LONDON FIRE BRIGADE

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Freedom of Information request reference number: 8452.1

Date of response: 06/03/2024

Request:

Is it possible to get a copy of each of the most up to date fire Safety Guidance Notes (GN..)

Response:

Please see the below list of our Fire Safety Guidance Notes and the most up to date versions attached as requested.

Note: GN_66 - Regulatory Reform (Fire Safety) Order 2005 is under review, please refer to the Home Office guide for persons with duties under fire safety legislation.

- GN_03 - Fire Safety Precautions for Childcare Facilities that are Places of Work
- GN_07 - Fireworks and Firework Displays
- GN_08 - Hand Held Portable Firefighting Equipment
- GN_11 - Security Doors and Other Security
- GN_12 - General Principles of Means of Escape
- GN_22 - Caravan and Mobile Home Sites
- GN_24 - Fire Precautions in Toy Fairs and Grottoes
- GN_29 - Access for Fire Appliances
- GN_39 - Automatic Natural Smoke & Heat Ventilators
- GN_54 - False Alarms Caused by Automatic Fire and Smoke Detection
- GN_55 - Powered Stairlifts in Commercial Premises
- GN_58 - Fire Precautions in Places of Public Worship
- GN_60 - Fire Safety Precautions for Domestic Premises Used for Child Minding
- GN_61 - Fire Safety Signs and Signals
- GN_63 - Oxygen Therapy in the Home
- GN_70 - LFB Secure Information Boxes
- GN_71 - Guide to Applicants for Premises Licences and Club Premises Certificates under the Licensing Act 2003
- GN_72 - Fire Safety in Shared Lives Schemes
- GN_73 - Fire Safety Guidance for Organisers of small scale events under the Licensing Act 2003 - Temporary Event Notices
- GN_74 - Sanctuary Rooms in Domestic Premises – Fire Safety Considerations
- GN_75 - Risk Assessments for Petrol Dispensing Premises under Dangerous Substances and Explosive Atmospheres Regulations 2002
- GN_76 - Timber Frame Construction Sites
- GN_80 - Heritage and Buildings of Special Interest
- GN_81 - Primary Authority partnerships
- GN_82 - Foam inlet systems
- GN_83 - Regulatory Reform (Fire Safety) – Interim
- GN_84 - Fires in Communal Areas
- GN_85 - Sleepovers in non-domestic premises

- GN_86 - Catering kitchen extract systems
- GN_87 - Identifying vulnerable persons at risk from fire
- GN_88 - Personal Protection Watermist Systems
- GN_89 - Retrofitting Automatic Fire Suppression Systems in Residential Premises
- GN_91 - Shisha Bars
- GN_92 - Fire Resisting Separation (including advice on fire doors and self-closing devices)
- GN_93 - 1. Person Centred Fire Risk Assessments (PCFRAs) and 2. Personal Emergency Evacuation Plans (PEEPs)
- GN_95 - Fires involving balconies in Residential Premises – Information for Housing Providers, Residents Groups and Individual Residents
- GN_101 - Smoke ventilation controls for use by firefighters – residential premises
- GN_103 - Smoke ventilation controls for use by firefighters – residential premises

We have dealt with your request under the Freedom of Information Act 2000. For more information about this process please see the guidance we publish about making a request on our website: https://www.london-fire.gov.uk/about-us/transparency/request-information-from-us/

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN03
Fire Safety Precautions for Childcare Facilities that are Places of Work

Rev 15, 01 October 2023

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order'.

This Guidance Note provides fire safety advice in respect of fire safety precautions for childcare facilities that are places of work.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local fire safety office, telephone 020 8555 1200 and ask for the nearest fire safety office, or visit the London Fire Brigade web site at https://www.london-fire.gov.uk

1 Introduction

1.1 This document has been prepared by the Prevention and Protection (Fire Safety) Department, London Fire Brigade (LFB).

1.2 This Note has been prepared with the objective of informing and educating childcare providers about the fire safety standards that fire safety staff or Ofsted inspectors will expect providers to achieve.

1.3 In addition to the advice contained in this note the Department for Education (DfE) publishes welfare requirements for the Early Years Foundation Stage (EYFS). Paragraph 3.54 onwards of this document, Safety and suitability of premises, environment and equipment, includes some fire safety advice. Copies may be obtained from both the DfE and Ofsted and is available online from any web search.

1.4 It is in the interests of both childcare providers and their clients that a high standard of fire safety is maintained in childcare facilities. This does not necessarily mean that onerous fire safety measures need be taken but that those measures need to be adequate and appropriate. In order to do this an adequate assessment of the risks from fire in the premises needs to be made. Once identified, any hazards should be removed and the risks from these reduced to an acceptable level. Sufficient and suitable arrangements for early detection of fire should be in place and once the alarm is raised safe evacuation will depend upon a well-rehearsed emergency evacuation plan including any personal emergency evacuation plans (PEEPs). There should also be adequate arrangements in place for maintaining fire safety equipment and for training staff in the emergency procedures.

2 Fire Risk Assessment

2.1 The premises you use for your childcare facility will be subject to fire safety requirements under The Order. This legislation requires that you carry out an assessment of the risks from fire and to take adequate fire safety precautions.

2.2 LFB Guidance Note No.66 outlines the actions required by the responsible person (RP) to comply with The Order. In particular, the Guidance Note provides advice on the requirement to carry out a fire risk assessment (FRA) and formulate an emergency evacuation plan (EEP). It should be read in conjunction with the appropriate Home Office Guide for the premises (see section 4 Bibliography). If your childcare facility forms part of a larger premises, or the premises are used for different purposes at different times, you will need to co-ordinate your planning with other users/occupiers. In this regard ask to see any existing FRA and EEP for the premises and, if available, consider how it relates to your childcare facility.

2.3 As the premises will require to be registered, in accordance with The Order regardless of size and number of people working, you will need to record the findings of your FRA and ES/EEP.

2.4 LFB staff and/or an Ofsted inspector will need to see and discuss with you the FRA and EEP including any Personal Emergency Evacuation Plan (PEEP) for your childcare facility.

2.5 Where an FRA already exists for the premises it should be reviewed. This review should focus on the issues that relate to the childcare provision including the following:

(a) The location of the childcare facility within the building. Ideally, it should be situated on the ground floor with an exit direct to the outside of the building. Where this is not possible it should be as near to the ground floor as possible.
(b) The layout of the childcare facility. This should be conducive to safe escape with any cooking or heating facility being sited remote from exits.
(c) Means of Escape. There should be adequate means of escape from the childcare facility. Fire doors protecting the escape routes should be effectively self-closing and fire resisting. Doors across escape routes and at exits should be easily opened without the need for a key. Escape routes should be free from obstruction and adequately lit. There should be adequate signage indicating escape routes and particularly alternative routes.
(d) Early detection and alarm of fire. Additional automatic fire detection may be required to ensure adequate early detection and alarm of fire. If a two stage fire alarm is installed the evacuation of the children should commence on the first stage alert. The system should include provision for all people including those with hearing impairments and those with Autism spectrum disorder (ASD) as examples.
(e) Evcauation strategy and the emergency evacuation plan including any required PEEP. Sufficient numbers of trained staff should be available to enable a safe and efficient evacuation, taking into account the need to assist children. Parents should be advised of the procedures including the location of the assembly point. Plans for those with a special educational need may also need to be made, if their need demands it.
(f) Staff training. This should include knowing the location of, and how to use, any fire extinguisher or fire blanket provided. The importance of keeping fire doors shut. The means of raising the alarm, the emergency evacuation plan, external assembly point and how to call the fire brigade. There should be an induction process for new staff and regular training for all staff. Staff should focus on the evacuation of children as a priority when an incident occurs.
(g) Fire Safety Procedures and Notices. There should be written procedures and notices providing information to staff and visitors about emergency plans including invacuation, where necessary. (Invacuation is as ES that requires staff and others to remain inside the building in case of an incident)

3 Overnight Care

3.1 Fire risks are potentially greater at night when people are asleep. In addition to the items mentioned above, you will therefore need to ensure that:

- There is adequate automatic fire detection to ensure early detection of a fire including coverage of the areas used for overnight care and the escape routes from it.
- Means of escape can be safely used at all times. Remember, loose items such as shoes and bags should also be kept out of the way of the means of escape. Additionally, emergency escape lighting and exit signage may be required.
- There is an adequate balance between security and safety. Exits routes including windows and doors should be easily opened in an emergency.

- Each member of staff should have a clear understanding of the emergency procedures and their own responsibilities.
- A night time routine should be followed ensuring that gas and electrical appliances are turned off and that all smoking materials are safely extinguished. All fire doors should be closed including any that have hold open devices.
- Sufficient trained staff are available to ensure a safe and efficient evacuation taking into account the need to assist children in accordance with the handling of children risk assessment.

4 Bibliography

4.1 Childminders should be advised that further information or advice may be sought from the local fire safety office or our website: www.london-fire.gov.uk

4.2 Further guidance may be obtained from the following publications:

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
Ofsted Website: Ofsted - GOV.UK (www.gov.uk)	Are you ready for your inspection? Conducting Early Years inspections. Framework for the regulation of those on the Early Years and Childcare Registers.
The Department for Education (Dfe) Schools, colleges and children's services : Early years - detailed information - GOV.UK (www.gov.uk)	Early years: detailed information

The Stationery Office (Mail, Telephone, Fax & Internet Orders) TSO Orders/Post Cash Dept PO Box 29 Norwich NR3 1GN Telephone: 0333 202 5070 Fax orders: 0333 202 5080 Mail: customerservices@tso.co.uk Web: www.tso.co.uk	Fire safety in offices and shops ISBN-13: 978 1 85112 815 0 Fire safety in factories and warehouses ISBN-13: 978 1 85112 816 7 Fire safety in premises providing sleeping accommodation ISBN-13: 978 1 85112 817 4 Fire safety in residential care premises ISBN-13: 978 1 85112 818 1 Fire safety in educational premises ISBN-13: 978 1 85112 819 8 Fire safety in small and medium places of assembly ISBN-13: 978 1 85112 820 4
	Fire safety in large places of assembly ISBN-13: 978 1 85112 821 1 Fire safety in theatres and cinemas ISBN-13: 978 1 85112 822 8 Fire safety in healthcare premises ISBN-13: 978 1 85112 824 2 Fire Safety Risk Assessment - Means of Escape for Disabled People ISBN: 978 1 85112 873 7

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Fireworks and Firework Displays

GN07

Rev 20, 01 October 2023

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) (The Order).

This Guidance Note provides fire safety advice in respect of the legal requirements and safety standards for fireworks/firework displays for both residential and commercial properties.

This Note is one of a series produced by London Fire Brigade (LFB) to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit LFB web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 Firework displays, whether private or public, should be enjoyable occasions for all concerned. In the interests of safety, it is recommended that displays should be organised and produced by professionally competent operators. Events, whether at home or for a private audience i.e. sports clubs, schools etc., can be both enjoyable and safe provided that the organisers take the necessary safety precautions and that the hazards associated with fireworks and bonfires are not underestimated.

2 Content

2.1 The information provided in this Guidance Note has, in part, been adapted from several guidance documents produced by Government Departments and other organisations. Please also refer to Section 10: Publications and Other Guidance Information Available of this document. Advice on Fireworks is available on our website at: Fireworks | London Fire Brigade (london-fire.gov.uk). There are also a several of other websites that give information on this subject such as those listed below:

- Consumer Information - British Fireworks Association
- Firework safety - RoSPA
- Fireworks: the law - GOV.UK (www.gov.uk)
- HSE Explosives - Fireworks
- Firework Categories & Safety Distances – UKFR

3 Firework Safety

3.1 If using fireworks always follow the advice below:

- Never play with fireworks, they are explosives and can hurt you.
- Only buy fireworks that carry the CE mark from a licensed retailer.
- Only adults should light or hold fireworks.
- When you are watching fireworks, stand well back.
- Keep fireworks in a closed box.
- Follow the instructions on each firework.
- Light fireworks at arm's length, using a taper.
- Never go near a firework that has been lit. Even if it hasn't gone off, it could still explode.
- Fireworks may frighten animals so keep your pets safely indoors.
- Never put fireworks in your pocket or throw them.
- Always supervise children around fireworks.

- Light sparklers one at a time, always wear gloves and hold them at arm's length. Never give sparklers to children under the age of 5. When your sparkler goes out, DON'T TOUCH IT, it could still burn you, so put the sparkler hot end down in a bucket of water made ready for this purpose.
- Do not drink alcohol when and if setting off fireworks.

4 Firework Displays

4.1 These tips are intended for those organisers who are mounting firework displays for the general public. There is also important information about your responsibilities to the public and to your staff.

Planning Ahead

- Running a display takes a lot of work, so ensure you plan ahead.
- Set up a committee whose members can each take responsibility for a particular task (including one person to oversee all safety arrangements).
- Be clear on who will do what and when.
- Be sure each member has a photocopy of this guide and follows its advice.
- If possible, try to recruit at least one person with previous experience of firework displays.

Contacting the Right People

- It is very important to keep the authorities informed of your plans.
- Bonfire night, Diwali, Chinese New Year and New Year are always a busy times, so please give the organisations plenty of warning about your plans.
- You should contact and give information to:
  - The Fire Brigade.
  - The Police.
  - First Aid Service.
  - Local Authority.

Be Prepared

4.2 As well as liaising with the Local Authority, Police, Fire Brigade and First Aid organisations, you or your appropriate team member should:

- Arrange for your fireworks to be delivered and stored securely (and circulate the manufacturer's general instructions to your team).
- Warn your neighbours and any local farmers in advance so they can keep animals and pets indoors and take other necessary precautions.
- Arrange for you and your team to be trained in the various tasks for the night, including all emergency drills.
- Arrange for first aid posts to be staffed by qualified people. Borrow or hire special clothing (bibs, jackets etc.) to identify you and your team on the night.
- Arrange some form of public address system – as a safety measure, not just for commentary. A loud hailer will do as a bare minimum.
- Arrange for fire extinguishers, buckets of water, buckets of sand and metal litter bins to be available on the night.
- Check that plenty of electric torches will be available on the night, with full batteries.
- Publicise the fact that spectators are not allowed to bring their own fireworks (including sparklers) and will not be admitted if they do so.

- Prepare all necessary signage.
- Make sure that you'll have enough people available to help you on the night (including cover for illness).
- Draw up a detailed checklist of tasks and indicate who is to be responsible for each one.
- Check whether you are adequately insured to cover any firework-related injuries to those present at the display.
- Vet any traders you intend to allow on the site.

Picking the Right Location

4.3 You should choose a large, clear, and well-mown area free from obstructions, well away from any buildings, trees, and hazards like overhead cables, with as many safe entrances and exits as possible. These must be away from the firing area and dropping zone.

4.4 Make sure that all entrances are well lit, clearly signposted and kept free from obstructions. Clear away any undergrowth or very long grass. Have plenty of (metal) litter bins around the site. Make sure you can cater properly for disabled spectators. Watch out for any animals likely to be housed nearby.

- Allow at least 50m x 20m for your firing area.
- Beyond this you will need a dropping zone for spent fireworks of 100m x 50m in the downwind direction.
- Spectators should be kept back on the opposite side to the dropping zone at least 25m from the firing area.

4.5 Falling fireworks can cause damage, so site any designated car parking well away from your display area and dropping zone and upwind of the display. Signpost any car park clearly and make sure that the entrance is quite separate from pedestrian access. Do not permit parking anywhere else.

Keeping in Control

4.6 Proper crowd control is essential and needs good planning.

- Arrange for some stewards to be responsible for just this – at least one steward for every 250 spectators. Their job won't be finished until the display is over, the site is cleared and made safe. Your stewards should be easy to identify, perhaps with fluorescent bibs or jackets.
- Be certain that your team know what to do in an emergency and have practised safety drills.
- Spectators must not be allowed into your display area. If they do encroach, stop the display immediately. Prepare and erect signs to clearly show the area.
- Beware of overcrowding – seek advice from the police and follow it.
- None of the organisers should drink alcoholic drinks before or during the display.
- Do not allow spectators to enter the site with their own fireworks – even sparklers. Make sure that there are signs explaining this at all entrances and in publicity prior to the display.

Experience Counts

- Always take great care. Plan your display in advance, make sure you know which fireworks are going to be let off in what order. Take the fireworks from a secure container only when they are to be let off.
- Recruit people with previous experience of firework displays. Have as few people as possible involved with the fireworks.

- Do not allow smoking by your team when fireworks are being handled, or at any time during the display.
- Unpack fireworks with great care and well away from any open fire, naked flame, or flammable material. Remember that they are fragile and can easily be broken. Keep fireworks in a secure box which is kept closed.
- Before lighting any firework, read the instructions on it carefully (by torchlight).
- Make sure that the wind blows away from spectators. The display should be angled away from spectators.
- For lighting display-type fireworks, a device called a Portfire is often provided by the manufacturer. Use Portfires when available and always light fireworks at arm's length. Keep unused Portfires in a secure box and never carry them in pockets.
- Alternative forms of safety lighters, such as a slow match (also called match cord, is a slow-burning cord or twine fuse) are often available.
- Never use matches or lighters for lighting fireworks at a display. If any firework fails to go off, don't go back to it. It could still be live and could ignite near you. Half an hour is the absolute minimum time to wait before you consider approaching it again.
- A sudden change of wind could cause aerial fireworks to fall dangerously among spectators. In very windy weather, you should consider putting off the display altogether.

Bonfires Need Planning Too

4.7 Bonfires need a lot of organising and can be a hazard. Many displays are a great success without one.

- If, after careful consideration, you do decide to have a bonfire, make one person responsible for it, from early planning to final clearing up, and make sure it is the appropriate size for the space you have.
- Do not site it too near your display or firework storage area and don't site it anywhere near fences, trees or other combustible materials.
- Never use flammable liquids such as petrol to start a bonfire as this can result in uncontrolled spread of fire or explosion.
- Check immediately before lighting that there is no animal or even a young child hidden inside.
- Never put fireworks on a bonfire, even if they are duds.
- Do not burn dangerous rubbish (e.g. aerosols, paint tins or foam-filled furniture).
- Remove any rubbish from the bonfire area in advance so there is nothing that can be thrown onto the fire on the night.

After the Event

4.8 The work for you and your team does not finish when the last firework goes off:

- Spectators need to be cleared safely from the site.
- The bonfire needs to be put out completely.
- Spent firework cases must be gathered. Look for used fireworks with a torch and use tongs or some other suitable tool and wear appropriate hand protection.
- Do not allow any children to collect firework cases.
- If any fireworks look as if they have not ignited after at least half an hour, soak them in a bucket of water.

5 Fireworks Regulations 2004

5.1 These Regulations impose the following restrictions:

Curfew

5.2 The curfew prohibits persons from using adult fireworks (anything apart from party poppers or caps) during night hours (11pm to 7am). Exceptions allow use until 1am on the nights of Chinese New Year, Diwali, New Years Eve, and until midnight on Bonfire night. There is also an exception for the purposes of local authority firework displays, national public celebrations or national commemorative events.

Noise

5.3 The supply, purchase or possession of a category 3 firework that has a noise level exceeding 120 decibels is banned.

Notices

5.4 Suppliers of adult fireworks must display a notice stating that it is a criminal offence to supply adult fireworks to those under the age of 18, and for those under 18 to possess such fireworks. Fireworks suppliers' must provide the local licensing authority, in London the Trading Standards department for the local Borough or City of London, with information about fireworks in circumstances where the total net explosive content of fireworks supplied in a single transaction exceeds 50 kilograms.

Licensing (see also Section 9- Storage of Fireworks)

5.5 Suppliers of adult fireworks are required to hold a licence. The. licence allows the holder to supply fireworks on the first day of the Chinese New Year and 3 days immediately preceding it, on the first day of Diwali and 3 days immediately preceding it, from 15 October to 10 November and 26 December to 31 December. Traders wishing to supply at any other time must obtain a separate licence.

6 The Pyrotechnic Articles (Safety) Regulations 2015

6.1 The Regulations set out key prohibitions on the supply of fireworks and other pyrotechnic articles such that category F1 fireworks can only be supplied to persons of 16 years or older. Category 2 and 3 fireworks, category T1 theatrical pyrotechnic articles and category P1 pyrotechnic articles can only be supplied to persons of 18 years or older. Category 4 fireworks, category T2 theatrical pyrotechnic articles and P2 pyrotechnic articles can only be supplied to persons with specialist knowledge (see Regulation 31 and Schedule 4 of the Regulations available here: The Pyrotechnic Articles (Safety) Regulations 2015 (legislation.gov.uk).

7 Selling Fireworks

7.1 If you sell fireworks, you have certain obligations to the public and your staff:

- You must register and obtain a licence to store fireworks
- Store fireworks safely
- Adult fireworks, Category 2, 3, T1 and P1 must not be sold to people under the age of 18, although Category F1 fireworks can be sold to people over the age of 16. Category F1 fireworks are fireworks which present a very low hazard and negligible noise level, and which are intended for use in confined areas, including fireworks which are intended for use inside domestic buildings (see * in paragraph 7.2).
- Know and understand the fire plan and fire drill
- You must display a sign where fireworks are supplied or exposed for supply

- Keep all fireworks in a dry place.
- Label all containers 'Fireworks-Highly Flammable' (and always keep these containers closed).
- Do not allow any smoking anywhere near fireworks being displayed or sold. Put up 'No Smoking' notices.
- Unplug any electrical fitting that is inside a display case containing fireworks.
- Never let customers handle any fireworks while they are choosing.

7.2 It is illegal to:

- Sell adult* fireworks to anyone under the age of 18 or.
- Possess adult* fireworks in a public place.
- Throw or discharge a firework in a street or public place.

* (Any firework except for a cap, cracker snap, novelty matches, party poppers, serpents, and throwdowns)

8 Disposal of Fireworks

8.1 Advice is contained in the National Fire Chiefs Council (NFCC) guidance The Safe Disposal of Damaged Fireworks, regarding the disposal of fireworks across separate groups. The guidance relates to consumer fireworks (i.e. those that are to be supplied to members of the public) that have become damaged and which are leaking explosive composition or have partially functioned. This guidance has been prepared principally for retailers and those who might need to deal with damaged fireworks.

8.2 It should be noted that the safest way of dealing with a firework, that is complete and undamaged, is to function it in accordance with the instructions provided with the firework.

8.3 The Guidance 'copies out' parts of differing Explosives law, for example, that which gives advice on the Explosives, The Explosives Regulations 2014, where it states that , 'Any person who discards or disposes of explosives or explosive-contaminated items must ensure, so far as reasonably practicable, that they are discarded, or disposed of safely'.

8.4 The Guidance continues by giving advice to the Public, Retailers and Wholesalers regarding disposal of fireworks. This advice is copied below.

8.5 If it has been determined that placing in water for a specific period of time will render the firework non-explosive, even after the firework has dried out and there is no gas generation or self-heating during or after the drowning, then subsequent disposal of the soaked firework with domestic rubbish may be an appropriate action for the general public to take.

8.6 Any person who discards or disposes of explosives or explosive contaminated items must ensure, so far as reasonably practicable, that they are discarded or disposed of safely Regulation 28 – (1)

8.7 Retailers and others at work should be advised that even if a pyrotechnic article has been treated to render it non-explosive, any residual chemicals may render it hazardous waste and appropriate disposal of the residue may be required. This may include the sending/transporting of the treated firework residue to an appropriate disposal site.

8.8 Wholesalers should seek advice on the safe disposal of damaged fireworks(s) directly from the supplier, manufacturer, or importer.

9 Storage of Fireworks

9.1 The Explosives Regulations 2014 and the Pyrotechnics Articles (Safety) Regulations 2015 state that if you store fireworks, you will require a licence from the local authority (London Borough) Trading Standards office. The licence is granted to a person (or company) and not to the site.

9.2 A licence is required if storing:

- Up to 250kg of Hazard Type 4
- Up to 100kg of a combination of Hazard Type 3 and 4
- Up to a 100kg of Hazard Type 3

(This includes both the amount held on the shop floor and elsewhere in the premises).

9.3 Most fireworks in retail premises are Hazard Type 4, but if in doubt please contact your supplier. The quantities are often marked on the explosives outer packaging. If storing large quantities of fireworks (e.g. between 250kg and 2000kg of Hazard Type 4 fireworks) you need seek further advice from the local Trading Standards office.

10 Bibliography

10.1 Detailed guidance may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

10.2 The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
HSE Books www.hse.gov.uk https://www.hse.gov.uk/explosives/fireworks	Giving your own firework display: how to run and fire it safely. ISBN 97807 1766 1626
The Stationery Office (Mail, Telephone, Fax & Internet Orders) TSO Orders/Post Cash Dept PO Box 29 Norwich NR3 1GN Email: customer.services@tso.co.uk* Tel: +44 (0)333 202 5070 Text tel: +44 (0)333 202 5077 Twitter: @TSO_Publishers Web: www.tso.co.uk	Firework Legislation Fire safety at open air events and venues. (This guide can also be downloaded free of charge from: https://www.gov.uk/government/collections/fire-safety-law-and-guidance-documents-for-business)
British Standards Institution (Sales) 389 Chiswick High Road London, W4 4AL Telephone: 0345 080 9000 https://www.bsigroup.com/en-GB/contact-us/ Web: https://www.bsigroup.com/en-GB/	British Standards available on several fire safety related subjects.
Royal Society for the Prevention of Accidents (RoSPA)	Firework Safety Code Retailers guide: Selling fireworks

https://www.rospa.com/Home-Safety/Advice/Fireworks-Safety	Safe and successful firework displays Guidance on the Pyrotechnic Articles (Safety) Regulations 2010, issued July 2013
National Fire Chiefs Council West Midlands Fire Service HQ 99 Vauxhall Road Birmingham B7 4HW https://www.nationalfirechiefs.org.uk/Fireworks	NFCC Guidance 2016-12 The Safe Disposal of Damaged Fireworks

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN08

Hand Held Portable Firefighting Equipment

Rev 19, 09 September 2022

Contents

Explanatory Note:

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Note is one of a series produced by the Commissioner to provide advice to the general public on various aspects of fire safety. If you require any further guidance on the advice given here or require advice on another topic please contact your local fire safety office, telephone 020 8555 1200 and ask for the nearest fire safety office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Prevention and Protection Department, London Fire Brigade (LFB).

1.2 The purpose of this Note is to provide information to user groups on the type, siting and maintenance of portable fire fighting equipment for use in commercial premises. This information should be used to inform and review fire risk assessments (FRA) and the management of fire fighting equipment, its use and servicing, by stakeholders responsible for fire safety in premises including the responsible person (RP) and premises management groups.

1.3 To help prevent small fires growing into larger fires, suitable fire fighting equipment should be readily available at all times. On most occasions the equipment available will be of the hand-held portable type, but in some circumstances fixed or automatic fire fighting equipment may be provided.

1.4 In small premises, having one or two portable extinguishers of the appropriate type readily available for use may be all that is necessary. In larger, more complex premises, more portable extinguishers may be required, and they should be sited in suitable locations, such as on the escape routes at each floor level. It may also be necessary to indicate the location of extinguishers by suitable signage. The FRA for the premises will detail this requirement. See paragraph 5.2.

2 Other Authorities you may need to consult

2.1 LFB enforces fire safety legislation in many areas, but not all. Therefore, before providing fire-fighting equipment you are advised to consult the relevant enforcing authority for your premises, the other authorities involved may include:

- Health and Safety Executive e.g. new construction sites, nuclear sites etc.
- Crown Premises Fire Safety Inspectorate' e.g. prisons and crown properties etc.
- Defence Fire Safety Regulator e.g. Her Majesty's Armed Forces bases
- Local authority (contact the local borough council to find out which department may be involved)

2.2 Insurance companies may also wish to augment the number and type of extinguishers covering a specific risk as a condition to issuing an insurance policy.

3 General Principles

3.1 Portable fire fighting equipment should be allocated appropriate to the perceived fire risk. This should be classified by the extinguisher rating, and not the extinguisher size, weight, or content in litres. See paragraph 5.1

3.2 Different types of fire risk require the use of specific extinguishing agents. British Standard BSEN 2: Classification of fire; classifies these risks according to material involved. Appropriate extinguishing media have been indicated below:

CLASS OF MATERIALS INVOLVED	EXTINGUISHING MEDIA
CLASS A: Fires involving solid materials usually of an organic nature in which combustion normally takes place with the formation of glowing embers, e.g. wood, paper or textiles.	Extinguishers with an 'A' rating: e.g. 13A Types include: Water extinguisher, Foam Extinguisher, Dry Powder extinguisher (size according to risk).

CLASS B: Fires involving liquids or liquefiable solids, e.g. petrol, diesel or oils.	Extinguishers with a 'B' rating: e.g., 34B Types include: Foam extinguisher, CO^2 extinguisher, Dry powder extinguisher (size according to risk).
CLASS C: Fires involving gases	Foam extinguisher (according to risk) Seek specialist advice.
CLASS D: Fires involving metals	Special powder extinguishers (size and type according to risk), dry sand (quantity according to risk). Seek specialist advice.
CLASS F: Fires in cooking appliances that involves vegetable or animal fats.	Extinguishers with an 'F' rating: e.g., 15F Types include: Foam extinguisher, CO^2 extinguisher, Dry powder extinguisher (size according to risk).

3.3 Fire extinguishers should conform to BS EN 3 and be maintained as outlined in BS 5306: Part -3: extinguishing installations and equipment on premises. Commissioning and maintenance of portable fire extinguishers. Code of practice. Schemes for ensuring the conformity with these Standards have been produced by the British Standards Institution and adopted by British Approvals for Fire Equipment (BAFE) and conforming equipment and services are recognised by that organisation's mark of approval.

3.4 A recent innovation is the 20 year life cycle extinguisher that needs to be refilled/refurbished after 10 years by the manufacturer. These extinguishers enable a business or an organisation to carry out their own maintenance with a simple visual inspection that is required at least annually. Depending on the type and location of the extinguisher, it may be appropriate to perform a visual inspection at shorter intervals (e.g. monthly). These extinguishers are either dry powder or foam within a Kevlar lined container and covered with a composite outer casing. Due to the 10 year operational corrosion guarantee they do not require a traditional service contract. These extinguisher types meet the requirements of The Order and are therefore acceptable to the LFB. The extinguishers meet the di-electric test as detailed in British Standard 3 – 7 (BS EN 3- 7) : Portable fire extinguishers. Characteristics, performance requirements and test methods; the extinguishers have also received various third party approvals. They are suitable for a number of locations within a premises and come in various sizes. The FRA will provide detailed information with regard to their location and placement, see paragraph 5.2.

Fire Blankets

3.5 Fire blankets primarily intended for extinguishing cooking oil fires are described in BS EN 1869: fire blankets. These can also be used for fires involving personal clothing.

3.6 Heavy-duty fire blankets and heat protective blankets primarily for industrial use are described in BS 7944: Type 1 Heavy duty fire blankets and Type 2 Heavy duty heat protective blankets.

4 Colour of Fire Extinguishers

4.1 The body colour of fire extinguishers is signal red, irrespective of the extinguishing media they contain. The extinguishers have a colour indication on the body of as noted in the table in paragraph 4.3 below.

