fire detectors with integral sounders may be sufficient for most premises to which this guide applies. Where there are staff/guests/residents/tenants with hearing impairment to the extent that the fire alarm sounders cannot be perceived, then it will be necessary to consider whether there is a need to provide tactile and/or visual alarm devices for those persons.

193. Where installed, the **control and indicator panel** provides the facility for indication of fire and fault signals and manual controls such as silencing and resetting.

System Type

194. The type of fire alarm system suitable for different occupancy types can vary. It is essential that due consideration is taken of all relevant circumstances including occupant characteristics such as age, mobility, lifestyle and socio-economic factors when designing and installing a suitable system. However, fire safety risk assessment should be used to determine the type of system required. The following are benchmarks against which existing provision can be compared.

195. Individual flats, maisonettes and other small premises normally comprising of no more than two storeys in height should be provided with a fire alarm system (designed for dwellings) complying with the recommendations of BS 5839: Part 6 for a Grade D Category LD2 system, comprising interlinked, mains-operated smoke and heat detectors (with battery back-up) connected to either a regularly used local lighting circuit, or to an entirely independent circuit to which no other electrical equipment is connected.

196. Small premises comprising of 3 storeys in height should be provided with a fire alarm system (designed for dwellings) complying with the recommendations of BS 5839: Part 6 for a Grade A Category LD2 system. It should incorporate control and indicating equipment complying with the recommendations of BS EN 54: Part 2 and comprise interlinked, mains-operated smoke and heat detectors (with battery back-up) connected to an entirely independent circuit to which no other electrical equipment is connected.

197. Regardless of system type, fire detection should include at least one:

- Smoke detector on each upper floor landing;
- Smoke detector in the ground floor hallway;
- Heat detector in each kitchen;
- Smoke detector each lounge;
- Smoke detector in each bedroom;
- Smoke detector in any basement; and
- Smoke detector in any other room off an escape route.

Inter-connection Of Fire Alarm Systems

198. In mixed-use multi-occupied/owned buildings where it is impractical or impossible to link individual systems together, the automatic fire detection installed in individual flats/accommodation should be extended into the common staircase escape route(s) at the same level as the entrance door to the premises.

Linked Operation

199. If an automatic life safety sprinkler system is installed in the building, this should be interlinked so that actuation in response to a fire should also cause operation of the fire alarm system.

Reducing False Alarms

200. False alarms from automatic fire detection systems are a major problem which cause disruption to the running of premises and result in many unwanted calls to the Fire and Rescue Service. If there are frequent false alarms in the premises, people may become complacent and may not respond correctly to a warning in the event of a real fire. False alarms should not be seen as inevitable: each one should be investigated and the cause identified. Where remedial action is required to prevent a recurrence, such as changing a detector head or re-siting a call point, then this should be implemented. A fire alarm system should never be disabled by staff/residents/tenants; if it is posing a problem then specialist help should be sought. Information on maintenance and testing of fire alarm systems is contained in Chapter 5.

201. In premises that are not usually staffed, such as HMOs, residents and tenants should be encouraged to notify the landlord/managing agent of false alarms that occur so that relevant remedial action can be taken.

Chapter 11: MEANS FOR FIGHTING FIRE

202. A small fire tackled with fire-fighting equipment in the early stages may be prevented from developing into a fire of life-threatening proportions. Fire-fighting equipment can fall into one of two categories; either (a) it is designed for use by persons, such as portable fire extinguishers or (b) it is a fixed installation, such as a sprinkler system which comes into operation automatically in the event of fire.

Fire-fighting Equipment For Use By Persons

203. Portable fire-fighting equipment should be provided in premises for use by staff or other relevant persons, such as tenants, where appropriate. Fire-fighting equipment can be used to prevent a small fire developing into a large one. The safe use of an appropriate fire extinguisher to control a fire in its early stages can also reduce the risk to people in the premises.

204. For the purpose of selecting fire extinguishers, fires generated by different materials can be classified as in the following table:

Table 5 Class of fire

Class of fire	Description
Class A	Fires involving solid materials such as wood, paper or textiles
Class B	Fires involving flammable liquids such as petrol, diesel or oils
Class C*	Fires involving gases
Class D*	Fires involving metals

* Note: For class C and D fires, specialist advice is required.