4.2 Certain companies have extinguishers that co-ordinate to their specific 'Brand' and therefore, silver, or grey extinguisher bodies are still utilised. These may still have the 5% surface area in colour as detailed in paragraph 4.3 below.

4.3 In the UK a colour zone of up to a maximum of 5% of the surface area of the extinguisher body may be used to identify the extinguishing agent. If used the colours will indicate: (Vaporising Liquid Extinguishers were coloured green and may still be found in certain applications).

EXTINGUISHING AGENT	COLOUR
Water	RED
Foam	PALE CREAM
Powder	BLUE
Powder Class D	SIGNAL VIOLET
Carbon Dioxide (CO2)	BLACK
Wet Chemical	CANARY YELLOW
Clean agent (including halons)	GREEN

5 Classification and Rating of Extinguishers

5.1 The scheme for the classification and rating of class A & B type extinguishers is detailed in BS EN 3-7 Portable fire extinguishers. Characteristics, performance requirements and test methods. On successful completion of the tests, a fire test rating is awarded to the extinguisher, and this is indicated on the instruction label (e.g. 13A, 34B, 15F).

5.2 The type, quantity, and distribution of extinguishers throughout the premises should be based on the risks identified in the FRA. The performance rating of the extinguishers is an important factor in this assessment, a 13A extinguisher need not be the heavy 9 litre water extinguisher found in many premises. A smaller version that still meets the 13A criteria is just as effective. A 2.5 kilogram Carbon Dioxide (CO^2) extinguisher is rated as a 34B. BS 5306-8: Fire extinguishing installations and equipment on premises. Selection and positioning of portable fire extinguishers. Code of practice; this is guidance that details the recommendations concerning the selection and positioning of portable fire extinguishers.

6 Location

6.1 Fire extinguishers should normally be located in conspicuous positions on escape routes, preferably near exit doors. Wherever possible, fire-fighting equipment should be grouped to form fire points. If extinguishers are placed in positions hidden from direct view, the Health & Safety (Safety Signs & Signals) Regulations 1996 require that their location be indicated by signs and, where appropriate, directional arrows.

6.2 Fire extinguishers can be either hung on suitable wall brackets or placed in purpose made stands. These stands often have the details of the specific extinguishers printed on the back of the stand. The stands are useful as if it is empty, you are aware that an extinguisher is missing and needs to be replaced.

7 Maintenance and Disposal

7.1 Regular inspection by the user should ensure that:

(a) Each extinguisher is located in its designated place.

(b) Operating instructions are clean and legible.

(c) Each extinguisher has not been operated and not obviously damaged.

(d) Any pressure gauge or indicator is within operational and safety limits.

(e) The seals and tamper indicators are not broken or missing.

7.2 Basic servicing should be carried out annually by a competent person. However, see paragraphs 3.4 and 8.2

7.3 Extended servicing, including discharging and recharging, should be carried out as detailed in BS 5306-3: Fire extinguishing installations and equipment on premises. Commissioning and maintenance of portable fire extinguishers. Code of practice. However, see paragraph 3.4 above.

7.4 Maintenance tests of all extinguisher types should be recorded.

7.5 The link detailed, can assist those who need to dispose of fire extinguishers. https://www.fireprotectionrecycling.co.uk/

8 Training

8.1 All staff should be familiar with the location and basic operating procedures for the equipment provided in case they need to use it. If your fire strategy means that certain people, e.g. fire marshals/fire wardens, will be expected to take a more active role, then they should be provided with more comprehensive training.

8.2 For staff who are to undertake in -house inspections of the 20 year life cycle extinguishers, it is important that they have been appropriately trained and receive the correct equipment to be able to carry out this task.

9 Bibliography

9.1 Detailed guidance on the various standards listed in the guidance note may be obtained from the following bibliography.

AVAILABLE FROM	TITLE
British Standards Institution (Sales) 389 Chiswick High Road London W4 4AL Telephone: 0345 080 9000 Fax: 020 8996 7001 E-mail: cservices@bsi-global.com Web: www.bsigroup.com	BS 5306-8: Fire extinguishing installations and equipment on premises. Selection and positioning of portable fire extinguishers. Code of practice BS 5306-3: Fire extinguishing installations and equipment on premises. Commissioning and maintenance of portable fire extinguishers. Code of practice BS EN3: Parts 6 - 9 Portable Fire Extinguishers BS EN2: Classification of fires

	BS 5306-10: Colour coding to indicate the extinguishing medium contained in portable fire extinguishers – Code of practice BS EN 1869: Fire Blankets BS 7944: Type 1 Heavy duty fire blankets and Type 2 Heavy duty heat protective blankets. BS 9999: Code of practice for fire safety in the design, management and use of buildings BS 9991: Fire safety in the design, management and use of residential buildings. Code of practice BS 6165: Specification for Small Disposable Fire Extinguishers of the Aerosol Type BS 6643: Recharging Fire Extinguishers
The Stationery Office (Mail, Telephone, Fax & Internet Orders) TSO Orders/Post Cash Dept. PO Box 29 Norwich NR3 1GN Telephone: 0333 202 5070 Fax orders: 0333 202 5080 Mail customer.services@tso.co.uk Web: www.tso.co.uk/	Fire safety in offices and shops ISBN-13: 978 1 85112 815 0 Fire safety in factories and warehouses ISBN-13: 9778 1 85112 816 7 Fire safety in premises providing sleeping accommodation ISBN-13: 978 1 85112 818 1 Fire safety in residential care premises ISBN-13:978 1 85112 818 1 Fire safety in educational premises ISBN-13: 978 1 85112 819 8 Fire safety in small and medium places of assembly ISBN-13: 978 1 85112 820 4 Fire safety in large places of assembly ISBN-13: 978 1 85112 821 1 Fire safety in theatres and cinemas ISBN-13: 978 1 85112 822 8 Fire safety at outdoor events ISBN-13: 978 1 85112 823 5 Fire safety in healthcare premises ISBN-13: 978 1 85112 824 2
	Fire safety in the transport network ISBN-13: 978 1 85112 825 9

	Fire Safety Risk Assessment - Means of Escape for Disabled People ISBN: 978 1 85112 873 7
Communities & Local Government www.communities.gov.uk	A short guide to making your premises safe from fire Product code: 05 FRSD 03546
Health & Safety Executive Order a Publication: 0333 202 5070 Mail hseorders@tso.co.uk Website: www.hsebooks.com	Health & Safety (Safety Signs & Signals) Regulations 1996

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

The "Fire Safety" guides listed above may also be downloaded free of charge from the Fire Safety Law Section of the CLG website at: https://www.gov.uk/workplace-fire-safety-your-responsibilities

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Security Doors and Other Security Measures for Premises

GN11

Rev 10, 01 May 2022

Contents

Explanatory Note:

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) in London.

This Guidance Note provides fire safety advice in respect of the Commissioner's preferred standards for security devices on windows and doors, for both commercial and residential properties.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit our web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 The purpose of this Guidance Note is to provide information to Housing Providers, Managing Agents, Residents Groups, Individual Residents, on security measures in or on premises. This information should be used to inform and review fire risk assessments (FRAs) by stakeholders responsible for fire safety in premises including the Responsible Person (RP), premises management groups and residents.

1.3 There are occasions where added security is required to prevent unauthorised entry to premises and this is often achieved by the provision of high security doors. Whilst LFB is sympathetic towards individuals and companies wishing to improve security measures, the need to maintain means of escape in case of fire should not be overlooked. It is also sometimes necessary for firefighters to gain access into premises in an emergency and a security door or other security measures can add significantly to the time that this takes, resulting in unacceptable danger to both life and property.

1.4 The LFB has no statutory powers to enforce these preferred standards in domestic/residential premises, consequently only recommendations and not requirements can be made based on internally defined policy guidance. The final decision on the installation and type of doors, gates or grilles must, therefore, rest with the local authority, managing agent, private landlord or owner/occupier.

1.5 Standards are necessary so that the LFB will not be unreasonably hindered in its job of rescuing trapped occupants. Householders must be warned of the possible dangers of entrapment which extra security devices can create.

1.6 In these standards the terms "security doors" and "security gates" refer to purpose made products, sold and supplied as such, usually comprising an integral door and frame assembly, and not just uprated doors.

1.7 In providing the information below it should be noted that the LFB policy with regard to any products manufactured by commercial organisations does not extend to the issue of authorised approvals for such products. The LFB is not a testing authority and it is not for the LFB to endorse products or appear to be endorsing products. LFB is required by the Fire and Rescue Services Act 2004, to give advice when requested in relation to fire safety matters, any such advice is given on a goodwill basis to be of assistance to those who request it.

1.8 It should be noted that in the United Kingdom the Police Services lead on the "Secured by Design", http://www.securedbydesign.com/ process to ensure that residential and domestic premises are safe by virtue of the design of the building or in some cases alterations to the building. This process is a "Functional Requirement" as part of the Building Regulations Approved Document guidance in Approved Document Q.

2 Authorities you may need to consult

2.1 Where security is the main concern the advice of the local crime prevention officer should be sought. The Architectural Liaison Officer (ALO) working for the City of London police service provides crime prevention design advice for City developments whilst the Metropolitan Police Crime Prevention Design Advisers provide advice for London boroughs. However, alterations to buildings may need approval from other authorities which may include :

- Building Control Officer (Local Authority)
- Environmental Health Officer (Local Authority)
- Petroleum Enforcement Authority (The London Fire Brigade)
- Entertainments Licensing Authority (Local Authority)
- Social Services (Local Authority)
- Fire and Rescue Authority (The London Fire Brigade)

3 Security doors /Gates

3.1 The door and frame assembly should conform with the fire resisting standards, where required, and open in the direction specified in any Code of Practice or Guide relevant to the premises.

3.2 Where doors form part of a means of escape route from more than one dwelling the complete fastening mechanism should comprise a single device operated manually from the premises side of the door by a control forming an integral part of the fastening mechanism. Where necessary the control shall take the form of a panic bar. The use of removable keys, electronic pass cards or digital key pads will not meet the requirements of this section.

3.3 No part of the fastening mechanism or operating control device which is permanently attached to the fastening mechanism should be constructed from plastic, wood or other materials which are combustible or have a melting point below 800°C.

3.4 When anybody is inside a premises our operational crews will need to breach the doors providing access using hand held equipment. The breaching of the door should be sufficient to allow the manipulation of any internal operating device of the fastening mechanism manually from a position on the outside or public side of the door. To this end, the structure should be free from reinforcement, bracing, locking bars or other construction which would impede the opening of the door at a point adjacent to the lock mechanism.

3.5 Where, in cavity doors, the space between two skins is filled with insulation material, the material should be of a type which will not present a hazard once exposed and which will not clog or impede the blade or tool of any device in use. Where it would be necessary to remove part of the insulation material to expose the inner skin of a cavity door, in order that the hole may be completed, the insulation material at the most likely point for the hole to be cut should be easily removable by hand.

3.6 Where security doors are installed within blocks of flats, across common corridors or access ways, the following criteria should be met :

(a) Where flats were designed in accordance with British Standard Code of Practice CP3 Chapter IV: Part 1 1971, Precautions Against Fire in Flats and Maisonettes (in blocks over two storeys) they will be designed on the principle of smoke containment or smoke dispersal should a fire occur. Where security doors are to be installed in such premises they should, therefore, be positioned in replacement of existing fire resisting doors in order to maintain the smoke control provisions within the building.

(b) Where flats have been designed to allow smoke to be dispersed from the building in the event of fire then at least 1.0m² area of ventilation should be allowed above the security door (and where possible to the sides of the door). Alternatively, consideration should be given to converting the flats to the smoke containment principle and the security doors fitted as specified in (a) above.

(c) In flats that do not comply with categories (a) and (b) above, any security doors installed should not detrimentally affect existing means of escape and fire safety arrangements.

NOTE: In all cases where security doors are installed across corridors or access ways they should not be positioned or secured in such a way as to prevent access to an alternative escape route. Any alternative escape route provided within a building may be required for escape purposes should the primary route of escape become blocked by fire or smoke.

(d) In those instances where members of the public wish to install a door(s) and there is any doubt as to which of the above categories is applicable to the premises concerned, the local authority building control office may be able to offer advice. Alternatively, the local fire and community safety centre may be able to provide assistance.

3.7 Security doors should not be fitted on pressurised stairways unless the degree of "leakage" around each door, necessary for the efficient operation of the pressurisation system, can be maintained.

3.8 The principles for security gate fitting should be similar to those used with security doors. Generally they should be easily opened from the inside without the need to search for a key.

3.9 Security doors and security gates should not be installed together at the same access point to the premises. Therefore, no more than one security door or gate should need to be breached to gain access to any dwelling.

3.10 In order to assist fire-fighters in the event of any emergency, details of premises where security doors/gates are fitted should be passed to LFB, after installation.

4 Window security grilles

4.1 Non-openable external/internal grilles should not be fitted to the windows of premises that have secondary security gates to the main entrance door.

4.2 All window grilles should have openable areas of sufficient dimensions to facilitate escape for the occupiers in the event of any emergency.

4.3 All grilles should be easily openable from the inside without the need to search for a key.

5 Roller shutters / Secondary steel doors

5.1 Roller shutters and secondary steel doors are not recommended as a means of security other than when premises are unoccupied. Where these have been installed on unoccupied dwellings they should be removed before any future occupancy is allowed.

5.2 If these items are installed on premises that are in use on a daily basis then they should not impinge on the means of escape and should be maintained in an open position whilst the premises are occupied.

6 Windows (fixed or secondary glazing)

6.1 In each occupied room, where windows are fitted, at least one window should be openable to allow for means of escape where required by the occupants in the event of an emergency. The window(s) concerned should be openable from the inside without the need to search for a key. Where child locks are fitted, these should be able to be opened quickly and easily.

7 Fire detection and warning systems

7.1 In all instances where any of the above security measures are taken it is most strongly recommended that smoke alarms be fitted within the premises.

7.2 The smoke alarms should be so arranged as to be audible in all rooms of the dwelling and of sufficient audibility to raise occupants from their sleep.

7.3 Smoke alarms will give early warning of fire and should enable occupiers to leave the premises by their own unaided efforts.

7.4 Smoke alarms for individual dwellings should comply with BS 5446-1: Fire detection and fire alarm devices for dwellings. Specification for smoke alarms. Smoke alarms or other detection devices for larger premises should be installed as part of a fire detection and warning system complying with BS 5839-1: Fire detection and fire alarm systems for buildings. Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises **or** BS 5839-6: Fire detection and fire alarm systems for buildings. Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises

8 Door security measures (all premises types)

8.1 Fire escape doors must be able to be opened from the inside without the use of a key; a key kept in a glass fronted box adjacent to the doors is not acceptable.

8.2 Locks and latches fitted to fire resisting doors must not contain low melting point materials such as aluminium or nylon.

8.3 Suitable security fittings for use of fire escape doors include the following;

(a) escape mortise deadlocks - this type of mortise lock allows the door to be opened by turning a knob from within;

(b) mortise night latches - these are suitable only providing that they are not fitted with a deadlocking mechanism and thus cannot be disabled by the key from outside;

(c) break glass locks - these are available in several forms. They may consist of a glass bolt that must be broken to enable the door to be opened or a glass cover may be placed over a lever handle or both. Break glass locks, as well as giving easy access to a door locking mechanism, may be used as a security device; the broken glass indicating that the door may have been opened.

NOTE: Break glass locks should not be used on doors which are;

- likely to be used by the public; or
- likely to be used by more than 10 (ten) employees; or
- situated at the base of a stairway; or
- on an escape route from a high risk area.

(d) panic bolts - the most commonly encountered devices suitable for opening final exit doors are panic bolts and panic latches, which are the subject of BS EN 1125:Building hardware. Panic exit devices operated by a horizontal bar, for use on escape routes. Requirements and test methods.

(e) bolts - these are known by various names i.e., barrel bolts, tower bolts, draw bolts, flush bolts etc.

(f) magnetic or motor actuated locks controlled centrally - these are only suitable for fire exits if they fail safe (i.e., the door is unlocked) in the event that the power supply fails, unlock upon operation of the fire alarm and have a manually operated control switch nearby. These types of locks should comply with BS 7273- 4: Code of practice for the operation of fire protection measures. Actuation of release mechanisms for doors

(g) a simple electric alarm or flimsy strap - these may be fitted to a door to give indication that the door has been opened.

9 Bibliography

9.1 Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting our website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
British Standards Institution (Sales) 389 Chiswick High Road London W4 4AL Telephone: 0345 386 9001 Fax: 020 8996 7001 E-mail: cservices@bsi-global.com Web : www.bsigroup.com	BS 3621: Lock assemblies operated by key from both the inside and outside of the door BS EN 1125: Building hardware. Panic exit devices operated by a horizontal bar. Requirements and test methods BS 5446-1:Fire detection and fire alarm devices for dwellings. Specification for smoke alarms BS 5839-6: Fire detection and fire alarm systems for buildings. Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises BS 5839-1: Fire detection and fire alarm systems for buildings. Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises

	BS EN 12209:Building hardware. Mechanically operated locks and locking plates. Requirements and test methods BS 8220-1:Guide for security of buildings against crime. Dwellings BS 7273- 4: Code of practice for the operation of fire protection measures. Actuation of release mechanisms for doors
TSO Customer Services PO Box 29 Norwich NR3 1GN Telephone: 0333 202 5070 mail: esupport@tso.co.uk Web: www.tso.co.uk	Building Regulations Guidance Approved Documents B and Q

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN12
General Principles of Means of Escape

Rev 13, 01 May 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Guidance Note provides fire safety advice on how to achieve and maintain satisfactory means of escape from commercial premises

This Note is one of a series produced by the Fire Authority to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 Under the provisions of The Order the 'responsible person' for a premises (usually the employer) has a duty to ensure that means of escape from their premises are satisfactory. Advice, recommendations and requirements made by LFB in relation to means of escape will be in accordance with principles laid down in The Order and in codes of practice described in the following paragraphs.

2 Other Authorities you may need to consult

2.1 There are other interested parties who have legislative control over certain premises and therefore they may need to be consulted, depending on the use of the premises, before works are undertaken.

- Authorities concerned are likely to include:
- Local authority (Building Control Department)
- Local authority (Environmental Health Department)
- Local authority (Planning Department)
- Local authority (Conservation Officer)
- English Heritage
- The Secretary of State for the Environment

The last three may have an interest in buildings listed as being of historical interest.

3 General Principles

3.1 The principle documentation relating to Means of Escape in new buildings is contained within the latest edition of Approved Document B to the Building Regulations 2000. The publication BR 186 entitled "Design principles for smoke ventilation in enclosed shopping centres" supports the code of practice documents including BS EN 12101 and provides useful information.

3.2 Several British Standards Institution Codes of Practice are also concerned with the design of new buildings and/or those which are being subjected to major refurbishment are listed in the bibliography below.

These lists are not exhaustive and more specialised occupancies may be subject to other legislation or Codes.

3.3 Guidance for responsible persons on maintaining adequate means of escape and completing a fire risk assessment under The Order is contained a number of Fire Safety guides for different premises uses. These guides are also listed in the bibliography below.

3.4 All the Guides and Codes relating to means of escape matters have as their objective the safeguarding of the lives of the occupants of the buildings to which they relate. The means of escape provided by the Codes and Guides allow occupants to escape unaided and without reliance on outside assistance. It should be noted that LFB policy on means of escape is that it should be an integral part of the building and capable of being used by all classes of occupants, irrespective of age, or physical ability. It should be further noted, in this connection that the provision of any type of manipulative or automatic escape apparatus such as ropes, chutes and folding ladders do not meet the standards aspired to by the Codes and Guides.

4 Bibliography

4.1 Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

4.2 The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
TSO Customer Services PO Box 29 Norwich NR3 1GN Telephone: 0870 600 5522 Fax orders: 0870 600 5533 www.tsoshop.co.uk this site also lists local stockists.	Fire safety in offices and shops ISBN-13: 978 1 85112 815 0 Fire safety in factories and warehouses ISBN-13: 9778 1 85112 816 7 Fire safety in premises providing sleeping accommodation ISBN-13: 978 1 85112 818 1 Fire safety in residential care premises ISBN-13:978 1 85112 818 1 Fire safety in educational premises ISBN-13: 978 1 85112 819 8 Fire safety in small and medium places of assembly ISBN-13: 978 1 85112 820 4 Fire safety in large places of assembly ISBN-13: 978 1 85112 821 1 Fire safety in theatres and cinemas ISBN-13: 978 1 85112 822 8 Fire safety at outdoor events ISBN-13: 978 1 85112 823 5 Fire safety in healthcare premises ISBN-13: 978 1 85112 824 2

	Fire safety in the transport network ISBN-13: 978 1 85112 825 9 Fire Safety Risk Assessment - Means of Escape for Disabled People ISBN: 978 1 85112 873 7
British Standards Institution (Sales) 389 Chiswick High Road London W4 4AL Telephone: 020 7996 9000 Fax: 020 7996 7001 E-mail: cservices@bsi-global.com Web : www.bsi-global.com	BS9991:2011 Fire Safety in the design, management & use of residential buildings - Code of Practice BS 9999: Code of practice for fire safety in the design, management and use of buildings BS EN 12101 Part 6: Smoke and heat control systems. Specification for pressure differential systems, Kits

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Caravan and Mobile Home Sites

GN22

Rev 12, 01 May 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Guidance Note provides advice on fire safety standards for caravan and mobile home sites both residential and commercial.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please contact your local borough Fire and Community Safety Centre or visit our web site at http://www.london-fire.co..uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 The purpose of this Guidance Note is to give outline advice on fire safety matters in regard to caravan, mobile home and holiday home sites. Legislative control is maintained through the Caravan Sites and Control of Development Act 1960 (the Act) which is enforced by the local authority.

1.3 The Order applies to caravan holiday sites. The Order, enforced by fire and rescue services, requires a fire safety risk assessment (FRA) to be undertaken by the responsible person for the site. There are guides available, (see Bibliography at the end of this Note) that helps with the FRA process and how to identify the general fire precautions that need to be in place.

1.4 As a site licence is required under the Act, section 5 allows for model standards to be applied to each site and these are published as guidance. In addition, where The Order applies, no fire safety provisions can be attached to the site licence, so far as it relates to any matter in relation to which requirements or prohibitions are, or could be, imposed by, or under, The Order.

2 Other Authorities you may need to Consult

2.1 As local authorities administer the Act, the site licence for premises that do not come under the auspices of The Order are subject to such conditions as they feel fit. These conditions may also specify that the following are provided:-

a) Adequate arrangements for preventing and detecting an outbreak of fire.

b) Means of fire fighting.

2.2 Usually the local authority Environmental Health Department will be responsible for requiring conditions and issuing a licence after consultation with the LFB.

3 General Principles

3.1 The following is a guide to the fire safety provisions which may be required on a residential site that falls outside of the provisions of The Order. However, the arrangements below are a good guide to follow for commercial sites. Guidance to more detailed information is listed under 'Bibliography' at the end of this Note.

(a) Adequate access and egress arrangements for the public, emergency vehicles and equipment in and out of the site.

(b) Sufficient water supplies for firefighting purposes.

(c) The provision of hard standing surfaces for fire appliances.

(d) A clearly marked site boundary.

(e) Adequate spacing between caravans.

(f) The provision of fire points which should include the following:-

I. Fire fighting equipment, i.e., hose reels.

II. Fire warning arrangements, i.e., manually operated sounders.

III. Fire notices which should include the following:-

- The evacuation procedure.
- How to raise the alarm.
- How to call the fire brigade.
- How to use the fire fighting equipment.

(g) The provision of a telephone to call the emergency services

(h) The safe storage and use of Liquid Petroleum Gas (LPG) which include propane and butane.

(i) The safe installation of electrical power installations.

(j) Refuse disposal arrangements.

4 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography.

AVAILABLE FROM	**TITLE**
British Standards Institution (Sales) 389 Chiswick High Road London W4 4AL Telephone: 020 7996 9000 Fax: 020 7996 7001 E-mail: cservices@bsi-global.com Web: www.bsigroupl.com	BS 3632:Residential Park Homes. Specification BS 5482-1: Code of practice for domestic butane- and propane-gas-burning installations. Installations at permanent dwellings, residential park homes and commercial premises
The Stationery Office (Mail, Telephone, Fax & Internet Orders) TSO Orders/Post Cash Dept PO Box 29 Norwich	Caravan Sites and Control of Development Act 1960 - Section 5: Model Standards 1989 - Permanent Residential Mobile Home Sites Caravan Sites and Control of Development Act 1960 - Section 5: Model Standards - Holiday

NR3 1GN Telephone: +44 (0)333 200 2425 Fax orders: +44 (0)333 202 5080 E mail esupport@tso.co.uk Web: www.tso.co.uk	Caravan Sites *Communities & Local Government Guide, Fire safety risk assessment sleeping accommodation ISBN 9781851128714

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

* This guide may also be downloaded free of charge from the Fire Safety Law and Guidance Documents for Business Section of the CLG website at: https://www.gov.uk/workplace-fire-safety-your-responsibilities

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Fire Precautions in Toy Fairs / Grottoes GN24

Rev 15, 01 May 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Guidance Note provides advice on fire safety standards and means of escape requirements for toy shop grottoes.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest FSR Admin, or visit our web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 The purpose of this Guidance Note is to provide information to the responsible person (RP) who may wish to allow a toy fair or grotto within the premises they have control of. This information should be used to inform and review fire risk assessments (FRAs) and the premises management of the additional hazards and risks from the introduction of these events.

1.3 Retail outlets come within the scope of The Order. This legislation requires that the RP takes such fire precautionary measures as are reasonable to ensure that the premises are safe.

1.4 When considering proposals to introduce toy fairs and grottoes into such premises, the RP must carry out a review of the fire risk assessment (FRA) and the emergency evacuation plan (EEP) for the premises.

1.5 If an Alterations Notice (a Notice that is an enforcement option under the auspices of The Order), is in force is in force in respect of your premises, any proposals to introduce toy fairs and grottoes must first be discussed with the London Fire Brigade, who enforce The Order. Where there is no Alterations Notice in force it may still be advisable to consult with the LFB.

2 Other Authorities you may need to Consult

2.1 There may also be other interested parties who have legislative control over certain premises who therefore may need to be consulted, depending on the use of the premises, before any works are undertaken. They are likely to include :-

- Building Control Officer (local authority)
- Environmental Health Officer (local authority)
- Licensing Authority (local authority)
- Health and Safety Executive
- Insurers of property

3 General Principles

Means of Escape

3.1 Each grotto, or other enclosed area into which the public are admitted, should be provided with not less than two exits sited remotely from each other and not less than 750mm in clear width, or such greater width as may be necessary to facilitate the ready evacuation of the persons likely to be there. If your escape route could be used by wheelchair users or other non ambulant people, they will need a minimum width of 800mm.

3.2 All aisles, gangways, corridors, exitways and exits, including those in the immediate vicinity of the structure, should be kept clear and unobstructed at all times and available for immediate use.

3.3 Existing fire exit notices in the premises should not be obstructed by the structure and additional exit and directional notices that comply with the current British standard should be provided within the structure and externally where necessary.

3.4 Curtains should not be hung across corridors or gangways and, where provided across doorways, they should not conceal fire exit notices and should be made to hang so that they can easily be drawn aside and do not trail on the floor.

Fire fighting equipment (fire extinguishers)

3.5 The allocation and type of portable fire appliances should be adequate for the risk and access to the equipment should be clear and unobstructed. Two 13A water-type extinguishers and one 34B carbon dioxide (CO^2) extinguisher will normally be sufficient. These can be either hung on suitable wall brackets or kept in a purpose built stands.

Other Precautions

3.6 In a sprinklered building the construction of a toy fair grotto should terminate at least 500mm below sprinkler deflector plates; this arrangement should also apply to storage in any storeroom associated with the structure.

3.7 All temporary or permanent electrical wiring to the structure should be in good condition and adequately protected against mechanical damage. Flexible cord or cables and unenclosed wiring should be installed remotely from any textile fabrics and, where it is essential for such wiring to pass through fabrics, these should be efficiently protected by insulating rings or similar devices.

3.8 Each item of temporary electrical equipment should be provided with a readily available means of isolation from the power supply.

3.9 A competent person should be in charge of the structure during the whole time that the public is present. The competence of this person should include knowledge of the system of electrical wiring and associated isolation switches.

3.10 There should be no overcrowding allowed within the structure, and queuing or waiting areas should not obstruct corridors, gangways, exits and stairways.

3.11 Packing cases, packing material, litter and other combustible material should not remain in, or in the vicinity of the structure, but should be removed to a safe storage area within or outside the building.

Safety Lighting

3.12 A satisfactory form of safety lighting should be provided in any structure where adequate borrowed lighting from any safety lighting in the remainder of the premises or from outside is not

available. The power source should be separate from the general lighting to the premises so that the structure can be evacuated safely in the event of failure of the general lighting.

Definition of Terms

3.13 "Non-combustible" material means material deemed to be non-combustible when tested in accordance with the provisions of British Standard 476-4:Fire tests on building materials and structures. Non-combustibility test for materials

3.14 "Inherently non-flammable" material means material which, although not non-combustible and not submitted to a flame proofing process nor provided with a flame-resistant finish, is in fact non-flammable throughout its thickness.

3.15 "Durably flameproof" fabric means a fabric which, after being submitted to a washing treatment, remains flameproof, as determined by the method of test prescribed in the relevant British Standard for that fabric used.

3.16 "A process of impregnation" means a vacuum/pressure process, undertaken by a firm registered under the British Standards Institution's Scheme of Assessed Capability. Products should bear a distinguishing mark to indicate that they have been impregnated and the product should be processed to a standard of "Class 1" when tested in accordance with the provisions of BS 476-7: Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products.

Materials to be used

3.17 Materials used in the construction and decoration of the structure should be:

(a) Non-combustible, e.g. board or composite sheet material or substitutes for asbestos sheeting such as Alphapan, Alphire, Durasteel 3DF2, Fireline, Masterboard, Supalux, Tacboard, Tacfire, Vicuclad, Plaster and Plasterboard sheet metal and wire mesh, metallic fabric, glass and glass cloth; or

(b) Inherently non-flammable, e.g. heavy woollen or woven glass cloth and certain rigid materials which whilst not non-combustible are in fact non-flammable such as Flameguard hardboard, Masterboard, Panoflam chipboard, and Vedex plywood;

(c) Durably flameproof;

(d) Plastic materials which have been tested in accordance with BS EN ISO 4589-2: Plastics. Determination of burning behaviour by oxygen index. Ambient-temperature test. The use of plastic materials should be kept to a minimum;

(e) Plywood, hardboard, pulpboard or fibreboard rendered flame-resistant by a process of impregnation and bearing a distinguishing mark to indicate that it has been so treated; or

(f) Timber of any thickness impregnated and branded as in (e) above. However, timber framing of stands may be of natural unproofed timber of a minimum thickness of 25mm and counters and floors of stands may be of natural unproofed timber of a minimum thickness of 25mm or wood chipboard or blockboard each of not less than 18mm, provided that where natural timber is used for floors it should be close-jointed.

NOTES: If materials are impregnated in accordance with (e) and (f) above but do not bear a distinguishing mark, a certificate should be obtained from the processing firm to the effect that the process of impregnation has been applied.