205. A **Water Extinguisher (red body)** can only be used on Class A fires. It allows the user to direct water onto a fire from a considerable distance. This type of extinguisher is not suitable for use on live electrical equipment because water is a conductor of electricity.

206. A **Water Extinguisher with Additives (red body)** is suitable for Class A fires and can also be suitable for use on Class B fires and where appropriate, this will be indicated on the extinguisher. This type is generally more efficient than conventional water extinguishers.

207. A **Foam Extinguisher (red body with cream label/band)** can be used on Class A or B fires and is particularly suited to extinguishing liquid fires. It should not be used on free-flowing liquid fires unless the operator has been specially trained, as these have the potential to rapidly spread the fire to adjacent material. This type of extinguisher is not suitable for deep-fat fryers or chip pans.

208. A **Powder Extinguisher (red body with blue label/band)** can be used on most classes of fire and achieve a good ‘knock down’ of the fire. It can be used on fires involving electrical equipment but may damage the equipment. Since powder does not cool a fire appreciably, it should be noted that the fire may re-ignite.

209. A **Carbon Dioxide (CO_2) Extinguisher (red body with black label/band)** can be used on Class B fires and is particularly suitable for fires involving electrical equipment as it is a non-conductor. As with all fires involving electrical equipment, the power should be disconnected if possible. The loud noise accompanying discharge and the freezing effect on

the discharge horn of this extinguisher can startle operators. It should be noted that CO_2 may not cool a fire appreciably and the fire may therefore re-ignite.

210. A **fire blanket** may be used to smother a small fire involving oil or fat and so are often best located in kitchens.

211. Staff should not be expected to attempt to extinguish a fire without training. Where fire-fighting equipment is provided, a suitable number of staff should be trained in its use.

212. The fire safety risk assessment should take particular cognisance of fire-fighting equipment and its use in premises which are not usually staffed. The law indicates that in some circumstances, competent persons should implement fire-fighting measures and, in this regard, it may not be reasonable to expect all persons, in all categories of premises and circumstances, to receive specific training on the use of fire-fighting equipment (fire extinguishers or fire blankets). Such persons may include guests staying in a holiday cottage or within a bed and breakfast type establishment for relatively short periods of time. Similarly, it may not be practicable for all persons resident for longer periods, for example within an HMO, to receive such training.

213. However, if, as a result of the fire safety risk assessment, it is ascertained that persons on the premises should be permitted to tackle a small fire where they consider it safe to do so, then an appropriate level of instruction should be provided for them. For example, this may involve the provision of written instructions for residents in leased holiday home accommodation advising them to familiarise themselves with the location of fire-fighting equipment and the operating instructions on the equipment. Alternatively, it may involve identifying, where appropriate, a limited number of residents/tenants to fulfil a basic fire marshalling role, such as in certain HMO accommodation. The overall aims are to ensure that a small fire does not become large enough to endanger life safety.

214. The following are benchmarks against which existing provision can be compared

215. Although the final number of **portable fire extinguishers** should be determined by the outcome of the fire safety risk assessment, one or two of the appropriate type, readily available for use, may be all that is necessary. They can be positioned on escape routes, close to room or storey exits or, if necessary, adjacent to hazards. It can be good practice to group extinguishers together in fire points at a similar position on each floor. However, for small premises, multi-purpose powder extinguishers capable of covering a range of risks, may be appropriate. They should be placed on a dedicated stand or hung on a wall at a convenient height (at about 1 m for larger extinguishers, 1.5 m for smaller ones, to the level of the handle).They should also be within the handling capabilities of staff or other relevant persons, such as tenants, who may be called upon to use them. It may also be necessary to indicate the location of extinguishers by suitable signs.

216. Extinguishers are red and may have a colour-coded area, sited above or within the instructions and denoting the type of extinguisher. Older extinguishers which have been manufactured with the body of the extinguisher painted entirely in a single colour remain acceptable until they are no longer serviceable. Information on the selection and installation of fire extinguishers is contained in BS 5306: Part 8.