3.18 The applied decorative finishes of toy fairs and grottoes may be of natural (unproofed) timber of a minimum thickness of 25mm provided that:

(a) The area of vertical wall surfaces does not exceed 2m for each metre of floor area occupied by the toy fair or grotto.

(b) Where such timber is used on the outside of the toy fair or grotto it is so arranged as not to be continuous with similar timber treatment of an adjoining grotto.

(c) Where timber is used on the inside of the toy fair or grotto and extends to within 600mm of a fabric ceiling, such fabric is inherently non-flammable or durably flame-proofed.

(d) Textile fabrics other than those referred to in (a), (b) and (c) above, when used for interior decorative purposes: -

- are rendered satisfactorily non-flammable;
- are fixed taut and/or in tight pleats to a solid backing of material conforming with (a) or (e) in paragraph 3.17 above except that such solid backing need not be provided to curtaining of window features or to fabric ceiling not inclined to an angle greater than 20° from the horizontal; and
- are secured at floor level by a 75mm deep skirting.

(e) Curtains to openings or recesses are of inherently non-flammable material rendered satisfactorily non-flammable.

Natural and artificial foliage

3.19 Any natural foliage should be maintained satisfactorily non-flammable by treatment with a flame retardant process. Materials used in the manufacture of artificial foliage should preferably be non-combustible, inherently non-flammable or durably flameproof.

3.20 Flammable toys or decorations should not be placed upon trees, and lighted candles should not be used. If decorative electric lights are used the electrical supply should be taken from a sub-circuit independent of the general lighting and all fittings and connectors should be well insulated; any unprotected length of flexible wiring should be connected to the permanent installation through an approved connector and the wiring should be in good condition, as short as practicable and arranged so as to be out of the reach of the public.

4 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography.

AVAILABLE FROM	TITLE
British Standards Institution (Sales) 389 Chiswick High Road London W4 4AL Telephone: 020 7996 9000 Fax: 020 7996 7001 E-mail: cservices@bsiglobal.com Web : www.bsi-global.com	BS 476-4:Fire tests on building materials and structures. Non-combustibility test for materials BS 476-7:Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products BS EN ISO 4589-2:Plastics. Determination of burning behaviour by oxygen index. Ambient-

	temperature test BS 9999: Fire safety in the design, management and use of buildings. Code of practice
The Stationery Office (Mail, Telephone, Fax & Internet Orders) TSO Orders/Post Cash Dept. PO Box 29 Norwich NR3 1GN Telephone: +44 (0)333 200 2425 Fax orders: +44 (0)333 202 5080 E mail esupport@tso.co.uk Web: www.tso.co.uk	The Building Regulations 2010: Approved Document B: Fire safety risk assessment offices and shops ISBN-13: 978 1 85112 815 0 Fire safety risk assessment small and medium places of assembly ISBN-13: 978 1 85112 820 4 Fire safety risk assessment in large places of assembly ISBN-13: 978 1 85112 821 1 Fire safety risk assessment - Means of Escape for Disabled People ISBN: 978 1 85112 873 7

The above publications are current at the time of preparation of this Guidance Note, (see date at foot of last page).

The "Fire Safety" guides listed above may also be downloaded free of charge from the Fire Safety Law Section of the CLG website at: **www.gov.uk/workplace-fire-safety-your-responsibilities**

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Access for Fire Appliances

GN29

Rev 15, 07 July 2023

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London.

This Guidance Note covers the access arrangements needed for fire appliances to get close enough to a building to fight fire. It details such requirements as minimum road widths, turning circles, road humps and projections from buildings. It is primarily aimed at developers and architects for planning reference but may be useful to anyone who has concerns about fire brigade access to a building.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 The purpose of this Guidance Note is to provide information to specialists and the public regarding fire brigade access for fire appliances to and around buildings. This information should be used to plan for new premises, inform and review fire risk assessments (FRAs) and review existing access arrangements where necessary.

2 Other Authorities you may need to Consult

2.1 As the local authority administers the Building Regulations, where access and facilities for the fire service are concerned, the authority concerned should be consulted.

3 General

3.1 Access roads may be public highways, private roads, footpaths, or specially strengthened and defined routes through the land surrounding the buildings. The recommendations for London Fire Brigade pumping appliances, aerial appliances and special large appliances are detailed below:

	*Pump (P)	32m Turntable Ladder (TL)	64m Turntable Ladder (TL)	Fire Rescue Unit (FRU)	Special
Min width between kerbs (m)	3.7				
Min Width of gateway (m)	3.2				
Max. width considering equipment trays, any extending legs (m)	4.18	5.6 without spreader plates	6.4 with spreader plates	5.34	4.4
Min clearance height (m)	3.505	3.45	4.15	3.3	4.25
Appliance length(m)	8.13	10.3	12	9.2	9.9
Min sweep circle (turning circle between walls) (m)	17	19.5	23.5	18.6	24.5
Min turning circle between kerbs (m)	16	17.5	21.5	17	22
Gross Vehicle Weight (GVW) (KG)	16000	20500	32000	14500	26000
Capacity, Gross Laden Weight (GLW) (KG)	14838	17284	30173	12900	24600

* NB: Pump (P) appliance includes new Zero Emissions Pumping Appliance (ZEPA) requirements

Table 1- Typical vehicle access route specification

3.2 It should be noted that any or all of the appliances noted could be attending a fire or other incident at any location and therefore, the upper number for width and weight considerations should be utilised in any deliberations for access at any location. It should also be noted that the weight and width considerations should be through any gateway and into the surrounding area as firefighters will need to gain access to the appliance concerned.

4 Access

Access for all appliance types

4.1 Access roads for appliances should be provided with a minimum 10 metre working area(s) at appropriate locations where appliances are to be positioned and used around the building. This will enable all types of appliance to operate at their optimum height and reach. Roads, including any inspection covers and public utility service pits, should be capable of carrying the maximum weight set out in Table 1.

Aerial appliances

4.2 Due to the weight of high and special reach appliances being distributed over several axles, it is considered that their infrequent use of a carriageway or route designed to 16.0 tonnes should not cause damage. It would therefore be reasonable to design the road base to 16.0 tonnes, although structures such as bridges should have the full 32.0 tonnes capacity.

4.3 In addition, aerial appliances will need to extend jacks from the appliances if they are to be used in any work environment. Turntable ladders, and aerial platforms are fitted with four ground jacks as stabilisers. Under normal working conditions the weight on the jack should not exceed 14.6 tonnes.

4.4 Overhang of booms on headrest do not exceed 1.83m from foremost part of the vehicle.

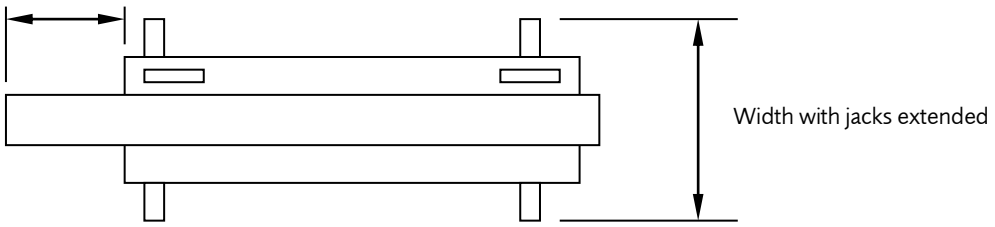


Figure 1 Aerial appliance overhang dimension and width with jacks extended. See Table 1 for Jack widths

4.5 With regard to Diagram 15.2 of ADB B5 Volume 2, the maximum and minimum distances and width of aerial appliances for the LFB are:

A = 4.9 metres

B = 7.0 metres

C = 12.0 metres

D = 2.2 metres

Access road gradients

4.6 Gradients on any access road to be used by fire appliances should be no greater than 1 in 4 (25%). The approach and departure angles to any gradient should not exceed 12°.

5 Turning and Sweep Circles of Appliances

5.1 When providing access for appliances, allowance should be made for an appliance's turning circle and sweep circles. Additional turning spaces should be provided where corners must be negotiated, and sweep circles should not be obstructed above kerb height.

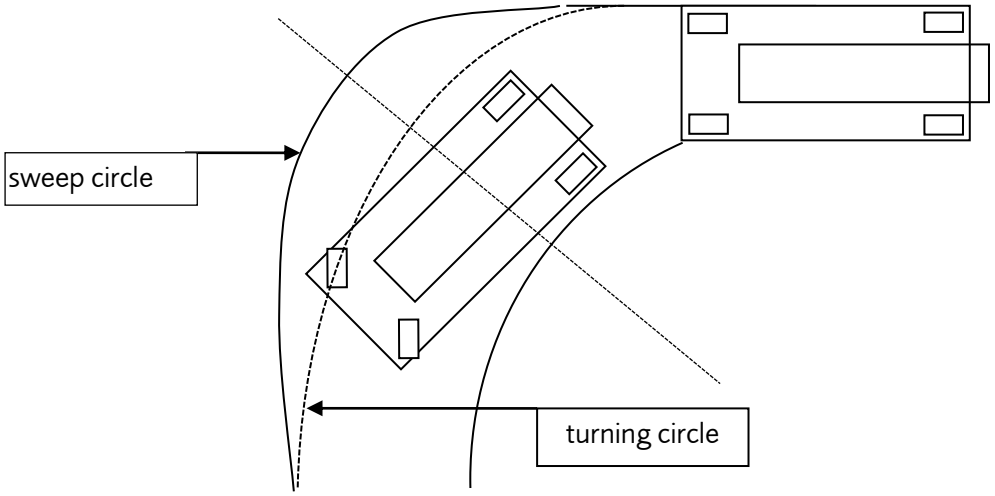


Figure 2 Appliance sweep and turning circles. See Table 1 for figures

6 Dead End Access

6.1 Turning facilities should be provided in any dead-end access route that is more than 20m long This can be a hammerhead or turning circle as described in Diagram 15.3 Turning facilities, of Volume 2 of ADB (Diagram 13.1 in ADB Volume 1).

7 Access for Buildings

7.1 Access to the exteriors of the building is needed to enable high reach appliances to be used and pumping appliances to supply water and equipment for fire fighting and rescue activities. These access requirements increase with the building size and height. Vehicle access requirements are commented on in the current versions, Volumes 1 and 2 of ADB, Requirement B5: Access and facilities for the fire service. Alternatively, the current version of BS 9999 Fire safety in the design, management and use of buildings Code of practice or BS 9991 Fire safety in the design, management and use of residential buildings Code of practice can be utilised

8 Obstruction to Access

8.1 All access roads for Fire Brigade appliances should be kept clear of any obstructions. It may, however, be considered necessary to restrict unauthorised entry and various arrangements are set out below.

8.2 Before any obstructions are installed the proposed arrangements should be advised to the local LFB fire safety team who can liaise with the local fire station as necessary,

9 Posts and Bollards

9.1 Siting of bollards must not obstruct the use of hydrants.

Fixed and removable posts or bollards

9.2 When considering the type of post or bollard to be used, either fixed or removable, it is particularly important to bear in mind the type of scheme being considered.

9.3 If the scheme is a simple environmental improvements scheme in a thoroughfare it may be acceptable for a row of fixed bollards to be spaced along the kerb line. If this is not acceptable to the traffic authority, there are a number of options:

(a) Intermediate bollards of a lower height i.e., below 230mm in height.

(b) A removable bollard - one only for any access route. Removable bollards may be of galvanised steel tube. They should be secured in position with a standard Fire Brigade (FB) padlock or GERDA key.

Collapsible posts or bollards

9.4 Collapsible posts and bollards are acceptable in certain cases provided they do not project more than 150mm above ground level when folded and are not of such a type that an appliance passing over one end of the collapsed bollard will raise the other end and foul the appliance. Collapsible posts may be of iron pivoted near the ground. They should be secured by a standard FB padlock or GERDA key.

Flexible posts or bollards

9.5 Any proposal to use flexible bollards of a new or improved design should be referred (with particulars of the design) to the local LFB fire safety office.

10 Width Restrictions

10.1 Closure of the roadway by a lockable gate or removable post(s) is not permitted where the restriction extends the attendance times. A raised paved area of any sort in the centre section of a width restriction is not acceptable except where it forms a control island with posts to prevent traffic mounting the pavement. It should have a kerb height not exceeding 100mm. It is essential to ensure that these posts are easily removable.

10.2 Any gate or removable post(s) must be secured only at one point and with a standard FB padlock or GERDA key.

10.3 If an appliance would have to mount the pavement to pass a restriction there should be no obstructions in the form of shop blinds, trees or street furniture which might impede its passage. The total width available for the passage of appliances, i.e., combined width of road and pavement, must not be less than 3.1m with a straight approach. Where the approach is at an angle, up to 5m may be necessary.

11 Gate Barriers

11.1 Barriers are not acceptable on through routes and only one barrier is acceptable on a route to an estate. Thus, if a barrier is provided on an estate, the route from the local fire station to that estate must not be additionally obstructed in any way.

11.2 Tests have shown that time is lost through the appliance and crew negotiating their way through a barrier through stopping, dismounting, removing an obstruction, remounting and proceeding. This time is impacted if the lock is not in good order and the obstruction cannot be easily removed.

11.3 Most types of gate barrier are acceptable if they meet the following criteria: -

(a) They must be quickly and easily openable by LFB personnel.

(b) They must be only secured at one point by a standard FB padlock or Gerda key.

11.4 Any proposal to install electrically operated barriers should be referred to the local LFB fire safety office. Measures should be taken to ensure that parking will not take place in the immediate vicinity of a barrier and where it is known that parking is likely to take place, the scheme should not be allowed.

12 Speed Control Humps

12.1 The Highways (Road Humps) Regulations 1999 stipulate precise and demanding criteria for the construction, siting and signing of road humps on public roads.

12.2 Regulation 3(b) of the Highways (Road Humps) Regulations 1999 confirms the London Fire Brigade should be consulted when a borough proposes introducing a road hump scheme.

12.3 Written notification of the final scheme details should be presented to the LFB at least one month prior to implementation. Such notification would enable the Officers to consider and introduce any contingency arrangements that may be possible.

12.4 Proposals to amend any part of an existing scheme should be subject to further notification and consultation in order that Officers may consider the full implications of the revised scheme and regarding any adjacent traffic management schemes.

12.5 Although the LFB is supportive of the aims of traffic management schemes it should be remembered that each road hump delays a fire appliance by approximately ten seconds. (Six humps represent a delay of one minute). Every consideration should be given to the introduction of other traffic calming measures in place of road humps, with road humps only being used to complement the total scheme.

12.6 A typical location for a road hump system would be a long and fairly straight secondary road situated in a residential area. The LFB's case will then need to be based on the distance from the nearest fire station and whether the road on which the humps are to be constructed is one which is essential for access, and for which no suitable alternative is available. Additional factors to be considered include: -

(a) **Type of road humps**: Round top humps are preferred to those with a flat top.

(b) **Size**: Humps of 50mm high are preferable to those of 75mm or 100mm high. The overall length of a specific type of hump should be as near to the recommended minimum as possible.

(c) **Distance between humps**: In general, the Brigade would prefer the maximum possible distance between humps. However, there may be specific sections of a road on which it is desired to achieve a more defined speed limitation, and which consequently will result in closer positioning of humps. Accordingly, such measures should not apply to the whole length of the road.

(d) **Number of humps**: The removal of previous restrictions on the number of humps in a series may lead to a tendency to identify road(s), which though worthy of the installation of road humps, could result in unnecessarily extensive series of road humps. This tendency should be avoided and humps only installed where their specific benefits have been identified.

(e) **Location of road humps**: Generally, the placement of road humps within close proximity of bus stops, round-a-bouts, road junctions and on dual carriageways are likely to lead to speed reductions, but correspondingly heavier traffic congestion which would, invariably, further delay appliances attending emergency incidents. Therefore, such proposals would be discouraged.

(f) **Speed Tables**: The Highways (Road Humps) Regulations 1999 indicate a minimum length for a road hump but not a maximum length. This allows a road to be raised for a considerable distance to provide a flat-topped table, these are known as Speed Tables.

12.7 Speed Cushions are normal road humps with gaps to allow the passage of large vehicles, e.g. fire appliances and buses. Conditions a) – f) above also apply to speed cushions although they are generally more acceptable to the LFB.

13 Pedestrianised Areas

13.1 A clearly defined fire path of sufficient width, and capable of supporting the weight of a pumping appliance is required through a pedestrianised area. (This may be indicated by the use of different coloured concrete or different paving patterns). Where tall buildings abut, the fire path will need to be of sufficient width for use by aerial appliances giving consideration for their working dimensions and increased weight loading requirements.

13.2 The siting of the fire path should consider building design features, e.g., canopies, extended shop fronts, etc. and any other road furniture. (these features may affect the positioning and operational use of aerial appliances and/or ladders).

13.3 No physical obstructions including seating, trees or flower beds should obstruct the fire path and no street furniture e.g., lamp posts, should be allowed which could prevent the use of ladders by firefighters.

13.4 If appliance access to a pedestrianised area crosses a kerb, it should be ramped with a steady incline for a minimum length of 500mm with the difference in levels not exceeding 100mm and both ends inset.

14 Standard Padlocks

14.1 Fire Brigade padlocks and keys are generally available from hardware suppliers. Please refer to the telephone directory for your nearest outlet. For GERDA locks consult their website http://www.gerdasecurity.co.uk/

15 Water Mains, Fire Hydrants and Alternative Supplies of Water for Fire Fighting

15.1 The provision of fire hydrants and other facilities for firefighting must be in accordance with the current version of both the Building Regulations and Approved Document B. Fire hydrant flow rates for firefighting should be in accordance with the National guidance document on the provision of water for firefighting, which is available via Water UK's website, https://www.water.org.uk

15.2 Building development sometimes necessitates the closure of thoroughfares and the disestablishment of existing water mains. It will be necessary to decide in such cases whether any hydrants affected may be abolished or whether they should be refixed in new positions. The cost of such work will be met by the developer.

15.3 Subject to the terms of the planning agreement and any conditions under the Community Infrastructure Levy, the cost of additional statutory fire hydrants will normally be met by the London Fire Brigade. However, it may not be practicable, owing to the absence of statutory mains within the development area, to provide adequate cover by the installation of statutory fire hydrants. In such cases it may be a requirement to install private fire hydrants sealed in preference to metered (this will be decided by the water authority) and attached to a water main suitable for firefighting.

The hydrants should be installed in suitable locations within an appropriate and accessible distance to the buildings they cover. Access to hydrants must be measured via a route suitable for laying hose, this means access should not be obscured by walls, roads, or any other means. The Brigade will advise on such installation's requirements on receipt of the site plan.

Please e-mail electronic copies of the plans detailing the size, nature and usage of the building (residential, commercial, industrial, mixed usage, etc) , the water mains layouts including mains sizes, and the location of any dry or wet risers to water@london-fire.gov.uk. If submitting paper plans, please provide two copies of the site plan to the address detailed in 15.8.

15.4 When new mains are to be laid by a water undertaker, an INSET/NAV company or by self-lay, consideration must be given to proposed size in relation to the flow of water required for firefighting Please refer to the National guidance document on the provision of water for firefighting which is available from the Water UK website, https://www.water.org.uk. Advice and guidance may also be obtained from the London Fire Brigade Water Team either via an e-mail to water@london-fire.gov.uk or via the switchboard on 020 8555 1200.

15.5 Statutory and private hydrants should be underground hydrants of wedge gate valve, screwdown, or thorough-bore design and conform to the current version of British Standard (BS) 750: Specification for underground fire hydrants and surface box frames and covers. They should be installed in footways immediately adjoining the access roads referred to and must be installed so that they are kept free of any obstructions (NB - hydrants must not be installed in parking bays, unmade areas, flowerbeds, or other areas where they could become damaged, obstructed and /or inaccessible).

15.6 The positions of the hydrants should be indicated by standard plates as detailed in the current version of BS 325: Indicator plates for fire hydrants and emergency water supplies.

15.7 Where either no piped water is available or the required flow rate for firefighting cannot be achieved via fire hydrants alone, developers must consider the use of alternative or complementary supplies as outlined in the current version(s) of Building Regulations Approved Document B. These measures may include automatic fire suppression systems, the use of storage tanks of water of appropriate capacity, the use of open water sources able to deliver a suitable supply of water all year around, or any other means of water supply for firefighting considered appropriate by the London Fire Brigade.

15.8 For other general enquiries relating to hydrant matters within the London boroughs, please contact the London Fire Brigade Water Team either via an e-mail to water@london-fire.gov.uk or via the switchboard on 020 8555 1200. The Water Team is normally staffed from 7am to 5pm Monday to Friday. Please note the Water Team is not staffed in the evenings, at weekends or on Public Holidays.

The postal address is:

London Fire Brigade
Water Team
169 Union Street
London
SE1 0LL

The Water Team's email address is water@london-fire.gov.uk

The Water Team may also be contacted using the Contact Us facility on the London Fire Brigade website: https://www.london-fire.gov.uk/contact-us/

16 Standards

16.1 The Standard or Code to be followed will normally be that current at the time the Brigade is consulted subject to any specific requirement contained in a statutory consent or approval relating to a development.

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN39
Automatic Natural Smoke & Heat Ventilators

Rev 7, 01 May 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) in London.

This Guidance Note provides general information on types of smoke control system available that can be utilised to improve life safety, aid firefighting or increase property protection.

This Note is one of a series produced by the Fire Authority to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 There are numerous types of smoke control system available that can be utilised to improve life safety, aid firefighting or increase property protection. These systems generally form part of a package of fire protection measures which could include heat or smoke detection, compartmentation, sprinklers, smoke barriers and other installations suitable for the particular circumstances.

1.3 Heat and smoke ventilation systems perform a valuable function in the control of fire by the prevention of smoke logging, improving visibility and retarding the rate of lateral fire spread, thus assisting in the evacuation of people from buildings. As a result of the improved visibility fire-fighters are able to locate and extinguish the fire more speedily, therefore reducing fire damage and financial loss.

1.4 At the initial design stage it is important to understand why a smoke control system is required this will help to determine the performance objectives of the system and develop a clear pass/fail criteria when it comes to commissioning the installation.

2 Other Authorities you may need to consult

2.1 Other authorities you may need to consult when designing an automatic natural smoke and heat exhaust ventilation system include:-

- Local Authority (Building Control Department)
- Local Authority (Planning Department)
- Home Office Inspector (Crown Property)
- Building Research Establishment.

2.2 Note: if the smoke control system is being installed as part of a property protection measure you may need to consult your insurance provider.

3 General Principles

3.1 The design principles and specification for Automatic Natural Smoke and Heat Exhaust Ventilators which have been adopted by the LFB are set out in the Building Research

Establishment Report BR 186 and British Standard EN 12101-2 : Smoke and heat control systems – Part 2: Specification for natural smoke and heat exhaust ventilators.

3.2 In addition the following recommendations are made as these areas are not covered in detail in the above documents.

a) Ventilators installed in the vicinity of sprinkler heads should be activated by a heat sensitive device with an operating temperature similar to that of the sprinkler head. In addition to the heat sensitive device the ventilator may be automatically operated via a sprinkler installation flow switch. (Guidance on fixed installations is given in Guidance Note No 45).

b) Where ventilators are not installed in association with sprinklers their operation may be either by a smoke or heat sensitive device.

NOTE: Where a ventilator has a life safety application (i.e., means of escape) it shall be activated by an automatic smoke detection system complying with BS 5839: Part 1.

c) To facilitate manual override by fire-fighters the control can either be mechanically or electrically operated remotely.

3.3 Preferably the override control should be operated electrically by a remote control switch positioned adjacent to the main alarm panel and be fail safe to open on failure of the electrical supply. A separate battery supply may be provided to keep the vent closed in the event of a failure of the mains supply but, in the event of both the main and battery supplies failing, the vent must fail safe to open.

3.4 Publications to which reference could be made when considering automatic natural smoke and heat exhaust ventilation include:-

- BS EN 12101-2 : Smoke and heat control systems – Part 2: Specification for natural smoke and heat exhaust ventilators
- BRE report BR186 : Design principles for smoke ventilation in enclosed shopping centres.

NOTE: this list is not exhaustive.

4 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
British Standards Institution (Sales) 389 Chiswick High Road London W4 4AL Telephone: 020 7996 9001 Fax: 020 7996 7001 E-mail: cservices@bsigroup.com Web: www.bsigroup.com	BS EN 12101-2 : Smoke and heat control systems – Part 2: Specification for natural smoke and heat exhaust ventilators

BRE Building Research Establishment Bucknalls Lane Garston Watford Herts,WD25 9XX Telephone: 01923 664262 Web: www.brebookshop.com	BRE report BR186 : Design principles for smoke ventilation in enclosed shopping centres

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN54
False Alarms Caused by Automatic Fire and Smoke Detection

Rev 11, 01 May 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Guidance Note provides fire safety advice for all premises experiencing false alarms.

This Note is one of a series produced by the Fire Authority to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 If you have been provided with, or have requested a copy of this Guidance Note, it is likely that the London Fire Brigade has responded to emergency calls to your premises that were found on arrival to be 'False Alarms'. A False Alarm is "any fire alarm or fire signal resulting from a cause other than fire".

1.3 False alarms that are passed through to LFB are an unnecessary drain on public resources and are considered to be 'Unwanted Fire Signals' (UwFS). It should be noted that whilst there may be an acceptable rate of false alarms relative to the number of detector heads (source: BS 5839 Part 1 Section 3), there is no acceptable rate for these false alarms being transmitted to the LFB to become UwFS. The LFB has introduced measures to help protect valuable public resources. This includes providing guidance to occupants and collaborating with all interested parties to reduce the impact of false alarms.

1.4 In accordance with the commencement of the general power of competence under the Localism Act 2011, under the provision of S18C of the Fire & Rescue Services Act 2004, we are now able to charge for attending false reports of fire. In accordance with the provision, a charge may be applied where; the call originates from non-domestic premises where the report is false, persistent and due to warning equipment having malfunctioned or been mis-installed. We will apply a charge when called to attend the 10th chargeable call in a rolling 12month period, and all subsequent chargeable calls.

1.5 From 1st January 2014, the charge will be applied to encourage adoption of proper management practices that prevent false alarms from resulting in an unnecessary emergency response. We want to see improvements in local management of fire alarm systems. We will always respond to a call to fire and do want to attend if you have good reason to suspect a fire.

1.6 It is recognised that, in many instances, it is not practical or possible to prevent all false alarms. Where there are sufficient false alarms to unreasonably impact on emergency services, it is appropriate to consider the introduction of filtering measures – actions that result in the prevention of the fire alarm being notified to the emergency services. It is vital that filtering measures are only ever employed as a result of a suitable fire risk assessment that accounts for both the fire alarm system and management practices ability to support the filtering practices considered. In the event filtering is not a suitable action, steps should be taken to improve the system and/or management practices accordingly.

1.7 People gradually lose confidence in a fire alarm system that causes false alarms and may start to ignore its warning. It is important that you recognise the importance of keeping the fire detection and fire alarm system in good working order and of removing the causes of false alarms. It is also worth remembering that if a genuine fire alarm is ignored (for example, because people mistake it for yet another false alarm), this can lead to death, injury and extensive damage. It is known that many companies that suffer a serious fire will never recover and cease trading.

1.8 Many false alarms are the result of the actions or inactions of employees or contractors who may not be aware that an automatic fire detection system is in operation. A few simple rules, coupled with normal good housekeeping practices can provide you with effective and trouble-free use.

1.9 Repeated attendances to UwFS place a burden on the LFBs resources and may mean that fire appliances are unavailable to attend a genuine emergency. They increase the risk to fire-fighters and members of the public during unnecessary emergency journeys. False alarm actuations may also result in loss of production and general disruption of your normal business activities.

2 Fire Safety Law

2.1 Under The Order, employers and others responsible for buildings must provide effective fire precautions to protect people visiting or using their premises. Your fire detection and fire alarm system forms part of those fire precautions. A suitable person must be nominated to be responsible for supervising the system and must have the appropriate skills, knowledge, experience and training to carry out the role. The fire alarm and fire detection system forms part of the premises Fire Risk Assessment and Emergency Plan. Along with other requirements of The Order, the effectiveness of the fire alarm system, its management and appropriate staff training must not be overlooked if the Fire Risk Assessment and Emergency Plan are to be considered effective.

2.2 Further detail on The Order is provided in LFBs Fire Safety Guidance Note No.66 which outlines the actions required by responsible persons to comply with The Order.

3 Fire Alarm Systems

3.1 Your automatic fire detection and alarm system can be a significant factor in reducing the risk to life and the limiting of damage to your property in the event of fire if it is designed, installed, maintained and managed in accordance with a relevant standard such as BS 5839.

3.2 It is strongly recommended that you employ a competent person or company to design, install and maintain and manage your fire detection and fire alarm system. The use of a company with Third Party Certification in the relevant area of design, installation and maintenance is recommended to ensure the system will operate effectively and limit the number of false alarms to a minimum. It may also help the Responsible Person to comply with the requirement of The Order to employ a 'competent person' to manage this aspect of the fire precautions.

3.3 Modern fire detection and fire alarm systems can be tailored specifically to give the end user a more reliable and flexible system and one which is less likely to give false alarms.

3.4 The ability to tailor the system at the design stage requires input from the end user regarding the building usage together with effective user training concerning the system operation. Liaison between all parties (e.g.: user, maintainer, supplier, monitoring centre) will produce the best result for the occupier in terms of system design, flexibility and long term operation with a minimum of false alarms.

4 Management and Maintenance

4.1 Surveys show that most false alarms are attributable to human error. The key to effectively avoiding many of these human factors is in having suitable procedures, correct supervision and a competent person to observe and keep a log of fire alarm activity and who has the authority to take appropriate action.

4.2 The competent person should have a good understanding of the operation of the fire alarm system as well as the consequences of poor maintenance and inadequate routine testing. They should keep a detailed record / log book of system events and any trends, e.g. a false alarm every Friday evening would be investigated and action taken until the cause of the problem was identified and resolved. This will aid the maintenance contractor in preventing false alarms occurring in the future. If you do not have the necessary training, skills, knowledge and experience to fulfil this role, you must appoint a competent person to do so for you.

4.3 A regular maintenance contract is essential in order to maintain your system in an effective and efficient condition.

5 How to Reduce False Alarms

5.1 Where a system is producing an unacceptable level of false alarms the causes must be investigated. The following remedial measures, as appropriate, should then be considered in consultation with your fire alarm maintainer:

- managing the process causing the false alarm (remove, alter or relocate process, isolate system during contractual work processes, etc.)
- re-siting of detector device;
- changing the type of detector (e.g.: heat for smoke);
- increasing the threshold limits on analogue detectors (keeping within Standards);
- selection of system type;
- siting/protection of break glass call points in vulnerable areas (e.g., loading docks) to prevent accidental operation;
- protection against electromagnetic interference;
- performance monitoring of newly commissioned systems;
- filtering measures;
- system management;
- regular servicing and maintenance.

6 On Site Call Filtering

6.1 Whenever possible fire alarm actuations should be investigated and filtered on site to prevent false alarms being transmitted to the LFB as UwFS. The early confirmation of a fire to 999 operators will enable them to mobilise the appropriate emergency fire response for the incident.

6.2 Some degree of alarm investigation can be carried out by all staff when the alarm sounds. The premises fire risk assessment must address the risk and protective measures required for any staff

that are required to investigate the cause of the actuation. In particular the following should be considered:

- The building size, layout and facilities
- The capabilities and flexibility of the alarm system
- Time available
- Communications
- Suitable training
- Maintaining a safe exit
- Any lone worker arrangements.

6.3 In a smaller premises where the risk of escape routes being obstructed is low it should be reasonable for an investigation to take place by the occupants without any complex or onerous precautions. With larger premises greater precautions will be necessary.

6.4 In many installations the automatic transmission of a fire alarm signal is used to alert the LFB via a remote centre (Alarm Receiving Centres, an ARC, are dealt with in the documents BS 5979 or BS 50515). Where there is a high incidence of UwFS from fire alarm systems and the Responsible Person is satisfied that all reasonable steps have been taken to reduce false alarms, but they continue at an unacceptable level, it may be desirable to delay the automatic signalling to the Fire Brigade. This will allow time for the cause of the alarm to be investigated during working hours to confirm a fire or false alarm.

6.5 In addition to an automatic transmission delay, premises with automatic transmission to an alarm receiving centre may consider introducing a time related system that removes the automatic transmission when the building is occupied. If the transmission cannot be delayed when the building is occupied then the relevant alarm receiving centre or your alarm maintenance company can be contacted for alternative methods.

6.6 Any change that you make to your procedures or fire safety control measures must be considered and justified in your fire risk assessment.

7 Action in the Event of an Alarm

7.1 When the fire alarm sounds, everyone in the building should immediately follow the fire action plan (this plan must be well publicised within your building). You should have arrangements in place so that you will know quickly whether an alarm is genuine or false.

7.2 If there is not a fire or other emergency then do not call the London Fire Brigade.

7.3 If there is a confirmed fire at your premises you must call London Fire Brigade using the normal 999 or 112 emergency number. This must be done even if there is automatic transmission of the fire signal to an alarm receiving centre. This ensures a full fire attendance by the brigade in the shortest possible time. If the LFB has been called, do not reset your alarm until the incident is resolved or you are asked to do so by a London Fire Brigade Officer.

7.4 When the building is unoccupied or where the occupants are not competent to operate the fire alarm panel, a person able to access and operate the fire alarm panel should be in attendance within 20 minutes of the alarm activating. Note that LFB may not wait longer than 20 minutes if they cannot gain access to the premises and there are no external signs of fire.

7.5 An alarm should not be reset until information about the alarm event has been recorded. The LFBs officers are not responsible for resetting the alarm system.

7.6 If a fault cannot be cleared by resetting the alarm system call your supplier or engineer and place the system out of order until the fault is repaired. During the period that the system is out of order extra vigilance will be required and organised patrols should be introduced to check the building for signs of fire at regular intervals.

8 Bibliography

8.1 Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

8.2 The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
British Standards Institution (Sales) 389 Chiswick High Road London W4 4AL Telephone: 020 7996 9001 Fax: 020 7996 7001 E-mail: cservices@bsigroup.com Web: www.bsigroup.com	British Standard BS 5839 Part 1 - Fire detection and fire alarm systems for buildings. Code of practice for system design, installation, commissioning and maintenance. *Includes advice on: false alarms and managing them effectively on site; maintenance recommendations and procedures.* BS 5979 - Code of practice for remote centres receiving signals from security systems *Includes information on Remote Centres such as ARC (alarm receiving centre), Telecare service provider or social alarm care provider.* This document has now been withdrawn and replaced by BS 50518 : Monitoring and alarm receiving centre. This standard is currently in 3 separate parts. However, ARCs that were built to the previous standard are still acceptable.

8.3 Additional information is available on the Fire Gateway (www.fire.gov.uk), a national website providing access to related information as well as links to all Fire & Rescue Services and the Communities and Local Government website (www.communities.gov.uk/fire/).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Powered Stairlifts In Commercial Premises GN55

Rev 11, 01 May 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) in London.

This Guidance Note provides advice on the fire safety considerations of installing a powered stairlift in commercial type premises (i.e. places of work, leisure centres, museums etc.).

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit our web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 The purpose of this Guidance Note is to provide information to persons on the risks from the powered stairlifts in premises. This information should be used to inform and review fire risk assessments (FRA) and the people responsible for fire safety in premises including the Responsible Person (RP and premises management groups.

1.3 Powered stairlifts can be an effective method of transporting disabled people between floors in domestic premises, however in residential care or commercial type premises, i.e. places of work, leisure centres, museums, etc., the LFB recommends that passenger lifts are installed in preference to stairlifts wherever possible.

1.4 With any proposal to install a stairlift in a private dwelling, the needs of the individual disabled person will be known and the installation can be tailored to suit. By contrast, with a proposal to install a stairlift in a commercial building the needs of the potential users will, except in rare cases, be unknown.

1.5 The conditions for a stairlift being approved in a public building, commercial building or residential care home are therefore more rigorous than those applying to a private dwelling. It will be necessary for each proposal to be considered on its merits having given due regard to any risk assessment that is carried out.

NOTE: Only in exceptional circumstances, and subject to advice from statutory bodies (see Section 2), should a stairlift be installed in a residential care home, or other building catering for the welfare, rehabilitation or care of disabled people. This would not preclude the installation of stairlifts as a reasonable alternative, when it may not be practicable to provide suitable access for disabled people to different levels within a storey by ramp or lifting platforms in an existing building.

2 Other Authorities you may wish to consult

2.1 The London Fire Brigade enforces fire safety legislation, and before purchasing or installing a stairlift, you should contact the Area Fire Safety Office of the LFB to ensure the proposals do not compromise the fire safety provisions within the premises. You should also consult with :

- The Environmental Health Department of the appropriate London borough to ensure the proposal complies with relevant health and safety requirements.
- The Building Control Department of the appropriate London borough to ensure compliance with the relevant building requirements.
- In respect of registered homes, the relevant registration authority.

3 General Advice and Guidelines

3.1 A stairlift should not be installed in a single staircase building if it causes an unacceptable restriction on the only available route of escape.

3.2 There should be an adequate clear distance between the stairlift in the operational position and the side of the staircase to allow other persons to safely use the staircase for means of escape. The number of persons required to use the staircase as a means of escape should also be considered.

3.3 In premises with two or more staircases, the staircase containing the stairlift should be able to be by-passed without entering that staircase.

3.4 Low pressure electrical cut out safety devices (i.e. pressure switches) should be provided to ensure that the stairlift stops immediately when in contact with any obstruction on the staircase.

3.5 Satisfactory arrangements should be made to ensure that the occupant cannot fall from the stairlift when in use.

3.6 The "parked position" of the stairlift should be so arranged as not to restrict the effective width of the staircase by more than the width of the fixed rail.

3.7 The lift should be capable of being operated by hand in the event of a power failure so that persons using the lift can be removed at a safe position, i.e., the top or bottom of the run and so that the lift can be stored in a position where it will cause least obstruction when not in use

3.8 An annual report should be obtained from a competent lift engineer indicating whether the lift is in a safe working condition and confirming that all safety devices are functioning correctly. The current report should be kept on the premises and made available for inspection on request.

3.9 Stairlifts should not be used as a means of escape.

3.10 The complete installation should comply in all aspects of the current edition of British Standard BS EN 81-40: Safety rules for the construction and installation of lifts. Special lifts for the transport of persons and goods. Stairlifts and inclined lifting platforms intended for persons with impaired mobility

4 Fire Risk Assessment and Emergency Plan

4.1 The use of a stairlift indicates that there may be a need for assisted evacuation from upper floor levels. This issue should be addressed in your premises fire risk assessment and any necessary measures put in place.

4.2 The fire emergency plan should include arrangements to check the stairlift in the event of the fire alarm operating and to ensure the passenger is assisted to a place of safety.

4.3 Consideration needs to be given to potential fire risk in an otherwise sterile area. For instance a suitable hand fire appliance should be provided to cover the risk posed by the electrical motor to the stairlift.

5 Bibliography

Further guidance may be obtained from the following publications:

AVAILABLE FROM	TITLE
BSI Customer Services 389 Chiswick High Road London W4 4AL Telephone: +44 345 086 9001 Mail cservices@bsigroup.com Web: http://shop.bsigroup.com	BS EN 81-40: Safety rules for the construction and installation of lifts. Special lifts for the transport of persons and goods. Stairlifts and inclined lifting platforms intended for persons with impaired mobility
TSO Customer Services PO Box 29 Norwich NR3 1GN Telephone: +44 (0)333 200 2425 Text-phone: +44 (0)333 202 5077 Mail: esupport@tso.co.uk Web: www.tso.co.uk	Building Regulations Approved Document B Building Regulations Approved Document K Building Regulations Approved Document M Fire Safety Risk Assessment - Means of Escape for Disabled People (Supplementary Guide)

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN58

Fire Precautions in Places of Public Worship

Rev 9, 01 May 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Guidance Note provides advice in respect of fire safety issues in places of worship, churches etc.

This Note is one of a series produced by the Fire Authority to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Department, London Fire Brigade (LFB).

1.2 The purpose of this Guidance Note is to provide basic fire safety advice for any person responsible for managing a place of public religious worship, be it purpose built or converted for such use. The guidance will also provide information to those who occupy and use places of worship and any associated halls and should be used to inform and review fire risk assessments (FRA) by stakeholders responsible for fire safety in the premises including the Responsible Person (RP) and premises management groups.

1.3 The Order applies to places of public worship. Further advice on these regulations can obtained from the LFB Guidance Note No 66.

2 Other Authorities you may need to consult

2.1 If the premises are to be newly constructed or altered in any way, Building Regulation approval may be required from the local authority Building Control Office and in the case of historic buildings, the local conservation officer.

2.2 If the premises are used for other purposes e.g., theatrical productions, or music and dancing or for showing films, a higher standard of fire safety may be required for all or part of the building and you should therefore consult the department within your local authority that deals with the Licensing Act 2003, a licence to operate may be required.

2.3 If the premises are used for children's nursery facilities or catering for large events then you may need to contact OFSTED, Social Services, or Environmental Health Departments at the local authority.

3 Means of Escape

3.1 The basic principle of means of escape is that persons should be able to safely leave the premises by moving away from a fire to a place of safety. When existing premises are converted from their current/original use to a Place of Worship the existing fire safety measures within the premises may not be suitable or sufficient and a full review of the measures incorporated within the premises should be carried out. This may require planning and building regulation permission and the local authority building control offices should be contacted in this regard.

3.2 The premises, be they a mosque, synagogue, temple, cathedral, church, room, hall or converted premises used to house the congregation or other event, should therefore be provided with sufficient exits giving access to escape routes capable of accommodating the maximum

congregation. These means of escape should take account of the loss of the largest exit or route as a result of any fire. The FRA will be required to detail these arrangements and the RP will need to ensure that the outcomes of the FRA are put in place for the safety of people..

3.3 When and if sleeping on the premises is provided for, or allowed to take place, a higher standard of fire safety will be necessary. The RP will need to ensure that the building has sufficient exits available and signed appropriately, a full detection and warning system is installed, emergency escape lighting is available and the FRA for the premises provides the details of these arrangements.

3.4 All exit routes must be left free of obstruction, floors/floor coverings should be maintained in good condition and these routes should be adequately lit, especially where there is a change of floor level.

3.5 Where ever possible, exit doors should open outwards and be clearly signed. These requirements may be altered providing that:

- those supervising the activity and others assisting them are trained in the action to be taken in case of fire and the evacuation procedure for the building, and
- the building is of ground floor only; and
- the available exits are of sufficient width to accommodate the number of people who may be present within the required evacuation time, and
- the exit doors lead directly to the open air enabling people to leave the building and its confines.

3.6 At all times that the premises are occupied, all doors from the area in use must be easily openable without the use of a key, they should preferably be fitted with a 'push bar' type of fastening unless the numbers of people required to use them is less than 50, in which case a single, simple fastening available without the use of a key may be acceptable.

3.7 Exit routes should be clearly marked to enable people unfamiliar with the premises to locate the final exit door in the event of a fire.

3.8 In a single stairway building, it is necessary to ensure that a fire on the lower floor(s) could not prevent people escaping from an upper floor. This can be achieved by the provision of an additional stairway to the upper floors (totally independent of the first stairway) or by ensuring that the existing stairway is enclosed by materials, having a fire resistance of 30 minutes and that all doors opening onto the stairway are fire doors rated at 30 minutes fitted with a self-closing device.

3.9 Powered stair-lifts should not be installed without the appropriate fire safety advice as they significantly reduce the width of stairs when in use.

4 Fire Detection and Warning

4.1 A relatively simple fire detection and warning system is capable of detecting a fire in its early stages and thereby enabling an early evacuation of the premises when they are occupied. Some systems can be a shout of fire, hand bell or rotary gong. Other systems are electronic in operation and will consist of manual call point and possibly automatic detection. The Fire Risk Assessment (FRA) will detail what type of system is necessary for the premises.

4.2 Dependent on the layout of the premises, some buildings have a convoluted design with multiple rooms and halls with different uses. Therefore, the fire detection and warning system should be

appropriate for the building, the activities going on within the building and the numbers of people in the building interdependent on the layout of the building internally.

5 Fire Fighting Equipment

5.1 As a general rule, extinguishers are to be hung on brackets or placed within purpose built stands near exits and could be tested by a recognised company annually. Whenever an extinguisher is used it is to be re-charged and put back into service immediately.

5.2 Extinguishers that can be purchased from DIY outlets or have 5 to 10 year testing are available and can be used. Information on fire fighting equipment is available in the LFB Guidance Note 8.

6 Lighting

6.1 All areas used by people resorting in the building must be adequately lit. It is also recommended that stairways, passages and large halls are provided with simple emergency escape lighting in case of a power failure.

7 Emergency Evacuation Plan

7.1 An emergency evacuation plan (EEP) is required for the premises which may need to be adjusted for other types of event. Generic or individual evacuation plans, known as Personal Emergency Evacuation Plans (PEEPs) may be required as part of this plan.

7.2 Fire drills to test the evacuation plan are required to be undertaken to ensure that people can escape where necessary in case of a fire. Those persons who are tasked to assist in any evacuation on behalf of the RP should be trained in the process of how to undertake this role.

7.3 Action to take on discovering a fire.

- Raise the alarm, instructing everyone to leave the building immediately by the nearest available exit.
- Call the Fire Brigade using the 999 or 112 codes.
- If the fire is small, a trained person may attempt to fight the fire using the portable extinguishers, but only if this can be done without risk.
- Do not allow people to re-enter the building until the Fire Brigade have checked and confirmed that it safe to do so.
- A responsible person should meet the Fire Brigade and advise them of the situation.

8 Housekeeping

8.1 Strict housekeeping is essential as accumulations of rubbish or combustibles can present the ideal place for a fire to start.

8.2 Areas used for storage should not be accessible to the public. Doors to stores should, where possible, be kept locked shut.

8.3 Candles and matches should be kept in a secure store when not in use. Candles should not be left burning when the premises are not in use or in any unsupervised part of the building. The LFB information regarding candles detailed in the Fire Safety in the Home booklet available from our website could be useful. The following information may also be of assistance.

- Have candles in a proper holder, they need to be held firmly upright by the holder so they will not fall over and the holder needs to be stable as well.
- Position candles away from curtains, fabrics and furniture, keep them out of draughts
- Keep candles away from clothes and hair, If there is any chance you could lean across a candle put it somewhere else, it could set fire to clothing or people's hair.
- Keep candles apart, leave at least 10 centimetres between two burning candles
- Don't move candles when they are alight and extinguish them before moving the candle.
- Use a snuffer implement or a spoon to put the flame out. It's safer than blowing them, which can send sparks and hot wax flying
- Double check the candle is completely extinguished. Candles that have not been put out properly can go on smouldering and start a fire.

9 Electrical

9.1 Electrical work should only be undertaken by a qualified electrician. Wiring should be fully tested by a competent person every five years and a certificate issued.

9.2 Portable and moveable appliances, such as kettles etc. should be subject to testing as recommended in the appropriate HSE guidance.

9.3 Socket adapters, extension leads and trailing leads can be a fire hazard and risk . Where possible additional electrical sockets should be installed to provide for sufficient electrical power for the building. Electrical leads should not be allowed to trail across floors or be allowed to come into contact with anything that could damage or fray the insulation. Carpets and rugs should not be placed over cables that are trailing on floors as this can cause hidden damage. Electrical plugs on appliances should be fitted with the appropriate fuse, the rating determined by the appliance that it serves.

10 Heating Systems

10.1 All heating systems must be maintained in accordance with manufacturer's instructions.

10.2 Radiant heaters should be adequately guarded and storage not allowed in close proximity to these heaters.

10.3 Portable heaters are not recommended for use in places of worship. If they are used, wherever possible they should be fixed in position and guarded, to ensure they cannot be inadvertently moved to come into contact with drapes, furnishings or other combustibles. They should not be left unattended and should not be used when people are sleeping.

11 Seating

11.1 Seating in large halls should be fixed in position with seats interlocked together in rows. There should be not less than 305mm between rows and gangways to be 1100mm wide. No seat should be more than 3.5m from a gangway.

11.2 Additional spacing may be required to provide accommodation/access for wheelchair users or other disabled or vulnerable people

12 Security and Arson

12.1 Fires in places of worship can be caused deliberately. For this reason it is essential that storage and refuse is kept away from the building and that the outside of the building is adequately lit. It is also recommended that the free advice of the local Police Crime Prevention Officer is obtained.

13 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
LFB Switchboard: 020 8555 1200	Guidance Note 8 – Hand Held Portable Firefighting Equipment Guidance Note 66 – The Order
The Stationery Office (Counter Service) 123 Kingsway London WC2B 6PQ Telephone: +44 (0)333 200 2425 Text-phone: +44 (0)333 202 5077 Mail: esupport@tso.co.uk Web: www.tso.co.uk	Fire safety risk assessment small and medium places of assembly ISBN-13: 978 1 85112 820 4 Fire safety risk assessment in large places of assembly ISBN-13: 978 1 85112 821 1 Fire safety risk assessment outdoor events ISBN-13: 978 1 85112 823 5 Fire Safety Risk Assessment - Means of Escape for Disabled People ISBN: 978 1 85112 873 7
ALSO: The Stationery Office (Mail, Telephone & Fax Orders) PO Box 29 Norwich NR3 1GN	

BRE Global Building Research Establishment, Bucknalls Lane Watford, Herts, WD25 9XX Telephone +44 (0)333 321 8811 Mail enquiries@bregroup.com	FIRE SAFETY AND SECURITY IN PLACES OF WORSHIP

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Fire Safety Precautions for Domestic Premises Used for Child Minding

GN60

Rev 10, 01 October 2023

Contents

Explanatory Note:

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) (The Order).

This Guidance Note provides fire safety advice for domestic premises being used for registered daytime childcare.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Prevention and Protection Policy and Strategy Group London Fire Brigade (LFB).

1.2 The purpose of this Guidance Note is to provide information to those who wish to, or who undertake childminding, on the fire safety measures required for child safety. This information should be used as information by the person responsible for fire safety in premises. Premises used for childminding when childminding is taking place are premises that are enforceable under The Order.

1.3 This guidance has been prepared with the objective of establishing a common basic standard of fire precautions for domestic premises used for childminding activities, registered under the Childcare Act 2006 as amended and subsequent secondary legislation.

1.4 The guidance may also be relevant to Ofsted inspectors to assist them in assessing the suitability of premises. Persons considering applying for registration should refer to the Early years foundation stage (EYFS) statutory framework Page 35, paragraphs 3.55 - 3.55 provide safety and fire safety guidance and detail the requirements that must be met.

1.5 Childminders work primarily in their own homes and the risk is similar to that found in dwellings during the day. Therefore, the standards to be applied to single domestic dwellings, purpose-built flats or maisonettes used for childminding activities will be limited to the structural standards recommended for new domestic residential buildings, including the provision of smoke alarms and the general fire safety precautions.

1.6 **Note:** This Guidance Note is intended for use in premises where childcare is provided during the daytime. This guidance is also appropriate for those who work under the term 'nanny' whereby childcare is provided by an individual. This can be working as part of an agency or directly employed by the family. **Where overnight care is offered, further protection may be necessary, please see Appendix 2**.

2 Means of Escape Recommendations

2.1 Childminding in private dwellings does not normally present a high risk to life from fire and it is important that a homely and non-institutional environment is maintained. In providing fire protection in any kind of dwelling, it should be recognised that measures which significantly interfere with everyday accessibility may be unreliable in the long term.

2.2 The most effective standard of safety will be achieved by ensuring that childminders follow sensible fire precautions (e.g. the fitting of smoke/heat alarms) and adopt good fire prevention practices in the use of heating and cooking appliances. A safe environment for the children should be maintained while being mindful of the escape routes. Appropriate escape routes should be available which are unobstructed and lead to a place of safety. However, it is noted that child safety gates may be employed and where this occurs childminders should be aware of all and any operating mechanisms. Further guidance can be found in the London Fire Brigade and Home Office publicity/education material available online. Fire safety at home | London Fire Brigade (london-fire.gov.uk)

2.3 It is important that childminders know what to do in the event of a fire and have a fire plan. This should include maintaining an unobstructed escape route free from tripping hazards, knowing the location and use of any fire extinguisher or fire blanket, if provided, the means of raising the alarm in the event of fire, an emergency evacuation plan (EEP) with an external assembly point and how to call the fire brigade in the event of fire. It should be noted that the EEP should include alternative accommodation in case of inclement weather.

2.4 The means of escape from one or two storey dwellings are generally simple. Therefore, few provisions are necessary beyond ensuring that each habitable room likely to be used for childminding either opens directly onto a hallway or stair leading to the entrance, or that it has a window or door through which escape could be made, which should be easily openable without the use of a key, and that means are provided for giving early warning in case of fire.

2.5 It is recommended that the standards to be applied to domestic childminding premises are based upon the recommendations for structural standards of new single domestic dwellings, flats, and maisonettes.

NOTE: Whilst it is advocated that there should be no unreasonable restrictions, a greater degree of supervision will be required where activities take place in areas of high fire risk, such as kitchens.

2.6 This standard should be simple to achieve in most existing one and two storey dwelling houses and for internal layouts of flats and maisonettes. Newly constructed premises should automatically comply since they will have been subjected to requirements for means of escape and structural fire precautions under the Building Regulations.

3 Fire Detection and Fire Alarm Systems (Domestic Dwellings)

3.1 Battery operated smoke and heat alarms or mains operated detection and fire alarm systems conforming to British Standard 5839-6: Fire detection and fire alarm systems for buildings. Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises should be installed for providing the minimum level of protection required in domestic childminding premises. There are smoke/heat alarms available that use a lithium battery with a ten-year life span. These types of alarms conform to the same standards but have the added advantage that they do not need a battery replacement each year. Where possible, these should be interlinked to provide more appropriate coverage and detection and alarm.

3.2 For the purpose of childminding, it is recommended that smoke/heat alarms are installed in accordance with BS 5839-6 category LD1 including the following recommendations:

- Smoke alarms should be positioned in all risk rooms. They should be near enough to places where fires are most likely to start (e.g. kitchen or living room) to pick up smoke in the early

stages, while also being close enough to bedroom doors for the alarm to be effective when the occupants are asleep.

- There should be a smoke alarm within 7m of the doors to rooms where a fire is likely to start (i.e. the kitchen or living room) and within 3m of the bedroom. These distances are measured horizontally. A corridor which is over 15m long should have more than one smoke alarm. Where more than one smoke alarm is installed, they should be interconnected so that the detection of smoke by one unit operates the alarm signal in all of them. The manufacturer's instructions about the maximum number of alarms that can be interconnected should be followed.
- Each smoke alarm should be fixed to the ceiling at least 300mm from any wall or light fitting. A central position is preferable. Units designed for wall mounting should be fixed between 150 and 300mm below the ceiling. The method of fixing should be in accordance with the manufacturer's instructions.
- Smoke alarms must be accessible to carry out routine maintenance, such as testing and cleaning, easily and safely. For this reason, smoke alarms should not be fixed directly over a stair shaft or any other opening between floors.
- Smoke alarms should not be fixed next to, or directly above heaters or air conditioning outlets. They should not be fixed in bathrooms, showers, cooking areas or garages, or any other place where steam, condensation or fumes could give false alarms (unless designed specifically for this use). smoke alarms should not be fitted in places that get very hot (such as boiler rooms), or very cold (such as an unheated porch). They should not be fixed to surfaces that are normally much warmer or colder than the rest of the space, because the temperature difference might create air currents that move smoke away from the unit.
- Heat alarms should be positioned in kitchens and other areas such as garages and boiler rooms where smoke alarms would be ineffective or lead to false alarms.
- In a dwelling that has childminding accommodation on more than one storey, there should be smoke/heat alarms at each storey level, and these should be interconnected.
- All smoke/heat alarms need to be checked regularly at the following intervals to ensure they are in good working order:

  Monthly - press test button to ensure the circuit is operating.

  Yearly - vacuum the inside of each smoke alarm to ensure dust is not blocking the sensor. Replace the battery (unless a 10-year lithium battery is fitted) and test by pressing the test button.

  and otherwise as recommended in the manufacturer's instructions.

3.3 Mains wired fire detection and warning systems will automatically be installed in newly constructed dwellings under the Building Regulations. It is also the preferred installation in existing premises. Where mains wired smoke/heat alarms are fitted they should be permanently wired to a separate fused circuit at the distribution board. They may operate at a low voltage via a mains transformer. Cable for the power supply to, and interconnection of, self-contained smoke alarms need have no special fire survival properties. The wiring installation should conform to the Institution of Electrical Engineering Wiring Regulations.

4 Fire Fighting Equipment

4.1 Childminders should be reminded that, should a fire occur their priority is the safe evacuation of the children. Childminders should not stop to put out the fire, or attempt to put out the fire, if to do so would place them or the children at unnecessary risk.

4.2 The provision of a lightweight fire blanket complying with BS EN 1869: Fire blankets, hung on a wall bracket at about eye level in the kitchen adjacent to the cooker would be deemed suitable for dealing with small fires involving cooking fats or oils. Childminders are reminded that a fire blanket may also be used to wrap around a child whose clothing has caught fire.

4.3 Where fire extinguishers are provided, childminders should be advised that each extinguisher should be maintained regularly in accordance with the manufacturer's instructions and replaced as required. Similarly, childminders should be proficient in the use of extinguishers and fire blankets provided within the registered premises, having due regard to the advice given in above. LFB guidance note 08 Handheld portable fire-fighting equipment, can assist with considerations regarding fire extinguishers.

4.4 **Childminders should be reminded that water and AFFF type extinguishers SHOULD NOT BE USED on electrical fires unless the electricity supply has been isolated**.

5 Reducing the Risk from Fire

Heating

5.1 Portable heaters, whether using liquefied petroleum gas or electricity, are not regarded as safe forms of heating for childminding activities and their use is discouraged. Our advice on portable heaters can be found here: Portable heaters, gas fires and open fires - Fire safety at home | London Fire Brigade (london-fire.gov.uk)

5.2 Where the use of a portable heater is unavoidable (e.g. power cuts etc.), it should be securely anchored in a safe and suitable position, away from draughts and enclosed in a guard constructed to BS 8423: Fireguards for fires and heating appliances for domestic use. Specification and securely fixed in position.

5.3 Solid fuel fires and heating appliances, other than low-pressure hot water radiators, should also be enclosed by a substantial guard constructed to BS 8423. No part of the guard should be closer than 200mm from the heat source, otherwise the guard may get dangerously hot.

Cooking

5.4 Children should be kept out of the kitchen area unless they are well supervised and constantly monitored. There should be no deep fat frying cooking when any children are in the kitchen. Matches should not be used for lighting gas cookers (See also smoking materials).

5.5 Pans should never be left unattended when cooking

Smoking and Vaping Materials

5.6 Smoking and vaping materials hold a fascination for most children. Many wish to imitate adults or play with cigarettes or matches, therefore smoking and vaping should be discouraged near the children. Cigarettes, lighters, and matches must always be kept out of sight, out of reach and preferably in a secure cabinet.

Foam Filled Furniture

5.7 Old foam filled furniture may not be fire retardant. The foam may easily be set on fire and gives off toxic fumes when involved in a fire, in addition to burning very rapidly. Accordingly, furniture with damaged covers should be removed from the childminding areas. It should be remembered that even fire-retardant foam will still burn fiercely when involved in a fire, its properties merely slow down the rate at which the fire will develop.

5.8 All new furniture should comply with the Furniture and Furnishings (Fire) (Safety) Regulations 1988 (as amended), and in general the regulations require that upholstered articles must have a fire-resistant filling, most cover fabrics must have passed a match resistance test and the combination of the cover fabric and filling material must have passed a cigarette resistance test.

Electrical Wiring

5.9 Although it is considered excessive to require a premises electrical system to be examined by a competent person at the time of the inspection, there should be no obvious defects in the electrical wiring system. Sockets and switches should be securely fixed to the wall and sockets should be of a safety pattern. Flex to electrical appliances should not be run under carpets. The use of multiple adapters and extension leads should be discouraged. However, where their use is unavoidable, care should be taken that they are not overloaded. It is recommended that covers should be provided to electrical sockets not in use.

5.10 Fuses should be correctly rated for the appliance in use, i.e.:

Up to 700 watts	**3-amp fuse**
700-1000 watts	**5-amp fuse**
Over 1000 watts	**13-amp fuse**

It is not deemed necessary to disassemble a plug to check on fuses, merely to advise the occupier of the correct fuse ratings.

Electrical White Goods

5.11 Childminders should ensure that electrical white goods such as washing machines, tumble dryers and refrigeration units are fit for purpose and not subject to recall by the manufacturer. These should be used in accordance with the manufacturer's instructions at all times.

5.12 Childminders should always register their white goods.

Candles and other naked flames

5.13 Candles, tea lights and incense should not be used when children are in the property for childminding.

Carbon Monoxide

5.14 A Carbon monoxide detector should be fixed in all rooms where a solid fuel burning appliance is fitted i.e. gas cooker, gas fires, solid fuel burner or open fire.

6 Fire Safety Procedure and Notices

6.1 All childminders should be aware of the procedures to be taken in the event of a fire occurring.

- Suitable fire procedure notices should be displayed detailing the actions to be taken in the event of fire: -

  (a) Evacuate all children to a safe place closing all doors behind you.

  (b) Call London Fire Brigade by dialling 999, 112 or the use of SMS text if registered; where practicable this task should be done by some other person;

  (c) Do not attempt to extinguish the fire until all the children in your care are in a safe place and adequately supervised. Only attempt to extinguish it if you are sure you can easily do so and are not putting yourself at risk.

- An example of a fire action notice is given in Appendix 1.