Automatic Life Safety Sprinkler Systems

217. Automatic life safety sprinkler systems operate automatically on detection of an outbreak of fire within the building to inhibit the spread of fire. Water is discharged from the individual sprinkler head which has detected heat from the fire, other sprinkler heads remain

closed. It may limit fire growth and extend the time taken for untenable conditions to develop outside the room involved in fire giving more time to evacuate, particularly in cases where fire separation, fire spread on internal linings or travel distance may be a concern or where guests, residents or tenants are particularly vulnerable or have limited mobility.

218. Where the installation of an automatic life safety sprinkler system is proposed, any such system should be designed and installed in accordance with BS 9251 and BS DD 252. Advice should always be sought from a qualified fire engineer.

Definition Of Terms Used In This Guide

Child	A person who is not over school age (to be construed in accordance with section 31 of the *Education (Scotland) Act 1980*).
Combustible	Capable of burning in the presence of oxygen.
Element of structure	Part of the structural frame of a building which is loadbearing.
Emergency door	A door which may be a fire door and which is intended to be used only during an emergency.
Escape route	A route forming part of the means of escape from any point in the building to the final exit.
Escape stair	A stair or ramp forming part of an escape route.
Final exit	Termination of an escape route from a building, giving direct access to a street or open space, where people are no longer in danger from fire.
Fire door	A fire door is rated by its fire-resistance performance under test conditions: a door rated to 30 minutes (short duration) will be described as FD 30 (when tested to BS 476: Part 22) or E 30 (when tested to BS EN 1634: Part 1). A suffix is added to denote the door has a smoke control function giving FD 30S and E 30Sa respectively. An equivalent 60 minutes (medium duration) fire door will be designated FD 60S or E 60Sa. This test rating is an indication of test performance and not necessarily how a door will perform in a real fire.
Fire engineering	The application of scientific and engineering principles to evaluate fire safety and calculate design and safety levels for the protection of people.
Fire-stopping	The sealing between elements, components or any joints in the construction of the building in order to prevent the passage of fire or smoke through the building.
Hazard	A situation that can give rise to a fire.
House in multiple occupation (HMO)	Premises which require to be licensed under the Civic Government (Scotland) Act 1982 (Licensing of Houses in Multiple Occupation) Order 2000, as amended (or the replacement licensing scheme in the Housing (Scotland) Act 2006). In general terms, an HMO may be any house, flat or building which is the only or principal residence of three or more people, who belong to three or more families and share a toilet, bathroom or cooking facilities.
Means of escape	Safe routes provided for people to travel from any point in a building to an unenclosed safe area beyond the premises including fire safety measures to maintain those routes.

Non-combustible	The material is certified as non-combustible throughout according to the test specified in BS 476: Part 4 or 11.
Protected circuit	A circuit originating at the main incoming switch or distribution board, the conductors of which are protected against fire.
Protected door	A fire door giving access to: • A protected zone; • A fire-fighting shaft; • Another compartment; • An unenclosed safe area beyond the premises; • An unenclosed external escape stair; • An open access balcony; or • An escape route across a flat roof or access deck.
Protected zone	That part of an escape route within a building, but not within a room, and to which access is only by way of a protected door from which there is an exit directly to an unenclosed safe area beyond the premises.
Risk	The potential for a fire to occur and cause death or injury.
Unprotected zone	That part of an escape route which is separated by walls, glazed screens or any other permanent form of demarcation from any space intended for human occupation, including a protected zone.
Young person	Any person who has not attained the age of 18.

Reference Material

1. Fire (Scotland) Act 2005: Part 3, as amended

2. Fire legislation website: www.infoscotland.com/firelaw

3. Liquefied Petroleum Gas Association: Code of Practice 24 The use of LPG cylinders.
- Part 1 The use of Propane in cylinders at residential premises`
- Part 2 The use of Butane cylinders at residential premises

(www.lpga.co.uk)

4. Building (Scotland) Regulations 2004

5. Scottish Building Standards Technical Handbook for Non-Domestic Buildings

6. Scottish Building Standards Technical Handbook for Domestic Buildings

7. Practical Fire Safety Guidance: The Evacuation of Disabled Persons from Buildings

8. Civic Government (Scotland) Act 1982 (Licensing of Houses in Multiple Occupation) Order 2000 (Part 5 of the Housing (Scotland) Act 2006 contains provisions on licensing of HMOs to replace this Order. The new provisions are expected to come into force in 2008.)