7 Bibliography

7.1 Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the LFB website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
Ofsted Literature and Advice: Web: www.ofsted.gov.uk Mail: enquiries@ofsted.co.uk	Guidance for childminders, nannies, nurseries and people providing other childcare on when/if you need to register with Ofsted, the process, fees and requirements; Childminders and childcare providers: register with Ofsted - Guidance - GOV.UK (www.gov.uk)
BSI Customer Services 389 Chiswick High Road London W4 4AL Telephone: +44 345 086 9001 Mail cservices@bsigroup.com Web: http://shop.bsigroup.com	BS 5839-6: Fire detection and fire alarm systems for buildings. Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises BS 8423: Fireguards for fires and heating appliances for domestic use. Specification

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Appendix 1

SPECIMEN A

IN THE CASE OF FIRE

1 DIAL

"999" "112" or use an SMS Text if registered

2 CONFIRM YOUR TELEPHONE NUMBER AND ASK FOR THE FIRE BRIGADE

3 WHEN THE FIRE BRIGADE REPLIES GIVE INFORMATION CLEARLY: -

FIRE AT: (insert exact address as appropriate)

……

……

……

DO NOT REPLACE THE RECEIVER UNTIL THE ADDRESS HAS BEEN REPEATED BY THE FIRE BRIGADE

CALL THE LONDON FIRE BRIGADE IMMEDIATELY TO EVERY FIRE OR ON SUSPICION OF FIRE

FIRST CONSIDERATION MUST BE THE SAFETY OF THE CHILDREN

CLOSE THE DOORS AND WINDOWS IF SAFE TO DO SO, AND TRY TO GET THE CHILDREN OUT OF THE PREMISES BY THE NORMAL MEANS

DO NOT STOP TO PUT OUT THE FIRE IF BY DOING SO WOULD PLACE YOU AT UNNECESSARY RISK AND WOULD THEREBY LEAVE THE CHILDREN UNATTENDED.

Appendix 2

NOTE: The Early years foundation stage (EYFS) statutory framework provides further information and requirements that childminders must meet if they intend to offer overnight care.

Additional Considerations for Overnight Care:

Fire risks are potentially greater at night when people are asleep. In addition to the detailed guidance in this note for domestic child-minding premises offering daytime care you will need to ensure that:

- There is adequate automatic fire detection to ensure early detection of a fire including coverage of the areas used for overnight care and the escape routes from it. Normally the fire alarm standards to be applied will be those detailed for Dwellings in Approved Document B Volume 1. Fire detection and fire alarm systems will need to be installed and maintained to the appropriate British Standard. In practice this means that fire detection and alarm system will need to be mains powered and interlinked so that the operation of one alarm actuates the alarm signal in all of them.
- There is an adequate balance between security and safety. Exits routes including windows and doors can be easily opened in an emergency.
- A bedtime routine is followed ensuring that gas and electrical appliances are turned off and that all smoking materials are safely extinguished.
- Sufficient trained adults are available to ensure a safe and efficient evacuation considering the need to assist or carry children.

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Fire Safety Signs and Signals

GN61

Rev: 12, 01 May 2022

Contents

Explanatory Note:

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This guidance note provides information on the requirements and regulations for fire safety signs and signals.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 The purpose of this Guidance Note is to provide information to the responsible person for fire safety arrangements in premises to inform fire risk assessments so that the details contained within then is correct and up to date. The premises will then meet the criteria stated in Article 13 of The Order.

1.3 The Health and Safety (Safety Signs and Signals) Regulations 1996, Statutory Instrument No. 341/1996 came into force on 1 April 1996. These regulations implement the European Council Directive 92/58/EEC which encourages the standardisation of safety signs by the use of common colours and symbols. In a multi-cultural society, it is absolutely vital that clear and unambiguous information is available not only for English speaking people but also for non-English speaking people, so safety signs must now contain a pictogram to convey the message instead of relying solely on text. The regulations cover traditional safety signs, such as the well known 'no smoking sign' and other means of communicating health and safety information such as signals, both hand and electronic, acoustic signals and verbal communication.

2 The Regulations regarding Fire Safety Signs & Signals

2.1 The regulations require employers to provide a safety sign wherever there is a risk to health and safety that cannot be avoided or controlled by other means. This includes fire safety signs and signals i.e. fire exit signs, fire-fighting signs and fire alarms. Guidance on a comprehensive range of fire safety signs can be found in the latest editions of BS 5499-4 and BS ISO 7010, including the use of appropriate graphical symbols, the use of supplementary text and the use of arrows to provide additional directional information.

2.2 A uniform approach to the provision of signs throughout a building will assist managers, occupiers and owners in training and education of the meaning of safety signs. To avoid confusion, all of the safety signs installed within means of escape routes should be of similar style, design and format. Size will depend on viewing distances so that they are conspicuous and legible.

2.3 The regulations also require illuminated signs and acoustic signals that need a form of power to operate, to be provided with a guaranteed emergency supply in the event of power failure. This includes illuminated exit signs and fire alarm systems that may currently be supplied by mains

power only. The fire detection and warning system should comply with the recommendations in the latest editions of BS 5839-1 and/or 6 and the illuminated signs, where they form part of the emergency lighting strategy for the premises, should comply with the latest editions of BS 5266. The recommendations of BS 5266 should also be considered for the secondary supply where the illuminated signs do not form part of the emergency lighting strategy.

3 Older Style Signs

3.1 There may be signs in use that do not meet the requirements of the regulations. If these signs can be easily understood by those persons within the premises then it will, in most cases, be appropriate just to supplement these signs with a simple pictogram. If in doubt ask for clarification from your local fire safety centre.

3.2 For those signs intended to identify fire detection and warning system manual call points, fire extinguishers, fire hose reels, fire points and fire telephones, it will only be necessary to provide such signs if the location of the associated equipment is not obvious. Examples of this are where a fire alarm call point might be located in a different position to those on other floors or where a fire hose reel is located in a cupboard out of sight.

4 Examples of Required Pictogram

Emergency exit signs

4.1 The purpose of these signs is to indicate designated emergency escape routes. Intrinsic features are the international symbol for escape and an arrow on a square/rectangular green background with optional text. The text is specific and should be a capitalised first letter with the remaining letters in lower case.

✓ ✗

Standard direction sign.
Note: the international symbol for escape symbol faces the arrow

Signs showing only text & arrows are not acceptable and must be replaced.

Fire safety signs

4.2 The purpose of these signs is to indicate the location of fire fighting equipment. Intrinsic features are a white fire symbol on a square/rectangular red background with optional text.

✓

Fire point Fire extinguisher Fire alarm call point Fire hose reel

4.3 Signs only showing text or non-standard symbols are not acceptable and must be replaced:

✗

Prohibition and hazard warning signs

4.4 Acceptable prohibition and hazard warning signs for premises storing flammable materials:

No smoking. Intrinsic features are red circular band with diagonal bar through black symbol on white background and optional text.

✓

Flammable material – for flammable stores. Intrinsic features are a yellow triangle with black border and symbol and optional text.

✓

5 Other Authorities you may need to Consult

5.1 Other parties who may have legislative control over certain premises and who should be consulted regarding the provision of signs are likely to include:

a) Local authority - building control

b) Local authority - environmental services

c) Local authority - social services

d) Local authority - licensing

e) Health and Safety Executive

6 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE

British Standards Institution (BSI) 389 Chiswick High Road London W4 4AL Telephone: 020 8996 9001 Fax: 020 8996 7001 Email: cservices@bsigroup.com Web : www.bsi.org.uk	BS 5499-4 : Safety signs. Code of practice for escape route signing BS ISO 7010: Graphical symbols. Safety colours and safety signs. Registered safety signs BS 5839-1: Fire detection and fire alarm systems for buildings. Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises BS 5839-6: Fire detection and fire alarm systems for buildings. Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises BS 5266-1: Emergency lighting. Code of practice for the emergency lighting of the premises
TSO Publications PO Box 29 Norwich NR3 1PD Telephone: 0870 600 5522 Web: www.tso.co.uk	The Health and Safety (Safety Signs and Signals) Regulations 1996 SI 1996 No. 341
Health and Safety Executive HSE Books Customer Services PO Box 29 Norwich, NR3 1GN Telephone: +44 (0)333 202 5070 Email: hseorders@tso.co.uk Web: www.hse.co.uk	Safety signs and signals. The Health and Safety Regulations 1996. Guidance on Regulations

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Oxygen Therapy in the Home

GN63

Rev: 09, 01 May 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) in London.

This Guidance Note provides advice on fire safety for users of home oxygen therapy equipment and their helpers.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB)..

1.2 The purpose of this Guidance Note is to provide information to Housing Providers, Residents Groups, Individual Residents, Relatives and Carers on the risks from and causes of fires involving oxygen therapy equipment. This information should be used to inform and review Fire Risk Assessments and the management of oxygen therapy risk by stakeholders responsible for fire safety in premises including the Responsible Person, premises management groups, relatives, carers and residents.

1.3 There are several different kinds of oxygen therapy:

- Long term oxygen therapy (LTOT) - used to stabilise oxygen levels for 15 hours and more a day
- Nocturnal oxygen therapy (NOT) - used to improve oxygen levels when you're asleep
- Ambulatory oxygen therapy (AOT) - used to improve oxygen levels when you're active
- Palliative oxygen therapy (POT) - used to manage severe breathlessness that doesn't respond to other treatments.

1.4 Oxygen therapy can be given in a number of ways including:

- Nasal prongs placed in the nose with the tubing secured over the ear (nasal cannula)
- Face mask placed over the nose and mouth
- Alongside other therapies to help people sleep and breathe

1.5 There are a number of hazards associated with oxygen and due regard should be given to these during the use and storage of oxygen equipment. It is assumed that the patients and their attendants have received training in the use of home oxygen therapy equipment and understand the terms and descriptions used in this note. If you are unsure of any of the terms referring to the equipment please contact the installer or your medical adviser.

2 Hazards

2.1 At standard temperature and pressure, oxygen is a colourless, odourless, and tasteless gas with the molecular formula O2. Oxygen can be stored and shipped in smaller cylinders containing compressed gas; a form that is useful in portable medical applications. It should be noted that;

- Oxygen adds enormously to the ferocity of any fire
- Oxygen is stored at high pressure in the cylinders and these cylinders may explode violently if subjected to violent movement or if heated.
- Liquid oxygen exists only at very high pressure, or very low temperature, and in either case can cause injury if it comes in to contact with the skin.
- Oil-based emollients and petroleum jelly, such as Vaseline, can increase risk of fire in the presence of oxygen and shouldn't be used. They can also cause blistering to the lips. Patients should be made aware that only water-based products should be used on the hands and face or inside the nose while using oxygen.

3 Safety

3.1 Each patient and their attendants should be fully conversant with the use of the oxygen apparatus. Each patient should obtain precise instructions on the use of the oxygen apparatus, details of safety aspects to be adhered to and the emergency telephone number to be used when expert help is urgently required, from the pharmacist supplying the equipment or the manufacturer.

3.2 Each patient should obtain precise instructions on the use of the oxygen apparatus, details of safety aspects to be adhered to and the emergency telephone number to be used when expert help is urgently required, from the pharmacist supplying the equipment or the manufacturer. A thorough check of all apparatus should include the servicing of all parts and be made at six monthly intervals.

3.3 The patient and the oxygen equipment should be kept well away (at least 2 metres) from any open fire, radiators, any apparatus producing sparks or apparatus producing radiant heat. Whenever possible radiant heaters should be replaced by heaters of the convector type. Smoking should not be allowed in rooms where oxygen is stored or used.

3.4 Oil and grease should be kept well away from valves, connections and any other part of the oxygen equipment. Be sure that the hands are kept clean and free of all grease before handling oxygen equipment.

3.5 Children and other untrained persons should not be allowed to use or tamper with any part of the apparatus.

3.6 Wherever possible a standard compressed gas cylinder sign should be placed on or next to the entrance of the home where the oxygen therapy equipment is stored or used.

3.7 Appropriate emergency fire fighting equipment should be provided and occupants instructed in its use. Clear written instructions on the use of the equipment provided should be placed in a prominent position. Equipment should be provided for the material that has the greatest risk of being involved in fire. Guidance Note 8: 'Hand Held Portable Firefighting Equipment' details the various classes of materials and the appropriate extinguishing media which should be provided.

3.8 Fire extinguishers should conform to British Standard (BS) EN 3 and be maintained as outlined in BS 5306-3: Fire extinguishing installations and equipment on premises. Commissioning and maintenance of portable fire extinguishers. Code of practice. Schemes for ensuring the conformity with these Standards have been produced by the BS Institution and adopted by British Approvals for Fire Equipment (BAFE) and conforming equipment and services are recognised by that organisation's mark of approval.

Oxygen Cylinders

3.9 All cylinders should be stored with valves closed tightly in an upright position and secured within a properly constructed stand or within a wall retaining device. All empty cylinders should be clearly distinguishable.

3.10 All cylinders should be stored externally to the building, but if this is not possible they should be in an area of negligible risk such as a cupboard used only for this purpose and outside the patient's room. This cupboard should be indicated by a compressed gas sign and should not be under the stairs.

3.11 Cylinders must not be stored in the same place as flammable liquids, e.g. paraffin, petrol, etc. Nor should flammable materials such as clothing be hung on the cylinders or stored near them.

3.12 Any plastic tubing used should be kept well away from flame, electric light bulbs or other sources of heat. Medical personnel or delegated technicians should plan the lay-out of the tubing circuitry within the house in such a way that maximum safety is offered. There should be separate main lines for the lounge and bedroom. The number of junctions in the circuit should be as few as possible unless copper tubing is used. All equipment should be installed by a qualified person.

Oxygen Concentrator

3.13 The electric circuitry at the patient's home should be inspected by a qualified electrician for defects, to avoid electrical hazards and overloading. The wall socket to be used should have an earth pin and the circuit should be properly fused.

3.14 Any evidence of electrical malfunction, such as discoloration of the plug, frequent changes of the fuse, or heating of the wall socket, plug or flex, should be rectified immediately by a qualified electrician.

3.15 The air intake and exhaust should be kept clear of obstructions and on no account should clothing or other potentially obstructing or flammable material be placed on or near the apparatus.

Liquid Oxygen

3.16 Do not use or store the equipment within 2 metres of any open flame or electrical appliance that might produce sparks. Do not smoke at any time in the same room as the Reservoir Unit. The Reservoir Unit should be anchored to the floor or adjacent wall in such a way that tipping is prevented.

3.17 All oil, grease and other flammable material should be kept away from the Reservoir Unit. Under no circumstances must chlorate organic chemicals, any bronze material, any fine metallic dust, flammable liquids such as turpentine substitute, linseed oil, sawdust, coal dust, or any flammable dust material be placed in the same room as the Reservoir Unit.

3.18 The equipment should be kept in well-ventilated places. Do not carry the Walker Unit under the coat or other clothing. Do not store the Walker or the Reservoir Unit in a closet, drawer or other tightly enclosed place where oxygen might accumulate. Always be sure that the supply valves are turned off when the equipment is not in use.

3.19 The Walker Unit should be handled only by the shoulder strap and should never be lifted by the hose or covers. When not in use it should be kept in a place where it will not be knocked over or dropped to the floor. The patient should be carefully instructed in the filling of their Walker Unit.

3.20 The patient and their relatives should be carefully instructed on how to cope with a leakage of liquid oxygen and other potential hazards. Liquid oxygen and the metallic parts of the equipment which show frost on the surface will cause severe frostbite to the skin and may damage the eyes; on no account must the patient or anyone else make direct physical contact with liquid oxygen.

General

3.21 The principles for safety of the person and the equipment should be followed when any oxygen therapy equipment is away from the home.

3.22 Motor vehicles that carry oxygen cylinders should have the standard compressed gas warning sign.

4 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
BSI Customer Services 389 Chiswick High Road London W4 4AL Telephone: 0845 086 9001 Fax: 020 8996 7001 Web: http://shop.bsigroup.com	BS EN2: Classification of fires BS EN3 Portable fire extinguishers BS 5306-3: Fire extinguishing installations and equipment on premises. Commissioning and maintenance of portable fire extinguishers. Code of practice

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: LFB Secure Information Boxes and Emergency Response Packs

GN70

Version: 4, 16 February 2023

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005, (The Order) as amended by the Fire Safety Act 2021, in London.

This Guidance Note provides fire safety advice in respect to the provision and maintenance of Secure Information Boxes (SIB) and the associated emergency response packs within. There are a wide range of uses for premises information boxes, from requirements under law to best practice provision of information to the fire service in an emergency. This guide aims to covers the wide range of circumstances a SIB might be provided.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please telephone or visit your local Fire Safety Office (telephone 020 8555 1200 and ask for your nearest Fire Safety Office) or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 It should be noted the Fire Safety (England) Regulations 2022 now uses the term Secure Information Box (SIB). Premises Information Box™ (PIB)® is referenced in older guidance and a trademark of Gerda but should be regarded as denoting the same- a lockable cabinet usually secured to a wall and a secure solution for providing firefighters with critical information during an incident. The combined contents within the SIB are referred to as an Emergency Response Pack (ERP) within this guidance.

1.2 SIB's are especially useful where there are no permanently staffed offices or a concierge. Where there are permanently staffed security offices or a concierge, the same information can be held in an ERP, without the need for a SIB, provided there are systems for securing the availability of the ERP immediately, and at all times.

1.3 **Note 1**: Staff must be aware of the location and access arrangements of this ERP.

Note 2: Where legislation, such as Fire Safety (England) Regulations 2022, requires the provision of a Secure Information Box these should be provided regardless.

1.4 The ERP is a method of providing firefighters with critical information at an incident and providing plans to aid search and wayfinding /navigation.

2 The Requirement for an Emergency Response Pack

2.1 The ERP's contents might be required as a result of legislation, guidance or codes of practice. For example:

- The Fire Safety (England) Regulations 2022 Regulation 4 requires all high-rise residential buildings containing two or more sets of domestic premises that are at least 18 metres above ground level; or has at least seven storeys, to provide a SIB to hold documents to be available in the event of an incident. (see section 3)
- Best practice when following the FIA /NFCC Code of Practice for Provision of Premises Information Boxes in Residential Buildings (see section 4).
- Meeting Approved Document B (Fire Safety) volume 1 2019 incorporating 2020 and 2022 amendments, requirement for wayfinding information and SIBs in residential buildings.

- Information required to be available to firefighters as part of an article 38 (Building Regulations 2010) hand over of information.
- Identification of high-risk areas/processes/chemicals e.g., an ERP (possibly in a SIB) might assist in meeting the requirements of Order, specifically Article 16 – Additional emergency measures in respect of dangerous substances.

2.2 In addition, a particular premises fire strategy might require information sharing of certain details with the London Fire Brigade (LFB). This may range from:

- Providing guidance and information on fire engineered solutions such as ventilation / smoke control systems.
- Fixed firefighting systems such as automatic fire suppression systems and their controls.
- Other areas where deviations from guidance have been made and fire engineered solutions are used to control the risk.
- Guidance on more complex evacuation strategies in use in the premises, such as progressive, staged, or phased evacuation.
- Premises with single but complex or unusual engineered approaches such as ventilation systems and their controls etc.

2.3 Further examples are:

- Any compartmentation, external wall system or other fire safety issues which may affect fire behaviour in the premises.
- A recommendation from a Fire Risk Assessment.
- A request or notice from the Fire and Rescue Service.
- A salvage plan for high value items e.g., Heritage premises.
- A complex layout which might delay response of LFB whilst wayfinding.
- Complex fire-fighting facilities and/or controlling equipment.
- A result of a failure of a commonly expected feature and the subsequent controls in place to mitigate the risk on a temporary basis e.g., a failure of compartmentation discovered, requiring a change to simultaneous evacuation.

The ERP is not intended to replace the normal information gathering and familiarisation carried out by fire crews but may assist in this process.

3 The Fire Safety (England) Regulations 2022- Requirements

Provision of Secure Information Boxes in High-rise Residential Buildings

3.1 The Fire Safety (England) Regulations 2022 applies to all high-rise residential buildings containing two or more sets of domestic premises that are at least 18 metres above ground level; or has at least seven storeys. Regulation 4 requires that the Responsible Person (RP) must provide a SIB.

3.2 The law states the Responsible Person must ensure that the following information is contained within the secure information box-

(a) the name, address and telephone number within the United Kingdom of the Responsible Person.

(b) the name and contact information of such other persons within the United Kingdom who are provided with the facilities to and are permitted to access the building as the Responsible Person considers appropriate.

(c) such documents as are required to be placed in it by these regulations. (Regulation 6 details the floor and building plans required).

3.3 Further guidance can be found at UK government website.

Note: The FIA guide in section 4 below is partially referenced in this guidance. Refer to the government guidance in section 3.3 for details and scope.

4 FIA NFCC Code of Practice

Provision of Premises Information Boxes in Residential Buildings

4.1 This Code of Practice was created by the Fire Industry Association (FIA) in association with the National Fire Chief Council (NFCC). This best practice guide is intended to support new legislation and guidance proposed to be introduced by the Government in response to the recommendations in the Phase 1 report of the Grenfell Tower Inquiry. This LFB guidance note refers the reader to follow this Code of Practice for the relevant residential premises below.

- Existing blocks of flats whose top storey floor height is 18m or more, or over six storeys (ground plus five upper storeys), whichever is the lower.
- Existing blocks of flats whose top storey floor height is below 18m or under six storeys which have additional complexity i.e., layout, access, floor numbering, flat numbering, firefighting facilities, fire engineering etc.
- Student accommodation designed like a block of flats, e.g., those adopting a stay put approach whose top storey floor height is 11m or more.
- New build blocks of flats whose top storey floor height is 11m or more.

4.2 The Code of Practice is provided for RPs to assist them in providing and managing SIBs and ERPs. It also provides advice to FRSs in ensuring access and managing access systems. Building designers, Building Control Bodies and Building Safety Regulators will also benefit from the guidance where a SIB is proposed for new buildings. The Code of Practice provides recommendations for the:

- Contents - Emergency Response Pack (ERP).
- Location of the SIB.
- Signage.
- Maintenance of the SIB and ERP.
- Exchange of information between stakeholders and definition of responsibilities.

5 Information Box –General

5.1 **Note:** Where premises are outside the scope of the legislation or the Code of Practice, detailed in section 3 and 4, the majority of the principles set out can be applied to other types of premises.

The sections below supplement the above guidance but also reflect some areas for out-of-scope premises.

5.2 Fundamentally the SIB is a method to convey clear concise and critical information to emergency responders. The ERP contents should reflect the specific requirements set out in Section 2 of this guide and the necessity to inform firefighters. (e.g., Providing guidance and information on fire engineered solutions such as ventilation / smoke control systems.)

5.3 An emergency response pack may be in the form of; simple details of an engineered system's operation, or it might contain multiple documents and plans. It is highly important that these contents should be accurate and maintained up to date.

5.4 Furthermore, there is a balance to be made with how much information is provided. Attending crews may have to interact with these systems and therefore need accurate, concise, and up to date information when developing fire-fighting tactics.

5.5 The ERP should also have an On Arrival Information sheet (Appendix A) setting out the basic premises details, risk, and facilities. Some of these may be detailed further in the ERP but this sheet should be limited to an 'at a glance' information summary.

5.6 In addition, plans should always be considered, as they will enable wayfinding, locating of risks, fixed installations and controls, enable firefighters to manage search and firefighting operations and to visualise the premises. These should not be building design plans with extraneous information but specifically drawn for the purpose. The information may need to be broken down as demonstrated in the three examples below, depending on complexity of the premises–

- An Orientation Plan (Appendix B), showing the location of the building in relation to surrounding buildings and other reference points (e.g., roads) and water supplies.
- A Building Layout Plan (Appendix C), showing the internal layout, including up to date floor plans
- Additional simple layout plans for complex premises if not provided in the Orientation plan or floor plans showing:
    i. any relevant fire resistance, hazards, water supplies for firefighting including hydrants, emergency water supplies, wet riser supplies etc.
    ii. facilities of relevance to operational firefighting and rescue including relevant information regarding any lift(s) intended for use by the LFB.

Further information should include-

- A contents list
- A logbook for the purpose of recording events that occur in respect of the SIB system including emergency use, system updates etc.
- An 'Off the Run' notice containing details of any fire-fighting fixed installations not available for use and/or unresolved fire safety issues.

6 Type, Siting and Identification of SIB

6.1 Where a SIB is chosen to hold the ERP, the SIB should be secure but openable by firefighters without delays. The LFB recommend use of Gerda premises information boxes due to the key compatibility arrangement currently in place.

6.2 Other premises information storage systems may be acceptable, provided the information is secured against unauthorised use but can be accessed by firefighters at all times. **Note**: the LFB will not accept key carrying for alternate locking boxes as this would require a wide range of keys to be carried across the area.

Figure 1: Gerda Premises information box and key (note old style signage)

6.3 A square or rectangular sign, bearing the words "PIB for Fire and Rescue Service Use Only" should be fixed to the door of the PIB enclosure (see Fig 2. below). The wording should comprise white Sans Serif text, on a red background, with a lower-case letter height of at least 10mm. The sign should incorporate the red flames pictogram specified for fire-fighting equipment in BS 5499-10. The sign should be of metal or trifoliate construction and should be fixed to the door of the cabinet by rivets or by at least four security screws, or by a security adhesive.

Figure 2: New PIB sign

6.4 Where a SIB is not clearly on view for fire crews entering the premises (e.g., it is located in a lobby or a side room), one or more directional signs should be prominently located to unambiguously direct fire crews to the location of the SIB. The location should not require firefighters to force entry. The directional sign should comprise of a white arrow on a red background in conjunction with the red flames pictogram specified for fire-fighting equipment in BS 5499-10 and bear the letters "PIB".

6.5 When the boxes are sited externally, they should be in a prominent position preferably sheltered from inclement weather.

6.6 It is not expected that signage on existing PIB installations be replaced. All new signage should follow this guidance.

7 Maintenance of the SIB and the ERP

7.1 The RP should ensure that the SIB is regularly inspected and maintained by a competent person, to ensure that fire crews are not hindered by any mechanical faults when attending an incident. The SIB should be checked to ensure operation and that any defects are actioned in suitable timescales The RP should ensure that the competent maintainer and/or the person with responsibility for updating and checking the ERP has access to the SIB or alternatively arranges access by a professional keyholding service that conforms to BS 7984-1:2016 Part 1: General recommendations for keyholding and response services.

7.2 Maintenance instructions given by the supplier / manufacturer should be followed. Periodically (at the frequency recommended by the manufacturer, but, at least, annually), the SIB housing, locks, seals, and fixings should be inspected for damage or degradation.

7.3 It is vital that the RP, or their agent, ensures that a competent person checks and updates the SIB and ERP on a regular basis. It is recommended that this process of review should include:

Changes to layout or key firefighting equipment

- The RP should update the floor plans and building plan as soon as reasonably practicable after any change to the layout of the building or location of key fire-fighting equipment.

Post Incident Checks

- After any incident where the SIB contents are used the RP must ensure the contents are complete and available for use.

Monthly Checks

- Physical checking of the ERP contents – are plans and information sheets still present and protected in plastic wallets or properly laminated.
- Data checking – to check the contents against any known changes that have taken place.
- The SIB housing, locks, seals, and fixings should be inspected for damage or degradation.

Annual Checks (or where there have been changes in the fire safety arrangements refferd to in the ERP)

- Review ERP information for adequacy in scope and detail, as well as accuracy.
- Regulation 4(5) of The Fire Safety (England) Regulations 2022 requires at least annual checks to ensure that it continues to meet the requirements.

It is anticipated that confirmation of these checks being carried out and the quality assurance of these checks will be reviewed in line with any other fire safety system maintenance records.

8 The ERP Stakeholders and Consultation Process

Exchange of information and definition of responsibilities

8.1 It is important that the ERP contents and its specific use within the building is ascertained as accurately as possible by consultation between the relevant stake holders.

8.2 This process should be undertaken to ensure the contents are accurate, beneficial to firefighters, easily understood in a dynamic situation and do not include extraneous information that might mask the more critical risks contained within.

8.3 The l LFB is a primary stakeholder. Normally the best point of contact would be the local Prevention Team who would be able to coordinate involvement of local fire station staff and other LFB expertise as necessary. The extent to which such a consultation is necessary may be minimal for simple premises and more extensive for more complex buildings or buildings which employ complex evacuation procedures and/or fire safety systems.

8.4 The RP should:

i. Identify the requirement for an ERP. (Section 2)

ii. Contact the local Prevention Team to discuss requirements and contents. Further liaison maybe required as necessary. This might include the RP's design / fire safety team liaising with the LFB.

iii. Agree the contents and produce the pack as per Section 3 for residential premises, and Section 4 for all other premises.

iv. Identify and agree the location and method to contain the ERP (Section 5 if SIB is chosen). Note: all new SIBs should be formally registered with the local Prevention Team. Where a Gerda PIB system is utilised, the notification will be a standard Gerda letter.

v. Maintain the contents of the ERP. (Section 6)

vi. The RP should ensure that the Fire & Rescue Service is notified of any significant change to the operation of the building and agree relevant changes to the ERP.

8.5 If the building is under the control of more than one occupant, then any new SIB or ERP should be subject to co-operation and co-ordination between all the building occupiers (not intended to include individual flat occupiers).

8.6 Depending on the risk and complexity of the premises the LFB may also create an Operational Risk Database (ORD) record, and/or an electronic premises information plate (E-pip) which are held electronically and accessed from the fire appliances.

8.7 Point of note: This system should provide information for the fire service relating to your building. The provision of such information does not in any way negate any statutory obligations on any RP, nor will it prevent a fire from occurring and or spreading. It is provided in accordance with current guidance in good faith, so that the information is available to the fire service to be used as required.

9 List of Appendixes

9.1 **A** On Arrival Information sheet (Size A3)

B Orientation Plan with example of relevant British Standard symbols for items directly accessible from outside being included. (Size A3)

C Building Layout plan views with example of relevant British Standard symbols pertinent to internal items (Size A3).

D Elevation / isometric plans (Size A3)

9.2 **Note**: the information depicted in appendices A - D is intended only as a guide and should not be taken as an exhaustive specification for any particular building. Depending on the situation more or less information may be appropriate.

9.3 For display purposes appendices are shown in A4, however, these should be supplied in A3 format for installation in the Secure Information Box.

9.4 If you require any further guidance on the advice given in this Guidance Note, please contact your local Prevention Office or Fire Safety Admin to re-direct your enquiry on 020 8555 1200 ext. 89170/89171 or email FSR-AdminSupport@london-fire.gov.uk

Appendix A - On Arrival Information Example

BUILDING LAYOUT	
Size	66m x 33m
Construction	Concrete framed building with masonry walls, concrete floors, concrete stairs and a flat roof. Timber decked balconies to all flats.
Numbers of floors	13. Basement, ground and 11 upper floors
Layout	Basement, ground and first floor are predominately car parking. The main access point to the building is from Smithson Street at ground floor level. Access is also available at basement level from the shopping centre. A staircase serves all floors at the main access point. The main staircase at the shopping centre end of the building is accessed from the ground floor car park. The basement level has a retail unit and residents gymnasium and swimming pool. The swimming pool is not in use. Staircases are connected by a corridor at all levels above 1st floor by a corridor serving flats.
Lifts	4 lifts in a single bank. Only 2 lifts are operational.
Types of Front Entrance Doors	FD30s
Rubbish chutes/bin rooms	No waste chute provided
Common voids	No common voids
Access to roof/service rooms	Roof access at head of main staircase.
Occupants	Approx. 374, based on an average occupancy of 2 persons per flat (187 flats)
Evacuation strategy	Stay Put
Fire alarm/evacuation alarm	Fire alarm system to communal area. Fire alarm panel at reception on basement floor. Repeater panel at fire service access point on Smithson Street.
Caretaker/Concierge	No full time presence.

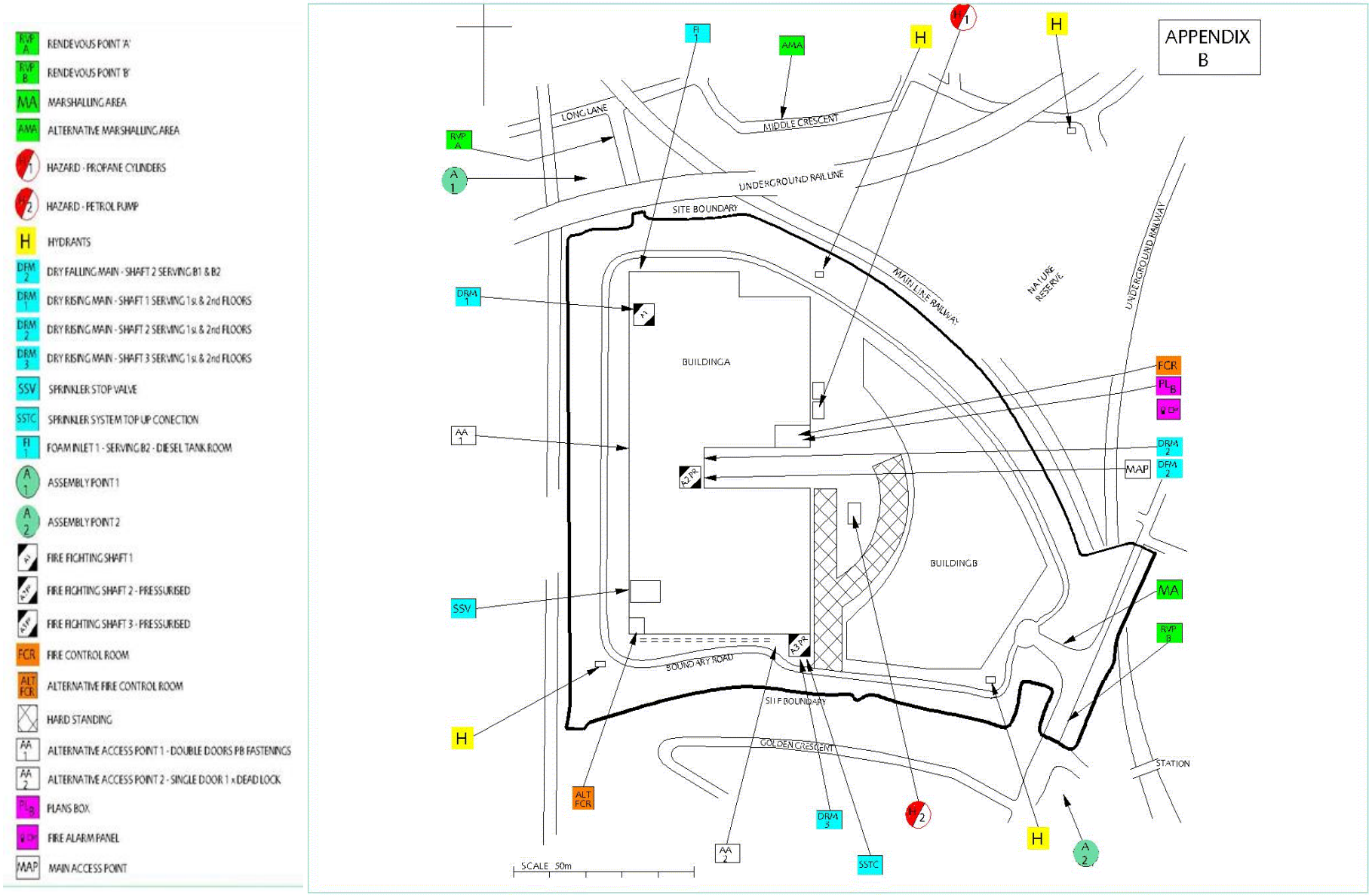
FIREFIGHTING SYSTEMS	
Water Supplies	2 fire hydrants 1. Outside car park entrance on Wellington Street (15 metres) 2. Albert Place, next to Notre Dame Mews (150 metres)
Fire Mains	Dry rising main fitted. Inlet outside main access point. Outlets on all floors containing flats in access point staircase only.
Fire Lifts	One firefighting lift
Firefighting Shafts	One provided.
Smoke Control Systems	Manually openable vents to both staircases on every floor level.
Sprinkler Systems	Sprinkler system to car park and all flats. Main sprinkler stop valve in basement car park in tank room. Stop valve for sprinklers in flats located on each floor in service cupboard in main staircase as indicated on plan.

DANGEROUS SUBSTANCES	
Location, type and quantity	None

SERVICES	
Electricity	Main electrical intake in basement car park. Main electrical isolation point to riser shaft in main staircase on ground floor.
Gas	No gas supplies

	Address: Southwark House Smithson Street Southwick SW1	Survey Date/last updated: 15th April 2021	ON ARRIVAL INFORMATION	

Appendix B - Orientation Plan (A3) Example



List of typical items to be considered for inclusion on Orientation plan

Rendezvous Point
Alternative Rendezvous Points
Marshalling Area
Alternative Marshalling Area
Externally Accessed Substantial Hazards
Hydrant type and locations
Main Access Points
Dry Riser Inlet/s
Falling Mains
Foam Inlet
Assembly Point/s
Fire Control Room
Alternative Fire Control Room
Ariel Fire appliance hard standing
Alternative access
Alternative plans box(s)
Sprinkler stop valve(s)
Pressurization systems
Depressurization systems
Sprinkler system top up connection
Emergency switches i.e. high voltage electrical discharge lamp signs
Externally accessed: -
Electrical intake main switch(s)
Gas isolation valves
Water main isolation valve(s)

The information depicted in this appendix is intended only as a guide and should not be taken as an exhaustive specification for any particular building.

Appendix C –Building Layout Plan Example

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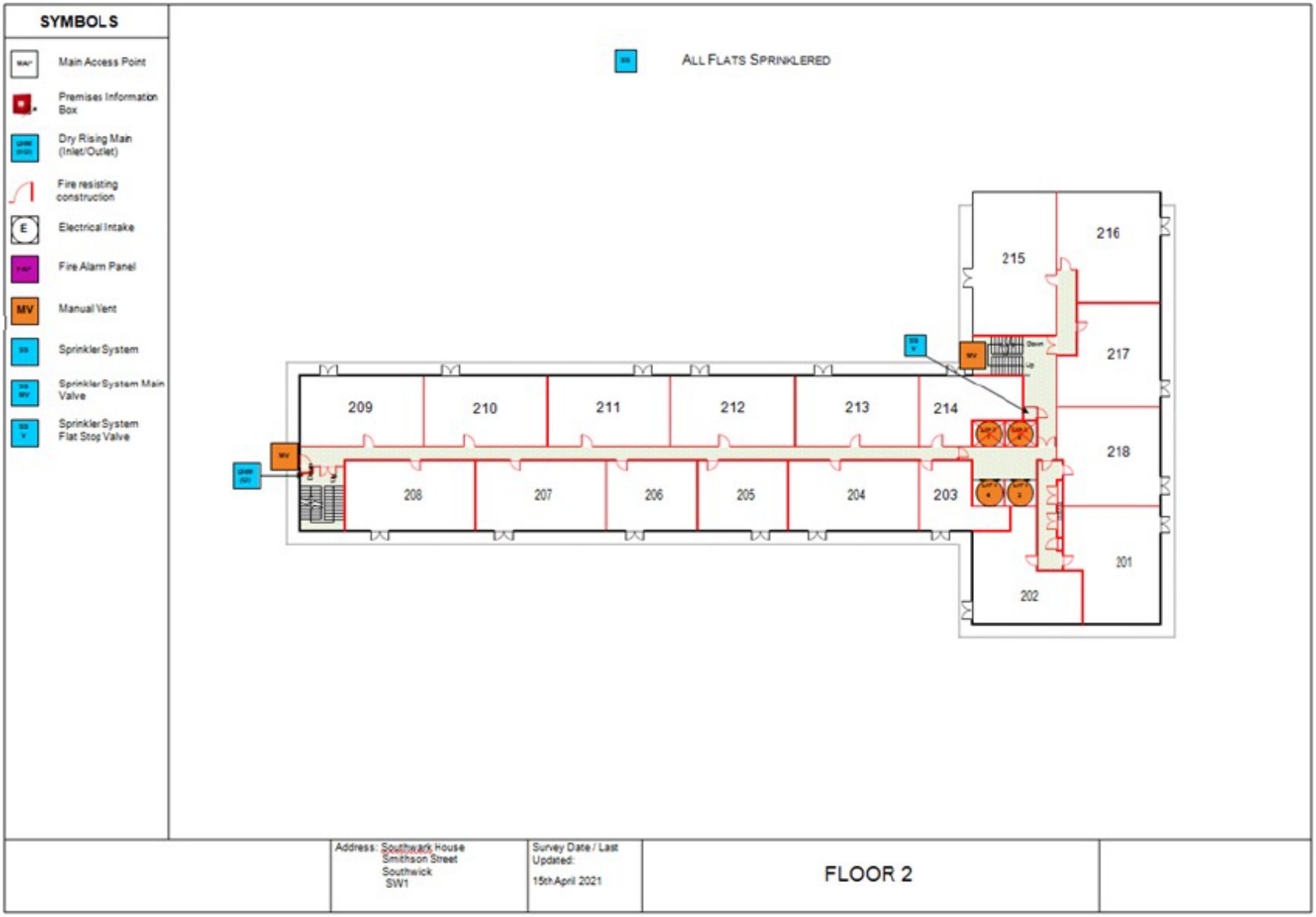
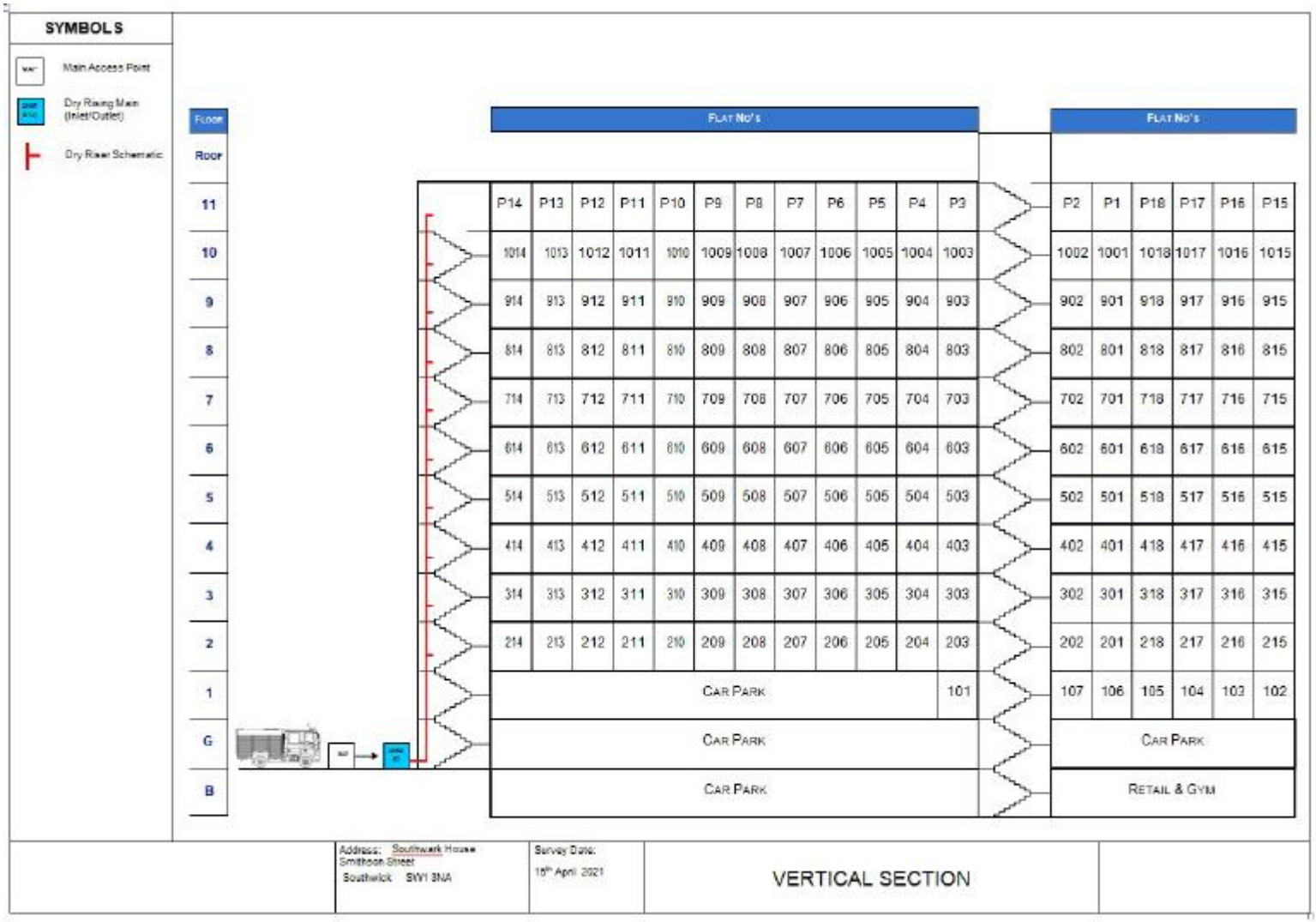

SYMBOLS
Main Access Point
Premises Information Box
Dry Rising Main (Inlet/Outlet)
Fire resisting construction
Electrical Intake
Fire Alarm Panel
Manual Vent
Sprinkler System
Sprinkler System Main Valve
Sprinkler System Flat Stop Valve
ALL FLATS SPRINKLERED
209
210
211
212
213
214
215
216
217
218
208
207
206
205
204
203
201
202
Address: Southwark House
Smithson Street
Southwick
SW1
Survey Date / Last Updated:
15th April 2021
FLOOR 2

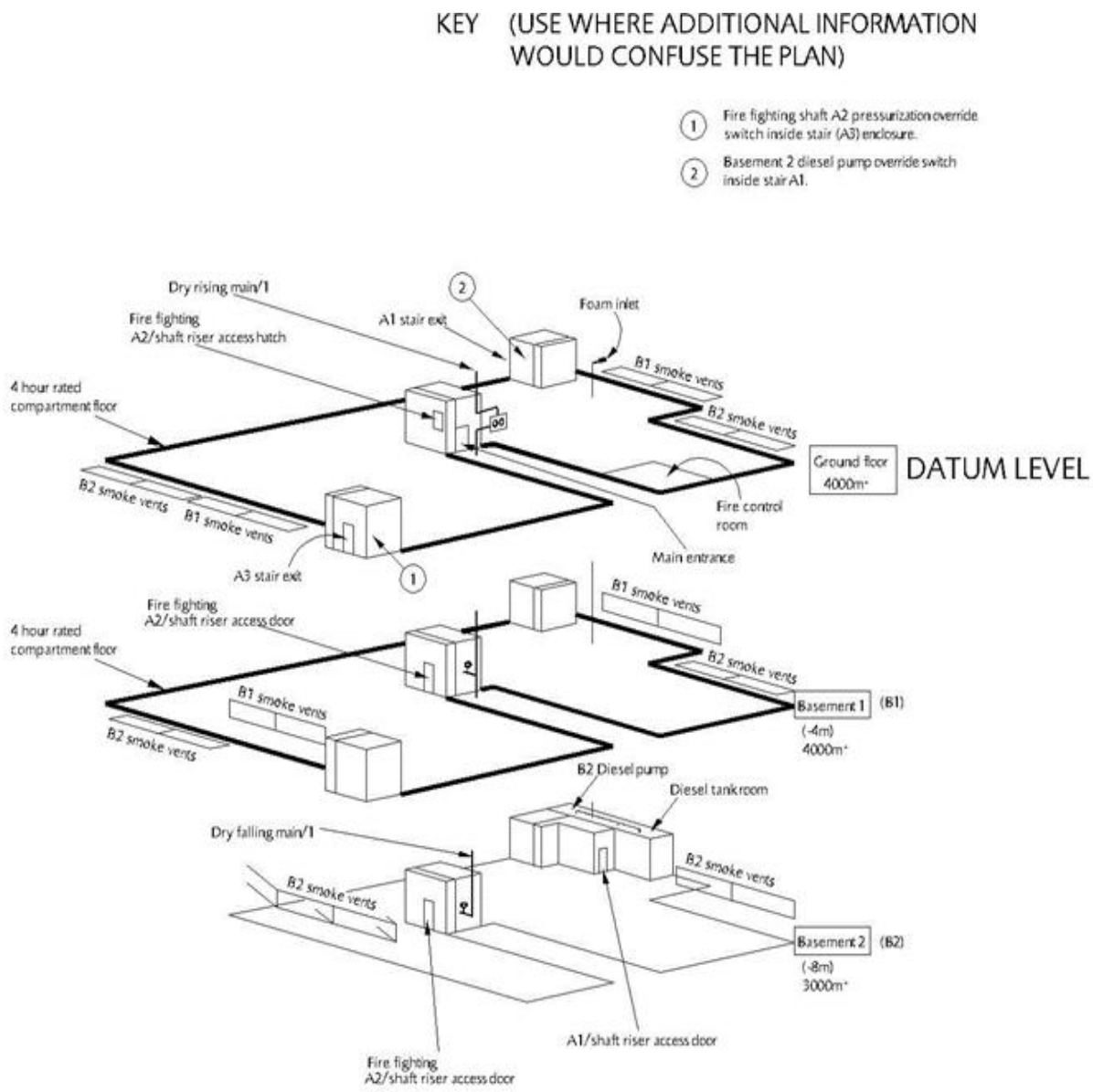
List of typical items to be considered for inclusion on floor plans

Fire Fighting Shaft(s) and Fire Fighting Lift(s)
Means of Escape Lift(s) disabled
Refuge Point(s)
Fire Telephones or other Communications
Dry rising mains and their outlets
Wet Rising Main(s)
Hazards and their location(s)
Mechanical Smoke Clearance System(s)
Mechanical Smoke Clearance System(s) Control Switch(s)
Natural Smoke Clearance System(s)
Mechanical Smoke Control System(s)
Mechanical Smoke Control System(s)Control Switch(s)
Natural Smoke Control System(s)
Pavement Vents
Residential Flat internal layouts – to assist search and rescue.
Sprinkler Systems
Sprinkler System Indicator Panel
Sprinkler System Main valve(s)
Sprinkler System Isolation valve(s)
Other Suppression System(s) (Water Mist, Gaseous, Drenchers etc.)
Other Suppression System(s) Control Panel
Fire Alarm Main Indicator Panel
Fire Alarm Slave Indicator Panel(s)
Smoke Control System(s)s control Panel
Gas Stop Valve(s)
Electrical intake main switch(s)
Extensive voids/cavities
Water main isolation valve(s)
Air conditioning control switches
Automatic fire suppression systems
Flat / room numbers

The information depicted in this appendix is intended only as a guide and should not be taken as an exhaustive specification for any particular building.

Appendix D - Example Elevation Plans





List of typical items to be considered for inclusion on isometric/cut away plans etc.

Flats numbers/ ranges
Risers showing access points
Lift motor rooms
Horizontal fire separation
Detail of floor slab connections
Detail of outer Curtain Walling Construction and Fixing
Basement's area and depth (as measured from floor of main entrance)
Other access points
Pressurization fans
Vent switches
Fireman's switches

The information depicted in this appendix is intended only as a guide and should not be taken as an exhaustive specification for any particular building.

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN71
Guide to Applicants for Premises Licences and Club Premises Certificates under the Licensing Act 2003

Rev 9, 01 May 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Guidance Note provides advice on the information and standards required by the Commissioner from applicants applying for licences under the Licensing Act 2003

This Note is one of a series produced by the Fire Authority to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 This guidance is intended for use by applicants for:

- New premises licences
- Variations to existing premises licences
- New Club premises certificates
- Variations to existing club premises certificates
- Provisional statements

2 Role of the Fire Authority

2.1 Fire Authorities are designated as a 'Responsible Authority' under the Licensing Act 2003 (the Act). The London Fire Commissioner (the Commissioner) is the Fire Authority for all 32 London Boroughs and the City of London. The Act requires that applications for the above licences are copied to the Fire Authority. The aim of this consultation is to promote public safety. The Act has four statutory objectives:

- The prevention of crime and disorder.
- Public safety
- The prevention of public nuisance
- The protection of children from harm

2.2 The Act was implemented whilst the Fire Precautions Act 1971 (FPA) was the primary piece of fire safety legislation. The FPA was repealed through the introduction of The Order, resulting in a number of changes to the Act. The principal change being that whilst fire authorities are a Responsible Authority, they should use their own enforcement powers through The Order where possible, rather than the Act. This does not negate the requirement under the Act for an individual or organisation to send applications for consultation to the Fire Authority. You are reminded that the Act embodies a self-regulatory approach with licensees taking control of the risks that they create.

2.3 From existing premises information and that provided, we will make an assessment of the fire safety provisions in relation to the public safety objective of the Act. Where we believe that this objective is not being adequately met and we cannot take action under The Order, we may make a representation about this to the Licensing Authority.

2.4 You are required to send the LFB:

- A copy of the Application Form including the Operating Schedule.
- Scaled plans of the premises (see below for more information).
- A copy of the Fire Risk Assessment (if completed)

2.5 In processing your submission we will:

- Check that we have sufficient information to make an assessment (Note: where insufficient or late information is supplied we may make a representation to the Licensing Authority) .
- Carry out a fire safety assessment of the application in relation to the licensing objectives.
- Where necessary, visit your premises to gather more information or carry out a fire safety audit
- Advise you and the licensing authority in writing whether we intend to make a representation or not.
- Where we are making a representation we will inform you which issues are causing us concern.
- Provide advice and guidance in order to avoid unnecessary hearings

3 The Fire Safety Content of your Operating Schedule

3.1 As part of your 'steps to promote the public safety objective' you should consider the fire safety arrangements for your premises. This will mean carrying out a thorough fire safety risk assessment. (For further information on how to carry out a fire risk assessment see our Guidance Note 66 or refer to www.gov.uk). The Order requires the responsible person to carry out a fire risk assessment and act upon the significant findings to reduce the risks from fire. Where a fire risk assessment already exists it should be reviewed to ensure that it takes account of any changes that you propose to make and also to ensure that it makes adequate provision for the safety of all the people who may be at the premises. If you haven't sent us a copy of your fire risk assessment with the application, we may ask to see your fire risk assessment and want to discuss with you any significant findings.

4 Safe Capacity

4.1 Your fire risk assessment should include an evaluation of the means of escape and the number of people that can safely be accommodated at the premises. In some premises this evaluation may show that the exits are sufficient for a greater number of people than could be present. Where a 'safe capacity' is necessary you should include this with your submission. Safe capacities are best expressed in clear and simple terms e.g. "The maximum capacity of the premises at any one time will be restricted in respect of the ground floor to 300 persons and in respect of the first floor to 100 persons." Capacity should normally be inclusive with respect to staff and performers.

4.2 Note: In meeting the four statutory objectives of the Act (Paragraph 2.1), the capacity of the premises for licensed purposes may be less than the actual capacity of the premises allowed by a fire safety fire risk assessment.

5 Permitted Capacity Recommendation

5.1 Section 177 of the Act, which now only applies to performances of dance, and Section 177(a) which applies to music, provides for the suspension of some licensing conditions in some smaller premises that have a 'permitted capacity' of not more than 500 persons. The Act states that the fire authority must be asked to make a recommendation on the capacity. If you wish the LFB to recommend a 'permitted capacity' you should first conduct a risk assessment and assess the capacity of your premises using an appropriate standard (see section below on underpinning

standards). You should then submit your request together with scaled plans as detailed below. We will consider your request and respond accordingly.

5.2 Applicants should be aware of various changes to the original Licensing Act 2003 through a variety of other Acts of Parliament and the guidance issued under the Act (Section 182 Guidance).

6 Scaled Plans of your Premises

6.1 NB: Scale required is 1:100 (i.e. 1 centimetre = 1 metre)

6.2 Regulations made under the Act detail the following information that should be included on the scaled plans that must be submitted with your application:

(a) The extent of the boundary of the building and any external and internal walls, and if different, the perimeter of the premises.

(b) The location of points of access to and egress from the premises.

(c) If different from (b) the location of escape routes from the premises.

(d) Where the premises are used for more than one existing licensable activity, the area within the premises used for each activity.

(e) Fixed structures (including furniture) or similar objects temporarily in a fixed location (but not furniture) which may impact on the ability of individuals to use exit or escape routes without impediment.

(f) The location and height of any stage or raised area.

(g) The location of any steps, stairs, elevators, or lifts.

(h) The location of public conveniences.

(i) The location and type of any fire safety equipment, including marine safety equipment.

(j) The location of any kitchen

6.3 At the back of this guidance note (appendix B) there is a specimen plan, that shows how this information may be recorded. This plan uses well recognised, standard symbols and a key to these symbols is attached (appendix A) for your convenience. For example, the plan shows safety equipment such as fire extinguishers, fire alarm call points and automatic fire detectors, using these symbols.

6.4 The plan also shows some additional information:

(i) The intended use of each room.

(ii) The size of the licensed area(s) (in square metres).

(iii) Walls, doors (including direction of opening), partitions and glazing which are fire resisting for not less than 30 minutes.

(iv) All exit routes, showing clear exit widths of doors, passageways, staircases and final exits.

6.5 Having all of your fire safety information available on one plan may assist you with your emergency planning and staff training. It will also enable the fire authority to assess your fire precautionary measures with the minimum of delay.

7 Underpinning Standards

7.1 Although each premises will be assessed on an individual basis we will use the following published guidance to provide underpinning standards:

Communities & Local Government Publications. These are available to download free of charge from: http://www.communities.gov.uk/fire

- Entry Level Guide: 'A short guide to making your premises safe from fire'
- Fire Safety in Small and medium places of assembly
- Fire Safety in Large places of assembly
- Fire Safety in Theatres and cinemas
- Fire Safety in Open air events and venues
- Fire Safety Risk Assessment - Means of Escape for Disabled People

Other documents:

- The Building Regulations 2000 - Approved Document B (available to download free of charge from: http://www.planningportal.gov.uk/buildingregulations/approveddocuments/partb/bcapproveddocumentsb/
- Annex E & F of "Guidance issued under section 182 of the Licensing Act 2003" (available to download free of charge from: http://www.culture.gov.uk/reference_library/publications/3667.aspx
- Appropriate British & European Standards e.g. BS 5839 and BS EN3

7.2 Each area requiring the provision of emergency lighting to assist escape in case of normal lighting failure, should be indicated on the plan using the appropriate symbols. Lighting design and installation should normally conform to BS 5266, and be installed by a competent person, preferably with third party accreditation.

7.3 Fire alarm systems should normally conform to the current edition of BS 5839, with consideration made for prevention of false alarms, and appropriate provision based on your fire risk assessment and the nature of the entertainment, e.g. visual indicators, phased systems and any links to disable sound systems. Installation should be made by a competent person, preferably with third party accreditation.

7.4 Fire-fighting equipment provided should normally conform to BSEN 3 or equivalent relevant standards. (Fire Safety Guidance Note 8: Hand held portable fire-fighting equipment, gives further guidance).

7.5 All necessary fire related signs and notices should normally conform to the Health and Safety (Safety Signs & Signals) Regulations 1996 or BS 5499.

8 PEOPLE with disabilities

8.1 The requirement to comply with access and means of escape for persons with disabilities will normally be considered to have been addressed where the recommendations/guidance in Approved Document M of the Building Regulation 88300 or BS 9999 have been satisfied. The fire risk assessment should demonstrate suitable and sufficient arrangements for the safety of persons with disabilities in the event of a fire emergency. The Equality Act 2010, requires reasonable physical adjustments to physical features that make it unreasonably difficult for persons with disabilities to use a service.

9 Large Temporary Events

9.1 These may involve a single premises licence to cover a wide range of activities at varied locations within the premises or a series of connected premises licences that in combination represent a single event. We strongly advise event organisers to set up a co-ordinating committee (Safety Advisory Group) and commence discussion with the Licensing and other Responsible Authorities at the earliest opportunity. The LFB can also provide pre-application fire safety advice to event organisers.

10 Our Risk Based Inspection & Enforcement Programme

10.1 Our intention is to focus our inspection and enforcement activities where the risks to people are greatest. To achieve this we will:

- Risk grade individual premises to identify higher and lower risks
- Inspect higher risk premises more frequently
- Target enforcement activity at known higher risk premises
- Use enforcement action under fire safety laws in parallel with action under the Licensing Act
- Where permitted we will share information on problem premises with other authorities

11 Residential Accommodation in Licensed Buildings

11.1 Whilst the new licensing regime relates only to the areas in your premises that are used for licensable activities, in some cases the greatest risk to life will be found in associated sleeping accommodation. You should take the opportunity to reassess these risks and consider:

- Where could a fire start and how will it effect anyone sleeping in the premises?
- How will they be alerted to a fire? Would automatic fire detection reduce the risks?
- How will they make their escape once alerted? Is there adequate protection and emergency escape lighting to the means of escape routes?

11.2 The exact legal position is dependant upon the nature of the risks and also the relationship between the responsible person and the people using the sleeping accommodation. Where the Commissioners' officers visit premises they will assess the risks to everyone and take any appropriate action including:

- Enforcement action under fire safety laws that we enforce.
- Passing information to other authorities that enforce relevant legislation i.e. Housing Act

12 Other Legislation

12.1 Applicants are reminded of the need to consult with a Building Control Authority/Agency where it is proposed to alter the structural layout or change the use of premises.

12.2 The Responsible Person must comply with the requirements of The Order when preparing their fire risk assessment. Further guidance relating to fire precautions in licensed premises can be obtained by referral to the relevant organisations detailed in the bibliography below:

13 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
The Stationery Office (Mail, Telephone, Fax & Internet Orders) TSO Orders/Post Cash Dept. PO Box 29 Norwich NR3 1GN Telephone: 0870 600 5522 Fax orders: 0870 600 5533 Web: www.tso.co.uk	Entry Level Guide: 'A short guide to making your premises safe from fire' Fire safety in small and medium places of assembly ISBN-13: 978 1 85112 820 4 Fire safety in large places of assembly ISBN-13: 978 1 85112 821 1 Fire safety in theatres and cinemas ISBN-13: 978 1 85112 822 8 Fire Safety Risk Assessment - Means of Escape for Disabled People ISBN: 978 1 85112 873 7
HSE Publications: http://www.hse.gov.uk/ HSE Books PO Box 1999 Sudbury Suffolk CO10 0JY Telephone: 01787 884148	1. Five steps to risk assessment 2. The event safety guide
Association of British Theatre Technicians/LDSA Publications are available from the ABTT website: http://www.abtt.org.uk/pages/home/homeframes.html **OR** ABTT 55 Farringdon Road London EC1M 3JB Telephone: 0207 242 9200	1. The Model National Standard Conditions for Places of Entertainment and Associated Guidance 2. Technical Standards for Places of Entertainment

BSI Shop Online: http://shop.bsigroup.com/ Offline & enquiries: Email: cservices@bsigroup.com Tel: +44 845 086 9001 Fax: +44 20 8996 7001 BSI Customer Services 389 Chiswick High Road London W4 4AL	BS 8300 - Design of buildings and their approaches to meet the needs of disabled people. Code of practice BS 9999 - Code of practice for fire safety in the design, management and use of buildings
Planning Portal Online government website: http://www.planningportal.gov.uk/	Approved Document M (Access to and use of buildings) - Volume 1: Dwellings – free to download

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

Appendix A

Key to Plan Symbols

Means of escape and equipment

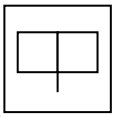
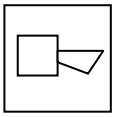
All doors, walls, partitions, screens and glazing shown in: -

(a) Thick black line, or

(b) Thick black broken line, or

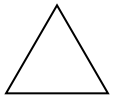
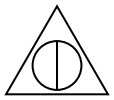
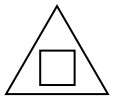
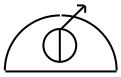
(c) Red

on plan are to comply with the definition of FIRE RESISTING.