9. Dangerous Substances and Explosive Atmospheres Regulations 2002 (www.hse.gov.uk/fireandexplosion/dsear.htm)

10. Guidance on smoking policies (www.clearingtheairscotland.com)

11. Historic Scotland Technical Advice Notes:

TAN 11	Fire Protection Measures in Scottish Historic Buildings
TAN 14	The Installation of Sprinkler Systems in Historic Buildings
TAN 22	Fire Risk Management in Heritage Buildings
TAN 28	Fire Safety Management in Heritage Buildings

12. British Standards: British Standards Institution (www.bsi-global.com). The dates quoted below are those at the time of publication.

British Standard DD 252: 2002 Components for residential sprinkler systems. Specification and test methods for residential sprinklers

British Standard EN 54: Part 2: 1998 Fire detection and fire alarm systems. Control and indicating equipment

British Standard EN 1021: Part 1: 2006. Furniture. Assessment of the ignitability of upholstered furniture. Ignition source smouldering cigarette

British Standard EN 1154: 1997 Building hardware. Controlled door closing devices. Requirements and test methods

British Standard EN 1634: Part 1: 2000 Fire-resistance tests for door and shutter assemblies. Fire doors and shutters

British Standard EN ISO 6940: 2004 Textile fabrics. Burning behaviour. Determination of ease of ignition of vertically oriented specimens

British Standard EN ISO 6941: 2003 Textile fabrics. Burning behaviour. Measurement of flame spread properties of vertically oriented specimens

British Standard 476: Part 4: 1970 Fire tests on building materials and structures – Non-combustibility test for materials

British Standard 476: Part 11: 1982 Fire tests on building materials and structures – Method for classification of the surface spread of flame of products

British Standard 476: Part 22: 1987 Fire tests on building materials and structures. Methods for determination of the fire-resistance of non-loadbearing elements of construction

British Standard 5266: Part 1: 2005 Emergency lighting. Code of practice for the emergency lighting of premises

British Standard 5266: Part 7: 1999 (BS EN 1838: 1999) Lighting applications. Emergency lighting

British Standard 5266: Part 8: 2004 Emergency Escape Lighting Systems (BS EN 50172: 2004)

British Standard 5306: Part 8: 2000 Fire extinguishing installations and equipment on premises. Selection and installation of portable fire extinguishers. Code of practice

British Standard 5499: Part 4: 2000 Safety signs, including fire safety signs. Code of practice for escape route signing

British Standard 5499: Part 5: 2002 Signs with specific safety meanings

British Standard 5815: Part 3: 1991 Sheets, sheeting, pillowslips, towels, napkins, counterpanes and continental quilt secondary covers suitable for use in the public sector. Specification for counterpanes and continental quilt secondary covers including flammability performance

British Standard 5839: Part 6: 2004 Fire detection and fire alarm systems for buildings. Code of practice for the design, installation and maintenance of fire detection and fire alarm systems in dwellings

British Standard 5852: 2006 Methods of test for assessment of ignitability of upholstered seating by smouldering and flaming ignition sources

British Standard 5866: Part 4: 1991 Blankets suitable for use in the public sector. Specification for flammability performance

British Standard 5867: Part 2: 1980 Specification for fabrics for curtains and drapes. Flammability requirements

British Standard 6807: 2006 Methods of test for assessment of the ignitability of mattresses, upholstered divans and upholstered bed bases with flaming types of primary and secondary sources of ignition

British Standard 7175: Part 3: 1989 Methods of test for the ignitability of bedcovers and pillows by smouldering and flaming ignition sources

British Standard 9251: 2005 Sprinkler systems for residential and domestic occupancies. Code of practice