	Fire Alarm Call Point with Fire Action Sign adjacent, the contents of which should be based on the Fire Safety and Evacuation Plan for the premises.
SL	Security Lock (Door, which may be provided with special fastening as described on plan).
FFF	Doors which are to be free from all fastenings (other than a ball or roller fastening or a lever handled latch). This is to ensure that the door is always available for escape from either side.
	Control panel sounders.
	Control panel illuminated signals .
	Control panel sounders and illuminated signals.
SCA	Self-closing door incorporating an automatic release e.g., Electro Magnetic Door Holder.
PB	Doors which are to be provided with a panic bolt. There should be a notice adjacent to the fastening indicating the method of opening (minimum 5mm lettering).
SF	Doors that have only a simple fastening which is easily and immediately openable by a person on his/her way out without use of a key, e.g., barrel bolts, night latch, lever handle, etc.
TP	Fire Alarm Telephone point.

VP	A panel of clear glass in the door or adjacent partition shown on plan. It should be of an appropriate size and in a suitable position which gives the occupant of the inner room early visual warning of fire. This glass should be Fire Resisting if the door or partition is shown as such.
S	Door assembly, which is able to resist the passage of smoke when, tested in accordance with the British Standard in force at the date of manufacture.

Fire fighting equipment

	Fire Extinguisher: e.g. 13A or 34B. Number indicates the extinguishing capability and the letter indicates the class of fire that the extinguisher is suitable for. For further information see our guidance note GN_08.
	Aqueous Film Forming Foam Extinguisher
	Water Fire Extinguisher
	Fire Blanket in container
	Carbon Dioxide Fire Extinguisher
	Dry Powder Extinguisher
	Foam Fire Extinguisher
	Hydraulic hose reel. A number following this symbol indicates the length of the tubing in metres.
	Sand Bucket
	Area covered by Fixed Fire Extinguisher installation (i.e. Co2)
	Area covered by Automatic Sprinkler installation.

All firefighting equipment should be so placed as to be readily available for use. They should be mounted on brackets or suitable shelves in conspicuous positions so that the carrying handles of the larger heavier extinguishers are approximately 1m from the floor, and the handles of the smaller fire extinguishers/base of fire blankets are approximately 1.5m from the floor.

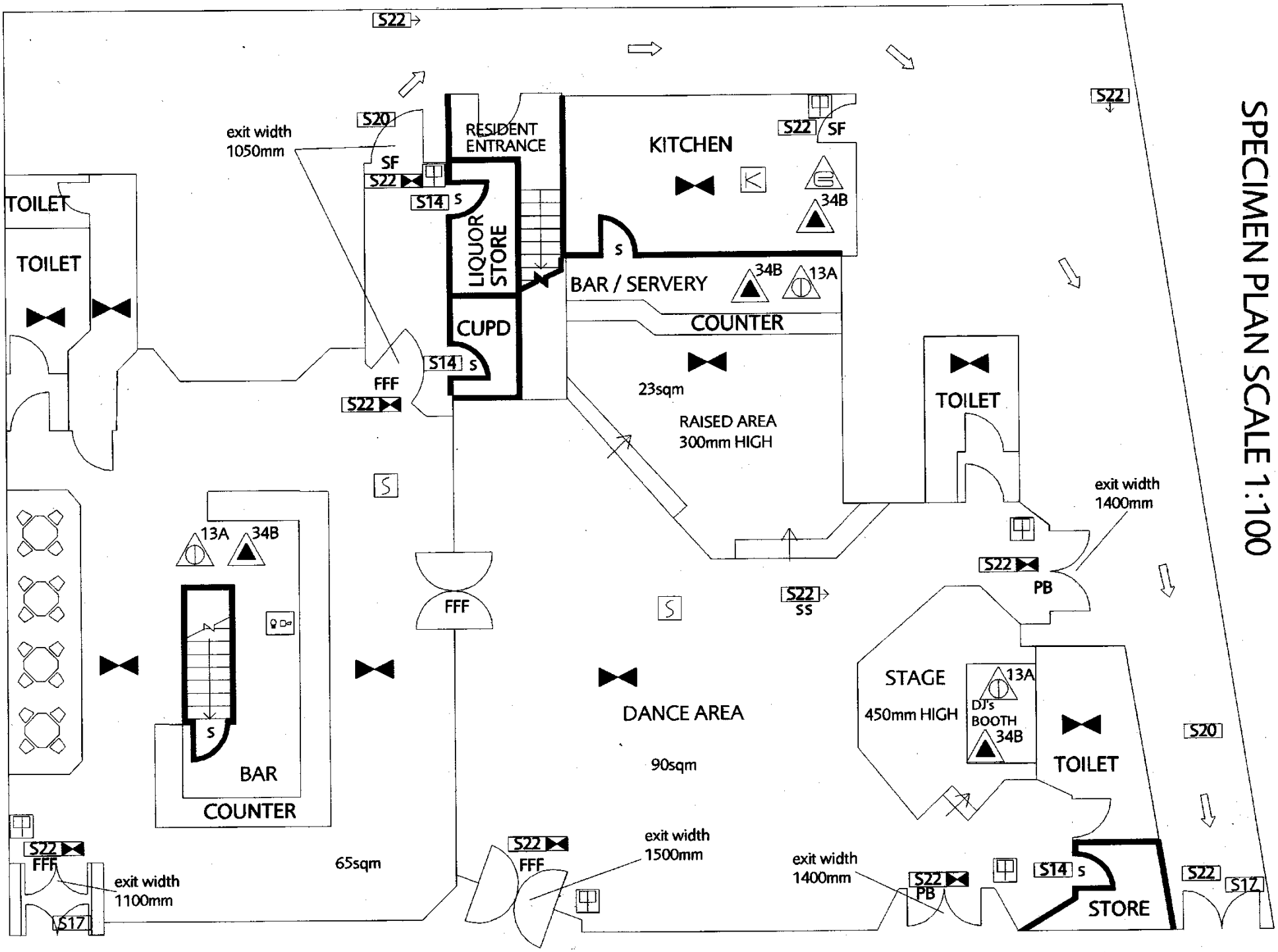
Other codes

	Area covered with a system of Escape Lighting that will illuminate the area upon failure of the normal lighting power supply, to a sufficient standard to enable persons to leave the area safely. The escape lighting system should conform to the British Standard current at the time of its installation and a certificate to this effect kept.
	Refuge Area temporary assembly point for those persons of impaired mobility, e.g.: wheelchair users, who are unable to independently reach a final exit. BS5588, pt8, Section 8 refers. Refuge areas should be a minimum of 900mm X 1400mm.
	Area covered by Automatic Heat Detectors
	Area covered by Automatic Smoke Detectors
PR	Area covered by Pressurisation system
MSE	Area covered by Mechanical Smoke Extraction
NSE	Area covered by Natural Smoke Extraction
POC	Pressurisation Override Control

Notices

S22	Boxes like this indicate signs. The following codes show the wording displayed on the notices. All notices should normally conform to the British Standard for signs which is current at the date of installation and the minimum size of lettering is as indicated below unless otherwise shown adjacent to the code on plan.
S22 →	**Additional Notes** Directional arrow.
S22	Notice suspended above head height at right angles to the escape route with the graphic symbol on the approach side.
S	As above but with the graphic symbol on both sides of the notice.
S22	
S22 	Indicates that the notice is internally illuminated.
S22	Fire exit, exit or emergency exit notice graphic symbol.

		Minimum size of lettering
S23	Slide to open (with arrow indicating direction).	25 mm
S20	Fire escape keep clear.	25 mm
S19	Gangway keep clear.	25 mm
S17	Secure door open when premises are occupied.	25 mm
S8	Highly flammable material - keep locked.	25 mm
S2	No smoking.	25 mm
S13	Fire door keep shut.	5mm
S14	Fire door keep locked.	5mm


SPECIMEN PLAN SCALE 1:100
S22
exit width
1050mm
S20
SF
S22
S14
S
RESIDENT
ENTRANCE
LIQUOR
STORE
CUPD
KITCHEN
S22
SF
34B
S
BAR / SERVERY
34B
13A
COUNTER
TOILET
TOILET
FFF
S22
S14
S
23sqm
RAISED AREA
300mm HIGH
TOILET
exit width
1400mm
S22
PB
S
13A
34B
FFF
S22
SS
S
BAR
COUNTER
DANCE AREA
90sqm
STAGE
450mm HIGH
13A
DJ's
BOOTH
34B
TOILET
S20
S22
FFF
exit width
1100mm
S17
65sqm
S22
FFF
exit width
1500mm
exit width
1400mm
S22
PB
S14
S
STORE
S22
S17

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN72
Fire Safety in Shared Lives Schemes

Rev 3, 01 May 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) in London.

This Guidance Note provides fire safety advice in respect of fire safety in shared lives schemes and provides guidance to ensure compliance with all relevant regulatory and legislative requirements

This Note is one of a series produced by the Fire Authority to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 Shared Lives (SL) Schemes were previously known as Adult Placement Schemes. For the purpose of fire safety, no distinction has been made between these two terms.

1.2 The information contained in this Guidance Note is taken from 'Fire Safety in Adult Placements – A Code of Practice'. This document is a guide for those responsible for the regulation and inspection of social care provision who are asked to advise on fire safety in SL Schemes and SL Scheme workers involved in approving, monitoring and reviewing the SL. It is intended to promote good fire safety and ensure compliance with all relevant regulatory and legislative requirements.

1.3 The code of practice was developed in consultation with Department for Communities and Local Government, Department of Health, Fire Brigades Union, Chief Fire Officers Association, Local Government Employers Association, Care Quality Commission, and the National Association of Adult Placement Services (NAAPS)

1.4 A SL Carer is defined as a person who offers accommodation and/or support in their own home for up to three vulnerable persons. An SL Carer must be approved by, matched with a person by, and supported by a SL Scheme. These places may include:

- Accommodation with care, or intermediate care, in the family home of an SL Carer whose Scheme is registered with the Care Quality Commission (under the Health and Social Care Act 2008 (Regulated Activities) Regulations 2010);
- Housing with support administered under Supported Living;
- Home based day services; and
- Respite care, where personal care is not provided.

1.5 This guidance is limited to cover domestic dwellings of up to three storeys (i.e. ground, first and second floors), which are occupied by no more than three service users in addition to the Carer and their own family. Consideration may be given by fire authorities and building control bodies where the above is exceeded, but you should be aware that a level of fire precautions might be required above that recommended in this guidance.

2 Standards and Building Regulation

2.1 If, as part of any refurbishment, building works are necessary to make your residence acceptable for the needs of the service users this work may be subject to the Building Control Regulation. Where no works are necessary this guide should be sufficient, however you should still consult your local authority Building Control Office.

2.2 Put quite simply, if a premises looks and feels like a dwelling house then it should be treated, for the purposes of fire safety, like a dwelling house. The Carer will still need to ensure that:

- All parts of the home to which service users have access are so far as reasonably practicable free from hazards to their safety.
- Unnecessary risks to health and safety of service users are identified and so far as possible eliminated.
- The SL Carer's home is of sound construction and kept in a good state of repair externally and internally.
- Ventilation, heating and lighting suitable for service users is provided in all parts of the SL Carer's home which are used by service users.
- There is a written fire evacuation plan, which is explained to and understood by all members of the household.
- The national minimum standards for SL Schemes are intended to reflect their special circumstances and to be appropriate to care provided in a normal domestic setting. It requires the registered SL Carer to take adequate fire and other home safety precautions, acting as a responsible householder and taking any necessary advice from the local fire authority.

2.3 Some SL Schemes are funded through Supporting People. In these cases the Scheme is required to meet Supporting People Accreditation and Review criteria. The scheme is required to ensure that:

- The security, health and safety of all individual service users, SL Carers and staff are protected
- The living environment is suitable for the purpose, accessible, safe and well maintained.

3 SL Placement Procedures

3.1 Prior to placement, prospective Carers will:

- Receive training to ensure that they understand relevant legislation and its practice implications including health and safety and fire safety.
- Carry out, as part of the assessment process, a health and safety and fire risk assessment of their home. This will be reviewed by the SL worker and will be included in the papers presented to the Independent Panel, which decides whether the prospective Carer can be approved.
- Identify any additional risks associated with the Service User i.e. where the Service User has limited mobility; is a heavy smoker etc.).

3.2 The Scheme will:

- Ensure that the Carers health and safety and fire safety training needs are identified and met, as part of the annual review of the work of the Carer and will review the health and safety and fire safety risk assessment of the Carer's home.

4 Recommendations on the minimum level of fire precautions

4.1 It is important that SL Carers know what to do in the event of a fire and that they make a fire plan. This should include:

- Knowing the location, operation and safe method of use of any fire fighting equipment;
- Ensuring that all escape routes are known, unobstructed and free from trip hazards;
- Knowing the means of raising the alarm in the event of fire;

- An evacuation plan with an external assembly point;
- Knowing how to call the fire brigade in the event of fire.

5 Escape Routes

5.1 There should be no additional life risk when private dwellings are used for SL compared to a single-family dwelling and it is also important that a homely and non-institutional environment is maintained. It should be recognised that fire protection measures that interfere significantly with everyday convenience for the occupants may prove unreliable in the long term.

5.2 Escape from one or two storey dwellings is generally simple, therefore it is unlikely that additional provisions will be necessary beyond ensuring that each habitable room either opens directly onto a hallway or stairway leading to the exit of the dwelling, or has an escape window or door opening directly to outside.

5.3 All exits required for escape should be easily opened from the inside, preferably without the use of a key. The Carer is not, however, expected to compromise the security of their homes. Everyone can be safe, as well as secure, provided that they can easily open doors and windows to escape in an emergency. Any keys should be easily accessible and kept close to the exits. The evacuation plan should ensure that everyone in the household knows where such keys are kept.

5.4 If service users have access to rooms over 4.5 metres above the ground floor level (i.e. normally the 2nd floor) then either the stairs and corridor needs to be fire protected (i.e. rated to achieve at least 30 minutes protection with 20 minute fire doors to the rooms) all the way to the exit door, or there needs to be a second separate escape route as an alternative

5.5 Where the service user's bedroom is in the basement, there must be a direct escape route out of the house from the basement.

5.6 New dwellings built for this use should automatically comply since they will have been subjected to Building Regulation control.

6 Fire Warning Systems

6.1 It is considered sufficient for smoke alarms to be installed in circulation areas only and:

- In a dwelling that has service user accommodation on more than one storey, there should be at least one self-contained smoke alarm at each available storey level.
- There should be a self-contained smoke alarm within 7m of the doors to rooms where a fire is likely to start (i.e., the kitchen or living room) and within 3m of the bedroom.
- If more than one self-contained smoke alarm is needed then, where possible, they should be connected together so that they all sound if any one detector operates. .
- Each self-contained smoke alarm should be installed and maintained in accordance with the manufacturer's instructions and for safety, they should not be fixed directly over a stair or any other opening between floors. Testing should include weekly and yearly routines.
    - **Weekly** – press test button to ensure the circuit is operating
    - **Yearly** – replace the battery (unless otherwise recommended by the manufacturer's guarantee) and test by pressing the test button.

6.2 Mains powered alarms are preferable to battery-powered alarms and will be installed in newly constructed dwellings under the Building Regulations. Any that require fitting should be fitted by a competent engineer.

6.3 The power and interconnection cables of these smoke alarms do not need any special fire survival properties; however, the wiring should still be fitted in accordance with the IEE wiring regulations.

7 Reducing the Risk from Fire

Fire Fighting Equipment

7.1 SL Carers should keep a (BSEN kite marked) fire blanket in the kitchen. Other fire fighting equipment is not normally necessary. Should a fire occur, SL Carers should be reminded that their first priority is the safe evacuation of the occupants of the house.

Portable Heating

7.2 Portable heating devices using a naked flame (i.e. portable gas fires etc) should not be used except in emergency circumstances (e.g. power cuts, etc.). They should always conform to the appropriate British Standard. When used the heater should be securely anchored in a safe and suitable position and away from draughts.

7.3 Where a portable heating device is to be used, SL Carers should carry out an assessment of risk, involving all members of the household, in order to ensure the safety of everybody living in the home.

7.4 Where necessary, (BS 6539 compliant) fire guards should be placed and secured in front of solid fuel fires and open flame heating appliances. The guard should not be closer than 200mm (8") from the heat source otherwise the guard may get dangerously hot.

7.5 Boilers and central heating systems should be serviced annually by a competent engineer and in accordance with manufacturers or British Standards guidance. Any gas installations should only be serviced by a Gas SAFE registered member.

Cooking

7.6 When cooking chips a thermostatically controlled deep fat fryer or oven-cooked chips should be used in preference to the traditional chip pan.

Furniture and Furnishings

7.7 When new furniture and mattresses are purchased, they should have a label attached to show they have been fire retardant treated to the relevant British Standard. The treatment means the ease and speed with which they burn will be reduced. It does not mean that the furniture and bedding will not burn.

7.8 SL Carers should be aware, however, that if their furniture and mattresses were made before 1988 (the date when the requirements for fire retardancy came into force), they should let their household know that it could be dangerous in a fire because they could catch light and burn very easily and quickly and may give off very toxic smoke. Furniture with damaged covers should be repaired or even replaced. Household members, especially smokers, should be asked to take extra care with matches and lighters.

Electrical Wiring

7.9 There should be no obvious defects in the electrical wiring system. Sockets and switches should be securely fixed to the wall. Flex to electrical appliances should be visible but not cause a trip

hazard. The use of multiple adapters should be discouraged. Where their use is unavoidable, they should be of the fused type and care taken that they are not overloaded. Fuses should be correctly rated for the appliance in use

Fire Routines

7.10 A bedtime routine should be followed ensuring that gas and electrical appliances are turned off and that all smoking materials are safely extinguished. All room doors should be kept closed at night.

7.11 The SL Carer should have a clear fire evacuation plan, which is explained and practised regularly to ensure that all members of the household know what they should do in case of a fire. It should be regularly reviewed to take account of the changing needs of the household.

Special Circumstances

7.12 The risk assessment carried out by an SL Carer with their SL Scheme for an individual service user might identify the need for additional fire precautions (e.g., where the service user has mobility problems, which may seriously impede their safe evacuation from the house in the case of a fire, or if they are inveterate smokers). Where appropriate, the SL Carer (with support from the SL Scheme) should seek advice from the local Fire and Rescue Service.

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN73
Fire Safety Guidance for Organisers of small scale events under the Licensing Act 2003: Temporary Event Notices

Rev 4, 01 May 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Guidance Note provides fire safety advice in respect of planning, organising or running an event under the authority of a "Temporary Event Notice" issued under the Licensing Act 2003.

This Note is one of a series produced by the Fire Authority to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 The Licensing Act 2003 makes provision for the carrying on of licensable activities under the authority of a "Temporary Event Notice". The Licensing Act places limits on the number and duration of temporary events as well as a limit on the total numbers of people that can be present (499 or less). If your event is intended to accommodate 500 or more people you will need to apply for a premises licence. The Licensing Authority for your borough has responsibility for temporary event notices and premises licences and can provide further advice about them.

1.3 The Order places responsibility for ensuring that the event is safe from fire on the person who has control of the premises. The Order requires that the responsible person has carried out a fire risk assessment and acted upon any significant findings to reduce the risk. Further information about The Order and the action required can be obtained from the government website www.gov.uk/workplace-fire-safety-your-responsibilities.

1.4 Information is also available from the LFBs Fire Safety Guidance Note 66 (see bibliography).

Fire Safety

1.5 This guidance provides some basic fire safety advice to those planning, organising or running an event. Depending on the size and nature of your event you should think about the following:

(i) The location of your venue: Is it suitable for your event?

(ii) Fire hazards: Where and how could a fire start?

(iii) People who might be at risk: Who might be affected by a fire?

(iv) Emergency Planning: What will you do if a fire happens?

2 Location

2.1 The first and most important consideration is to think about where the event will be held and what limitations on the number of people this will have:

- **Buildings normally used for public events: (e.g. Club, pub, community hall)** will usually have been designed with suitable and sufficient means of escape. If there is a premises licence, and/or a fire risk assessment, ask to see these and take account of any limitations that they impose, especially on the numbers of people that can safely be

accommodated. If there is no premises licence consider if you should apply to your licensing authority for a licence.

- **Buildings not normally used for public events: (e.g. shop, office, residential building)** these will require much more careful thought as they are likely to have fewer exit routes. In general having more than one exit route leading directly to safety will always be preferable. Buildings OR rooms with only one exit will usually be unsuitable for more than 60 people and may not even be safe for this many.
- **Temporary structures (e.g. Tents, marquees etc.)** in addition to the fire hazards below in paragraph 3.1, you should also consider:
  - **Choosing a safe place to put the structure:**
    - That allows adequate means of escape to a place of safety.
    - That allows access for the emergency services, their vehicles and equipment.
  - **The fabric structure could cause rapid fire spread unless:**
    - The structure is made of flame retardant materials and designed and erected so that it does not easily collapse when exposed to a fire.

2.2 London Fire Brigade Fire Safety Guidance Note 23: Tented structures, provides further advice (see bibliography).

3 Fire Hazards

3.1 Where and how could a fire start? No one plans to have a fire but, taking some basic precautions can help you to reduce the risks. Remember that, the easiest way to reduce risk is by not introducing hazards in the first place. Have a look around your venue and think about these risks:

- **Smoking**: Careless disposal of smoking materials causes many fires. The ban on smoking indoors may mean that people smoke out of sight. Consider providing designated external smoking areas, with sufficient sturdy ashtrays so that smokers can minimise the risk.
- **Heating equipment**: Central heating systems and radiators are generally safe. Other heating equipment, for example, stoves, electric or gas fires and any other temporary heaters should be securely fixed in position and have a fireguard. Any portable heaters should be located away from the exits and anything that might catch light, such as clothing, curtains and furniture.
- **Cooking equipment**: Fixed permanent cooking equipment will usually be safer, particularly when it is located in a kitchen. Great care should be taken with any temporary cooking equipment and it should be located away from the exits and anything that might catch light, such as clothing, curtains and furniture. Open fires and Bar-B-Q's should never be used indoors. Never leave any cooking unattended.
- **Lighting**: Any temporary lighting should be properly installed. The use of non-electric lighting (candles, oil lamps, etc.) introduces a significant risk and should be avoided.
- **Special effects**: The use of special effects such as fireworks and other pyrotechnics is an obvious and significant risk. They should not be used inside any structure unless a competent person who has been adequately trained has carried out a thorough risk assessment.
- **Stage, scenery and equipment**: Any temporary stage, scenery or electrical equipment should be arranged so that it does not create a fire hazard or obstruct escape routes.

- **Arson**: Deliberate fire setting is a significant risk especially in out of sight areas such as cloakrooms and storerooms and also where rubbish is stored. Removing rubbish regularly and restricting access to these areas will reduce the risk.

3.2 Fire fighting equipment may help to stop a small fire from spreading. Position suitable fire extinguishers near to identified fire hazards. London Fire Brigade Fire Safety Guidance Note 8: Hand held portable firefighting equipment, provides further advice (see bibliography).

4 People who might be at risk

4.1 You should think about the number of people and their location in relation to where a fire might start. A sensible approach is to imagine that a fire has started in each of your identified fire hazard locations (see section above on fire hazards). Now consider:

- How quickly will the fire and associated heat and smoke spread? Would removing or relocating the hazard reduce the risk?
- Keeping any fire and smoke control doors closed will help contain heat and smoke.
- How will people be alerted to the fire? Is there a working fire alarm?
- If the location of the outbreak is not easily observed, a fire detection and alarm system will reduce the risk.
- How will people make their escape? You should walk each escape route to make sure that it is not obstructed and leads to safety. Make sure that all exit doors can be easily opened without a key.
- How will people know where to go? Are emergency exits indicated by signs and are they adequately lit?
- How will people with disabilities make their escape? Who will provide any assistance that may be required?

5 Emergency Planning

5.1 What will you do if a fire happens? You should think about:

- Action on discovering a fire. Warn others immediately, use the fire alarm if there is one.
- If possible close the door to the room on fire.
- On hearing the fire warning start evacuating immediately.
- Stop any performance, turn off any loud music, and turn on all lighting.
- Dial 999 and alert the fire service, meet them when they arrive and tell them what has happened.
- Provide assistance to people that require it.
- Allocate specific responsibilities to appropriate people
- Provide training and information to others involved in planning and organising your event.

5.2 Carrying on an event under the authority of a Temporary Event Notice does not remove you from your obligations and responsibilities under other legislation including Fire Safety Law.

6 Role of the London Fire Brigade

- We provide fire safety advice to the people of London.
- We visit premises and events to help ensure that people are safe from fire.
- Where necessary we gather information and take appropriate action to enforce fire safety law.

7 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
HSE Publications: http://www.hse.gov.uk/ HSE Books PO Box 1999 Sudbury Suffolk CO10 0JY Telephone: 01787 884148	1. Five steps to risk assessment 2. The event safety guide
Free to download from: www.gov.uk/workplace-fire-safety-your-responsibilities OR Fire Safety Guides, PO Box 236, Wetherby LS23 7NB Tel: 0870 830 7099 Please quote the ISBN No when ordering	Entry Level Guide: 'A short guide to making your premises safe from fire' Guide 6: Small and medium places of assembly (ISBN: 978 1 85112 820 4) Guide 7: Large places of assembly (ISBN: 978 1 85112 821 1) Guide 8: Theatres and cinemas (ISBN: 978 1 85112 822 8) Guide 9: Open air events and venues (ISBN: 978 1 85112 823 5)
Local Brigade Borough Fire and Community Safety Centre	London Fire Brigade Fire Safety Guidance Note 8: Hand held portable firefighting equipment. London Fire Brigade Fire Safety Guidance Note 23: Tented structures. London Fire Brigade Fire Safety Guidance Note 66: Regulatory Reform (Fire Safety) Order 2005 (as amended).

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN74
Sanctuary Rooms in Domestic Premises – Fire Safety Considerations

Rev 8, 01 May 2022

Contents

Explanatory Note:

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) in London.

This Guidance Note has been produced to assist the consultation process between agencies involved in setting up 'Sanctuary Projects' and the fire authority.

This Note is one of a series produced by Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 The purpose of this Guidance Note is to provide information to housing providers, residents groups, management companies and individual residents and any others on the measures required for protection of occupants of premises where sanctuary rooms are provided.

1.3 A number of London Boroughs and welfare organisations have in place, or are developing, 'Sanctuary Projects' to assist individuals or families who have experienced domestic violence or hate crime. The aim of a Sanctuary Project is to make it possible for victims to remain in their own homes and feel safe. This can be achieved by providing a secure sanctuary room in their premises. The sanctuary room, normally the main bedroom, provides a secure place to retreat to and a place from where assistance can be summoned if the victim is under threat. This Guidance Note has been produced to assist the consultation process between agencies involved in setting up Sanctuary Projects and the LFB.

2 Preferred Standards

2.1 It is recognised that there is often conflict between security and fire safety measures; although in most cases an acceptable balance can be achieved. In this regard the advice given in this Guidance Note reflects London Fire Brigade's preferred standards for fire precautionary measures in premises incorporating a sanctuary room. LFB has no statutory powers to enforce these preferred standards in domestic premises occupied by a single person or family. The final decision on means of escape facilities and the provision of other related fire safety measures in this type of premises therefore rests with the owner, local authority (London Borough), landlord or the occupier, or any combination of these.

3 Type of Premises – Means of Escape

3.1 Not all types of premises will be suitable to house a sanctuary room. When considering a property it should be noted that any additional security measures should not compromise the basic means of escape from a premises. Consideration should also be given to the access needs for the fire and LFB including, where possible, locating the sanctuary room at the front of the property to facilitate any rescues of the occupants in the event of an emergency.

3.2 Premises containing sanctuary rooms should ideally consist of no more than two floors, as suitable means of escape measures from one or two storey dwellings are relatively simple to achieve. With such premises, few considerations are necessary beyond ensuring that the sanctuary room opens directly onto a hallway or stair leading to the entrance to the premises with an alternative means of escape such as another door or window that can be opened without the use of a key. In premises used as 'houses in multiple occupation' the level of risk to other occupants will need to be assessed in terms of possible lateral fire spread as well as the adequacy of fire separation between dwellings.

3.3 It is recognised that there will be instances where the victim resides in a block of flats and the sanctuary room is needed in premises above the second floor. In such circumstances it is likely that there will be no secondary means of escape, unless it is possible for the brigade to achieve this by ladder rescue, and consideration may need to be given to an enhanced level of fire protection.

4 Home Fire Safety Visit

4.1 Every premises being considered for a sanctuary room should be subject to a 'Home Fire Safety Visit'. This will be carried out free of charge by staff from the LFB and will include, amongst other things, advice on maintenance and testing of any smoke alarms, and general fire safety advice. The visit will also provide an opportunity to prepare an emergency escape plan, including a bedtime routine, which is considered essential, especially if additional security measures have been provided to doors and windows.

4.2 A free Home Fire Safety Visit can be arranged by emailing us at: smokealarms@london-fire.gov.uk

4.3 You should advise us that the Home Fire Safety Visit will be for a victim of Domestic Violence, Hate Crime or Arson and that the dwelling is a Sanctuary project. An enhanced level of protection will be considered following the Home Fire Safety Visit.

5 Smoke Alarms

5.1 Premises with a sanctuary room should ideally have mains operated smoke alarms installed in circulation areas only and the system should comply with the installation recommendations in British Standard 5839-6: Fire detection and fire alarm systems for buildings. Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises. As a minimum, a sufficient number (normally one per floor) of 10 year battery powered smoke alarms should be provided in circulation areas. However, LFB would strongly advise that alarms should be sited in all areas of risk and be interlinked so that any resident is able to hear the alarm no matter where it originates.

5.2 An alarm should be installed close enough to a sanctuary room door to alert the occupants should they be asleep but not so loud as to interfere with any subsequent telephone calls to summon assistance. If necessary, consideration should be given to installing a muting device within the sanctuary room to prevent the loud background noise of the alarm from interfering with the emergency call.

5.3 In cases where there are direct threats of arson against the occupier then hard- wired smoke alarms should always be provided and a domestic sprinkler system considered. In certain circumstances, and where the threat is high, agencies may enter into a partnership with LFB to provide a domestic sprinkler system. Details of such partnership arrangements can be obtained from the local Borough Commander or their Support Team.

6 Emergency Escape Lighting

6.1 It is recommended that rechargeable, battery operated emergency escape lighting is fitted directly outside the sanctuary room. This will assist occupiers to leave the premises should there be a mains failure during any emergency. The provision of a torch with rechargeable batteries will generally meet the requirement here, although this would be more ideally located inside the sanctuary room.

7 Doors in Sanctuary Rooms

7.1 The sanctuary room should be a fire resisting compartment able to withstand fire for a minimum of 30 minutes. Any door set should therefore be of similar fire resistance (known as FD30s or E30s doors). Intumescent and cold smoke fire seals should be rebated into all internal sanctuary room doors (or the receiving frame). In the event of fire these will greatly expand to seal the gap around the door to provide a safe and effective barrier against the passage of fire and smoke. A threshold should be provided on the bottom of the door to prevent the ingress of smoke and flammable liquids and any perforation of the door should be suitably protected to stop similar ingress.

7.2 Any front door letter box should be sealed up and replaced with an external wall mounted letter box or alternatively replaced with a special internal 'arson letterbox'. These can be supplied by LFB on request.

8 Windows in Sanctuary Rooms

8.1 Windows can be provided within sanctuary rooms to provide an alternative means of escape; in such circumstances the window should comply with the requirements of the Building Regulations and the stipulations with regard to floor height and window dimensions. In brief, these regulations state that the window should have an unobstructed opening of not less than 0.33m² and at least 450 mm high and 450mm wide; the bottom of the openable area should not be more than 1100mm above the floor. If a window is to be used for means of escape purposes then, like a door used for the same purpose, it should lead to a place of safety away from the danger of fire. Windows should open by at least 90 degrees so that escape is possible.

8.2 Windows that allow escape on to a roof, or that can be opened from a sanctuary room to provide fresh air, should be easily openable in case of emergency. If the windows are locked, keys should be kept where they can be quickly obtained to open the windows.

8.3 Further guidance on security measures for doors and windows can be found in LFB Guidance Note No. 11 'Security Doors and Other Security Measures for Residential Premises – Preferred Standards' available from your local fire safety office, contact details can be obtained from our website link at the end of this note.

9 Firefighting Equipment

9.1 The following firefighting equipment should be provided in the sanctuary room:

- dry powder extinguisher (to deal with a petrol/paraffin fire);
- water extinguisher (to deal with carbonaceous fire);
- fire blanket;
- break–glass hammer.

10 Telephone Facilities

10.1 In view of the reasons for providing a sanctuary room in a premises it is important that a reliable means for summoning assistance in the event of an emergency is provided for the occupier. It is therefore strongly recommended that a dedicated telephone line is provided for the premises with an extension within the sanctuary room. A Fire Instruction Notice should be fixed adjacent to the telephone extension. The notice should include clear instructions that, when calling the Fire Brigade, the caller should state that they are in a locked room and give the room's location (e.g. ground floor, front or back of premises).

10.2 In addition, and to take account of possible interference with the telephone cable, a 'pay-as-you-go' mobile phone with credit should be provided and kept available for use at all times in the sanctuary room.

11 Notifying the London Fire Brigade

11.1 Details of any premises where a sanctuary room has been provided should be forwarded to Fire Safety Admin, Brigade Headquarters (FSR-AdminSupport@london-fire.gov.uk). The details, to include the full address and location within the premises of the sanctuary room, will be used to inform fire crews who may be called to any incident at the premises. It is also important that LFB is informed if an existing sanctuary room is taken out of use.

12 Organisations you may need to consult

12.1 Other organisations you may need to consult are:

- Building Control Authority (London Borough);
- Environmental Health Department (London Borough);
- Social Services (London Borough);
- Insurers of the property;
- Metropolitan or City Police;
- Woman's Aid – for further advice on victim support.

13 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
British Standards Institution (BSI) 389 Chiswick High Road London W4 4AL Telephone: 020 8996 9001	BS 5839-6: Fire detection and fire alarm systems for buildings. Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises

Fax: 020 8996 7001 Email: cservices@bsigroup.com Web : www.bsi.org.uk	

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN75
Risk Assessments for Petrol Dispensing Premises under Dangerous Substances and Explosive Atmospheres Regulations 2002

Rev 9, 01 May 2022

Contents

Explanatory Note:

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing parts of the Dangerous Substances and Explosive Atmospheres Regulations 2002 in London.

This guidance Note provides information on the legislation relating to risk assessments for dispensing premises and is one of a series produced by the Commissioner to provide advice on various aspects of fire safety.

If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1. Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 The purpose of this Guidance Note is to provide information to petroleum dispensing premises owners / occupiers on the risks arising from the delivery, storage and dispensing of petroleum. This information should be used to inform and review Risk Assessments and the management of risk from dangerous substances.

1.3 The Dangerous Substances and Explosive Atmospheres Regulations (DSEAR) 2002 is the legislation which deals with the safe working of dangerous substances and explosive atmospheres. DSEAR requires employers to control the risks to safety from fire, explosions and substances corrosive to metals. Dangerous substances are any substances used or present at work that could, if not properly controlled, cause harm to people as a result of a fire or explosion or corrosion of metal.

1.4 In addition, DSEAR places the responsibility on the employer/responsible person to identify and assess the risks arising from the delivery, keeping and dispensing of petroleum spirit and other motor fuels (such as liquefied petroleum gas).

2. Related Legislation

- The Petroleum (Consolidation) Regulations 2014
- The Health and Safety at Work Act etc. 1974
- The Management of Health and Safety at Work Regulations 1999
- The Regulatory Reform (Fire Safety) Order 2005 (as amended) *(Please see Guidance Note 66 'Regulatory Reform (Fire Safety) Order 2005 (as amended)' for further information)*

3. What the Legislation (DSEAR 2002) Requires

3.1 The employer / responsible person must:

- Find out what dangerous substances are present in their workplace/premises and what the fire and explosion risks are. (Petroleum spirit and LPG are both "dangerous substances" for this purpose, but there may be others at the premises. If so, they need to be considered as well.)

- Carry out a risk assessment and make a record of the significant findings of that assessment; including the measures that have been or will be taken by the employer/responsible person to control the risk; keep a record of the risk assessment and significant findings available for inspection; review the risk assessment periodically and following any significant changes. - **Regulation 5, DSEAR (2002)**.
- Identify and classify areas of the workplace/premises where explosive atmospheres may occur and avoid ignition sources (for example from unprotected equipment) in those areas. Recording these areas is best done by way of a plan – see Appendix 2 for an example; - **Regulation 6, DSEAR (2002)**
- Put control measures in place to either remove those risks or, where this is not possible, to control them; put controls in place to reduce the effects of any incidents involving dangerous substances. – **Regulation 7, DSEAR (2002)**
- Prepare plans and procedures to deal with accidents, incidents and emergencies involving dangerous substances; - **Regulation 8, DSEAR (2002)**
- Make sure that employees are properly informed about and trained to control or deal with the risks from the dangerous substances. (This includes providing them with details of the substances and with a copy of the significant findings of the risk assessment.) - **Regulation 9, DSEAR (2002)**.

3.2 The Health & Safety Executive's Approved Code of Practice No. L138 provides additional detailed guidance for the employer/responsible person: http://www.hse.gov.uk/pubns/books/l138.htm

3.3 The requirement to assess the risks from the dangerous substances should not be considered in isolation. It should be carried out as part of the overall risk assessment required by Regulation 3 of the Management of Health and Safety at Work Regulations 1999 rather than as a separate exercise.

Appendix 1

3.4 Appendix 1 is a suggested format that you may wish to consider as a method of recording the required information and also lists some of the control measures that may be necessary for each activity.

Appendix 2

3.5 Appendix 2 details the hazardous zones associated with a petrol filling station forecourt, along with an example of the suggested drawing.

Following this guidance is not necessarily the only way to comply with the legislation, however, the advice offered here represents best practice.

4. Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
Energy Institute 61 New Cavendish Street London W1G 7AR Telephone: 020 7467 7100 Fax: 020 7255 1472 E-mail: info@energyinst.org Web: www.energyinst.org	Design, Construction, Modification, Maintenance and Decommissioning of Filling Stations (The Blue Book)
The Stationery Office (Mail, Telephone, Fax & Internet Orders) TSO Orders/Post Cash Dept PO Box 29 Norwich NR3 1GN Telephone: 08706 005 522 Web: www.tsoshop.co.uk	Fire safety in offices and shops ISBN-13: 978 1 85112 815 0
Related Legislation http://www.legislation.gov.uk/	The Petroleum (Consolidation) Regulations 2014 The Health and Safety at Work etc. Act 1974 The Management of Health and Safety at Work Regulations 1999 The Dangerous Substances and Explosive Atmosphere Regulations 2002 The Regulatory Reform (Fire Safety) Order 2005 (as amended)
Petroleum Enforcement Liaison Group (PELG) Web: https://publishing.energyinst.org/topics/petroleum-product-storage-and-distribution/filling-stations/petrol-filling-stations-guidance-on-managing-the-risks-of-fire-and-explosion-the-red-guide	Petrol Filling Stations Guidance on Managing The Risk of Fire & Explosion (The Red Guide)
Liquid Gas UK Camden House Warwick Road Kenilworth Warwickshire	Code of Practice 1: Part 1 2009 Edition - Bulk LPG Storage at Fixed Installations : Design, Installation and Operation of Vessels Located Above Ground (January 2009)

CV8 1TH Web: www.liquidgasuk.org	Code of Practice 1: Part 3 - Bulk LPG Storage at Fixed Installations: Examination and Inspection (2012) Code of Practice 1: Part 4 - Bulk LPG Storage at Fixed Installations: Buried/Mounded LPG Storage Vessels (February 2008) Code of Practice 11 - Autogas Installations (June 2001) incorporating Amendment 3, 2003 Code of Practice 20 - Automotive LPG Refuelling Facilities (November 2001) incorporating Amendment 1 2004 Code of Practice 22 - Design, Installation and Testing of LPG Piping Systems : 2011

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

The "Fire Safety" guide listed above may also be downloaded free of charge from the Fire Safety Law Section of the CLG website.

Appendix 1

ACTIVITY	RISK/HAZARD ASSOCIATED WITH ACTIVITY	EXISTING CONTROL MEASURES		SIGNIFICANT FINDINGS (i.e. is a risk not adequately controlled?)		ANY ACTION REQUIRED (BY WHOM) (TIME-SCALE)
		ENGINEERED	MANAGED	YES	NO	
Tank Unloading	• Overfill/crossover • Impact • Actions by unauthorised personnel • Spillage • Uncontrolled vapour release • Fire/explosion caused by ignition of vapour following uncontrolled release of product • Leak • Ignition sources	1.Overfill prevention/high level alarm 2.Correct labelling of fill points/signage 3.Stage 1b vapour recovery 4.Vent pipe location 5.Location/protection of fill pipes (tanker stand) 6.Impervious surface to tanker stand 7.Drainage of tanker stand/tank fill point area to a retention system. 8.Driver controlled delivery equipment 9.Adequate lighting 10.Hazardous area classification / suitability of equipment 11.Provision of fire fighting equipment & absorbent material	1.Inspection / maintenance regime 2.Staff training 3.Delivery documentation 4.Provision of personal protective equipment 5.Implemented emergency procedure			
Storage of fuel on site	• Leak • Uncontrolled vapour release • Fire/explosion caused by ignition of vapour following uncontrolled release of product	1.Secondary containment 2.Leak detection system 3.Observation / monitoring well(s) 4.Stage 1b vapour recovery 5.Gauge systems 6.Automated reconciliation system 7.Cathodic protection 8.Provision of fire fighting equipment and absorbent material	1.Staff training 2.Third party statistical inventory reconciliation 3.Wetstock reconciliation 4.Inspection / maintenance regime and records of same 5.Provision of personal protective equipment			
Carrying out repair maintenance or modification	• Ignition sources • Leaks • Spillage • Unauthorised personnel • Vapour release • Fire/explosion caused by ignition of vapour following uncontrolled release of product • Impacts	1.Correct equipment to be used in hazardous areas 2.Provision of suitable lifting equipment available for access chamber covers 3.Provision of fire fighting equipment and absorbent material 4.Provision of cones and barriers 5.Adequate lighting of working area	1.Competent contractors / safety passport 2.Staff training 3.Provision personal protective equipment 4.Emergency plan 5.Contractors documentation: • clearance certificates • method statement • risk assessment 6.Visitors book			

ACTIVITY	RISK/HAZARD ASSOCIATED WITH ACTIVITY	EXISTING CONTROL MEASURES		SIGNIFICANT FINDINGS (i.e. is a risk not adequately controlled?)		ANY ACTION REQUIRED (BY WHOM) (TIME-SCALE)
		ENGINEERED	MANAGED	YES	NO	
Dispensing of fuel by members of the public	• Leak • Spillage • Fire/explosion caused by ignition of vapour following uncontrolled release of product • Vehicular impact • Vapour release • Equipment failure • Ignition sources • Members of public	1.Dispensers to approved standard 2.Dispensers operating a stage II vapour recovery system 3.Labelling / signage 4.Adequate lighting 5.Impact check valves (pressurised pumping / LPG) 6.Position of dispenser(s) (vision / impact) 7.Isolation / emergency switches 8.Impact protection of dispenser(s) 9.Under pump valves (suction) 10.Loud speaker system 11.Impervious forecourt surface 12.Drainage of dispensing area to a retention system 13.Electrical equipment suitable for hazardous zone 14.Provision of fire fighting equipment and absorbent material	1.Staff training 2.Inspection / maintenance regime 3.Provision of personal protective equipment for staff 4.Provision of first aid kit and first aid training 5.Implemented emergency procedure			
Regulatory Reform (Fire Safety) Order 2005 (as amended)	Regulatory Reform (Fire Safety) Order 2005 (as amended): Consideration of staff and public within associated premises (or who may be affected as a result of a fire at the premises)	1.Suitable and sufficient means of escape 2.Suitable and sufficient provision of fire fighting equipment 3.Fire alarms and detection 4.Fire resisting separation	1.Staff training 2.Maintenance of fire fighting equipment / alarms / separation 3.Emergency plan 4.Risk Assessment 5.Competent persons			

Appendix 2

HAZARDOUS ZONE DEFINITIONS:-

Zone 0: That part of a hazardous area in which a flammable atmosphere is continuously present or present for long periods or for more than 1,000 hours per annum

Zone 1: That part of a hazardous area in which a flammable atmosphere is likely to occur in normal operation or for between 10 and 1,000 hours per annum.

Zone 2: That part of a hazardous area in which a flammable atmosphere is not likely to occur in normal operation and, if it occurs, will exist only for a short period or for between 0.1 and 10 hours per annum.

NOMINAL AREAS OF HAZARDOUS ZONES TO BE INDICATED ON THE HAZARDOUS ZONE DRAWING:-

Zone 0:

- Within any access chamber or pit in which there are tanker delivery hose connection point(s).
- Within an oil separator (petrol interceptor).

Zone 1:

- 1m radius around the road tanker delivery and vapour return hose connections extending down to ground level.
- 1m radius along the delivery hose route from the tanker connection point(s) to the tank connection point(s).
- 1m radius from a tank fill point (above ground)
- 1m radius from the edge of the chamber if fill point is below ground.
- Within petrol tank access chambers which do not have tank fill points.
- 2m radius around tank venting point(s) which do not have a stage 1b vapour recovery system.
- 1m radius around a venting point of an oil separator (petrol interceptor).
- Within the access chamber of an oil separator (petrol interceptor).
- Within a 4.1m radius of a petrol delivery hose connection on a dispenser (without stage 2 vapour recovery).

Zone 2:

- 4m radius of tanker delivery hose connection point(s).
- 4m radius of above ground off set fill connection(s).
- 1 m radius around vapour return hose connection point.
- 2m radius around tank venting points where the site has stage 1b vapour recovery installed.
- 2m radius from the edge of an oil separator (petrol interceptor) access chamber.
- Within a 4.1m radius of a petrol delivery hose connection on a dispenser (with stage 2 vapour recovery in operation).

Note: additional hazardous zones are present and must be identified on sites where LPG or other highly flammable motor fuels are stored and dispense

EXAMPLE OF HAZARDOUS ZONE DRAWING FOR A TYPICAL PETROL FILLING STATION

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Timber Frame Construction Sites

GN 76

Rev 5, 09 Aug 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London. This Guidance Note provides fire safety advice in respect of Timber Frame Construction Sites

This Note is one of a series produced by the Fire Authority to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 The purpose of this guidance note is to provide information to user groups on the potential fire risks relating to certain construction sites, how to notify the fire service of a site and reference to available industry guidance which should be followed.

1.3 There has been a notable increase in the use of modern methods of construction and this may have implications on the assessment of fire risk related to a building dependent on the stage of construction and the overall performance of the completed structure should there be a fire.

1.4 Concerns relate in the main to lightweight timber frame structures that are under construction and the associated fire risks related specifically to this phase of a project.

1.5 During the construction phase, a timber frame structure is considered particularly vulnerable to fire when in the unprotected state. While unprotected these sites may pose a risk to construction workers, firefighters and occupants of surrounding premises.

1.6 Specific areas of concern are;

- The potential rapid fire spread through the structure and early structural collapse
- High levels of resultant incident heat flux constituting a hazard to firefighting personnel and equipment and causing offsite fire spread to adjacent structures
- Partial occupation of buildings without a sufficient fire risk assessment being carried out that considers the potential for any incomplete structures to impact the occupied areas
- Appropriate arrangements for means of escape for construction workers
- Firefighting access and facilities

1.7 Once the construction is completed to the required standard then the risk of fire spread within the structure should be no different to any other form of construction. Poor maintenance and workmanship may, however, increase the vulnerability of the structure particularly where passive fire protection measures have been incorrectly installed, modified or damaged.

1.8 We would request that a notification form is supplied to us detailing specifics relating to the site including;

- Principal contractor details

- Site Address and contact details
- Construction start date and estimated completion
- Approximate floor area and number of storeys
- Site boundary details i.e. the distance between the timber frame and any neighbouring occupied buildings
- Security arrangements on site

The notification should be sent to: fireengineeringgroup@london-fire.gov.uk

Note: if the timber frame supplier is part of the Structural Timber Association (STA) 'SiteSafe' Scheme then a notification form should have already been completed.

2 Legislation

2.1 Both The Order and the Construction (Design and Management) Regulations 2015 (CDM) place duties on duty holders with regards to Fire safety arrangements on Construction sites.

2.2 As a broad outline, the Legislation requires those with control over the construction site can demonstrate that they have:

- Recognised the risks in their workplaces (including any risks related to the construction method itself)
- Considered who will be affected (which may include neighbouring occupied premises)
- Assessed the extent of their risks
- Come to an informed decision on the necessary action to reduce them; and
- Ensured that the actions decided are implemented.

2.3 Once the fire risk assessment has been completed it is important that it is regularly reviewed particularly as the construction phase progresses as risks are likely to change as the building work is completed.

3 Enforcing Authorities

3.1 The Health and Safety Executive (HSE) are the Enforcing Authority under The Order for construction sites and the local Fire and Rescue Service has an Enforcing role once the site is partially occupied.

3.2 The Health and Safety Executive (HSE) are the Enforcing Authority for the CDM Regulations.

4 Further Guidance and Advice

4.1 The bibliography below details guidance that is available to support duty holders in assessing the potential risks relating to the construction site.

5 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the LFB website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
Health and Safety Executive (HSE) Buy or download free from the following link; http://www.hse.gov.uk/pubns/books/hsg168.htm	Fire safety in Construction (HSG 168 3rd Edition) ISBN: 978 0 7176 6724 6
Fire Protection Associated (FPA) Buy via the following link; http://www.thefpa.co.uk/shop/shop_product_details.26E44626-A269-478D-BB0B24EAA798C155.html?shop_category=DEC2ADFB-B816-4043-B83BB310703D36B8	Fire prevention on construction sites – the joint code of practice on the protection from fire of construction sites and buildings undergoing refurbishment (9th Edition)
Structural Timber Association (STA) Free to download from the following website; http://www.structuraltimber.co.uk/library	16 Steps to Fire Safety on Timber Frame Construction Sites, Guide to separating distances and risk assessment checklist

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Heritage and Buildings of Special Interest

GN80

Version: Rev 5, 01 May 2022

Contents

Explanatory Note:

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Guidance Note provides information on historic buildings and the damage control / salvage of artefacts and collections.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Historic and Listed Buildings

1.1 Historic buildings can be defined as buildings of architectural or historic interest/ significance. The interest or significance may be:

(a) local or national

(b) a consequence of the building's age, build form or location.

(c) may result from its connection with a person or persons, or with local or national events or industry;

1.2 'Listed' Building is a term used to describe one of a number of legal procedures which help Historic England to protect our architectural heritage. When buildings are listed they are placed on statutory lists of buildings of "special architectural or historic interest" compiled by the Department of Digital, Culture, Media and Sport under the Planning (Listed Buildings and Conservation Areas) Act 1990, on advice from Historic England. To carry out works affecting the special character of a listed building without consent from the Local Authorities (LA) is a criminal offence even if the responsible person was not aware the premises was listed.

1.3 Listed buildings are graded to show their relative importance:

(a) Grade I - Buildings of exceptional interest (around 2% of all listed premises)

(b) Grade II* - Particularly important of more than special interest (around 4%)

(c) Grade II - Buildings of special interest warranting every effort to preserve them (around 92%).

1.4 All of the properties that Historic England inspect, are judged according to a set of national standards. Broadly, buildings that are eligible for listing are as follows:

(i) All buildings built before 1700 which survive in anything like their original condition

(ii) Most buildings of 1700 to 1840.

(iii) Between 1840 and 1914 only buildings of definite quality and character.

(iv) Between 1914 and 1939, selected buildings of high quality or historic interest.

(v) A few outstanding buildings erected after 1939.

2 Enforcing Authorities

2.1 If the premises is being constructed or altered, it will be subject to Building Regulation approval administered by the Local Authority (LA) Building Control office, or an approved inspector under the Building and Approved Inspectors (Amendment) Regulations 2010.

2.2 In relation to Crown premises there is a direction from the Secretary of State which means all government departments shall follow the building regulations procedure as though they are bound by it.

2.3 There are also other enforcing authorities who have legislative control over certain premises and, depending on the use of the premises, they may need to be consulted before any works are undertaken. These include:

(a) Fire & Rescue Services;

(b) Health and Safety Executive (e.g. construction sites);

(c) Crown Premises Inspection Group (CPIG);

(d) MOD fire service (e.g. army base);

(e) Local Authority (LA) Conservation Officer;

(f) Historic England (if the building is listed as being of historical interest);

(g) The Secretary of State for the Environment.

2.4 All LAs in London should have dedicated Conservation/Planning teams who manage listed buildings on behalf of Historic England. Discussions should be held with the local conservation officers before any changes are made to a listed building.

3 Fire Safety Arrangements

3.1 Fire Safety arrangements include Fire Risk Assessment (FRA), Evacuation Strategy (ES) emergency evacuation plan (EEP) plan and a fire safety manual. These can vary in its scope and detail according to the size and complexity of the premises. All of these documents should be easy to understand, kept current and should be accessible to any authorised person who needs to use them.

3.2 In smaller premises, the fire safety manual might comprise of a simple contact list and emergency response procedures.

3.3 In larger premises, such as museums, art galleries and houses containing collections, it should be a comprehensive manual including the following elements:

(a) Fire Strategy

(b) Fire Safety Engineering details

(c) Detailed Emergency Evacuation Procedures

(d) Emergency Response & Salvage/Damage Control plan

(e) Working with the Fire Rescue Service

(f) Business Continuity Plan

(g) Emergency Contact List

4 Fire Risk Assessment

4.1 The Order came into effect in 2006. The Order is enforced by a number of organisations but the primary enforcer is the local Fire and Rescue Service (FRS).

4.2 Its also important to consider The Fire Safety Act 2021. Upon implementation, it amends The Order to clarify that for buildings containing two or more sets of domestic premises, The Order applies to the building's structure and external walls (including cladding, balconies, doors and windows) and flat front entrance doors that open into any common parts. This now means that those responsible for fire safety for buildings containing two or more sets of domestic premises (regardless of height) must assess the risk from these additional areas and take adequate general fire precautions to remove, or reduce, so far as is reasonable, the risk from fire or the spread of fire.

4.3 The Order requires an assessment of the fire risks in a premises or part of a premises. A FRA is required for all premises falling within the scope of The Order. The Order imposes a duty on the Responsible Person (RP) to have the FRA carried out by a competent person. The criteria set out by the Fire Sector Federation is a good starting point for choosing a competent Risk Assessor and a link to a copy of "A Guide to Choosing a Competent Fire Risk Assessor" can be found on our web site.

4.4 The Responsible Person will be the employer in places of work and either the occupier or owner in other cases. For further information of how to carry out a FRA please see the London Fire Brigade (LFB) Guidance Note 66.

4.5 The obligation to ensure the safety of the occupants and the moral duty to protect the building from fire often gives rise to conflict. The FRA can be the key to striking a balance between the requirements for life safety and the need for property protection through the use of The Order. Other assessments for property protection and business continuity in relation to fire may need to be carried out to ensure that the character of the historic building is retained. Protecting the environment should also be a consideration especially regarding fire fighting water run off, smoke and fire debris and hazardous contamination. Any significant change to the building or deviation from current guidance or British Standard needs to be fully developed and justified within the FRA, to see whether it is possible to achieve safely. At no time should a variation take place without a full and detailed review of the FRA and/or fire strategy.

4.6 When sub-letting a part of a building or hiring out rooms/areas etc. within a premises, full consideration needs to be given to any hazards present and the risks from these that may be introduced into the premises. There should be clear co-operation and co-ordination between the RP and the function organiser to make sure that everyone is aware of the findings of the relevant FRAs and evacuation procedures for the premises. If there is an increase in numbers of people during an event the fire exits and escape routes will need to be re-assessed. A further FRA needs to be undertaken by the function organiser to assess the fire protection arrangements for the event.

5 Common Causes of Fire

5.1 The key to reducing loss in traditional buildings is gaining an understanding of the most common causes of fire. This can include accidental or deliberate causes and individual sources of ignition. The following represent some of the more common causes of fires and common risks in the building makeup.

Building or maintenance work

5.2 Several major fires have occurred when heritage premises have been undergoing refurbishment or alteration works. Where building works are taking place the additional hazards presented by the works should be continually monitored and addressed. These could include:

(a) Hot work such as soldering, roof repair and paint-stripping;

(b) Loss of fire separation caused by the removal of doors or repair of partitions or ceilings;

(c) Temporary isolation of fire detectors to avoid false alarms caused by dust;

(d) Additional fire loading caused by the temporary storage of building materials and packaging;

(e) Additional sources of ignition caused by temporary lighting, plumbing works, sparks from cutting gear, burning paint and lead burning. Poor water supplies because hydrants have been covered or have not yet been fitted;

(f) Poor access because of temporary hoarding or site huts;

(g) Fire precautions not yet in place.

Electrical faults

5.3 These are considered to be a major fire hazard. In many buildings the wiring itself may be of considerable age and may deteriorate over time. Alterations over a period of years, or circuits becoming overloaded by the connection of too many appliances, can lead to installations becoming unsafe. Faulty appliances can be a source of fire and consequently electrical appliances require regular checking and maintenance. Older style and types of fuses in Consumer units should be upgraded to modern standards with Residual Current Circuit Breakers (RCBs) fitted in line with the current BS7671 Wiring Regulations.

Open fires, stoves, grates and hearths

5.4 Many fires have started with a spark from a fire or because of a cracked hearth.

Defective flues

5.5 Chimney fires are common and fire can spread to other parts of the building due to cracked or faulty flues or where timber joists project into the flue way. Birds' nests in flues have also resulted in fires.

Vandalism and malicious damage

5.6 Arson has claimed many buildings, both in cities and at remote locations, therefore its important that suitable security arrangements are adopted. This is especially important within 'void/vacant' buildings where arson fires regularly occur.

Accidents & miscellaneous

5.7 A number of fires have occurred for reasons including: careless disposal of smoking materials, careless use of portable heaters, candles or spotlights to close to flammable materials, mirrors or glass focusing sunlight.

6 Fire Strategy

6.1 It is recommended, particularly in complex buildings, that an overriding strategy document is created. Fire strategies can be prepared in a variety of formats and level of detail, but ultimately they aim to formalise the base fire safety requirements for a premises or site. This can then be used to help inform more detailed fire protection specifications, FRAs, ES and EEP plus other relevant building strategies (for example, a building's security strategy).

6.2 Fire strategies primarily focus on life safety requirements, but may consider property protection, environmental and business continuity factors In the context of heritage and buildings of special interest, fire strategies can be a useful tool for ensuring that the required level of fire safety prevention and protection is effectively implemented and managed in a consistent manner.

6.3 It is important to note that the fire strategy for one premises may not be applicable/ transferable to another, thus it is imperative that a fire strategy considers and develops the overall fire strategy package for an individual premises or site on a case specific basis.

6.4 The creation or review of a fire strategy should only be completed by a competent person.

6.5 The type of occupancy is a key factor in the fire strategy. Occupancy can include the following:-

(a) Members of the public including children, volunteers and staff.

(b) Some heritage buildings have key representatives living on site, such as the curator or house and collections manager. They are the first line of defence from a fire and security perspective.

(c) Some heritage properties may have a holiday apartment incorporated into it or be a rental property for guests in its entirety.

(d) Some heritage buildings have the donor family still living in residence, sometimes in private apartments and therefore these parts do not come under the auspices of The Order and any FRA would not consider these areas although they may be part of the building. However, in regards to property or business assessments, there may well be a separate assessment to cover this area.

7 Fire Safety Engineering

7.1 In some cases the only practical way for a historic building to achieve a satisfactory standard of fire safety and fulfil the requirements of The Order 2005 and/or Building Regulations is to adopt a fire safety engineered solution.

7.2 Fire safety engineering/ performance based design solutions often adopt a more holistic and systematic approach to a fire safety problem than typical prescriptive methods. For example, British Standard (BS 7974) or CIBSE Guide E provides a framework and guidance on the design and assessment of fire safety measures needed to support a fire engineered design solution.

7.3 By using fire safety engineering, a building specific fire strategy can be developed based upon quantitative and qualitative scientific and engineering principles, which consider:

(a) The likelihood of a fire occurring.

(b) The anticipated fire development and severity.

(c) The performance of a building's structure and fire safety systems during a fire.

(d) The potential response and behaviour of occupants within a building during a fire, and fire service intervention.

7.4 If it is thought that a fire safety engineering solution is desirable or required in a historic building, then the RP should seek further guidance from a suitably competent and qualified fire engineer.

8 Passive Fire Safety

Compartmentation

8.1 This is the division of a building into separate fire compartments, using fire resisting walls, partitions and ceilings. This is to limit the size of fire and to stop it spreading from one part of the building to another, or into staircases and other exit routes. Examination of most buildings will show that each has its own natural lines of compartmentation, which can be utilised to provide separation elements that, with a little attention, are capable of providing a level of fire protection, and may, in some cases, provide an hour or more. It follows that, when deciding on a compartment strategy for the building, a full understanding of the location of all the hidden voids should be available to those responsible for the decisions.

8.2 Where services pass through a compartment floor, wall or cavity barrier then fire stopping should be provided to maintain (60min) fire-resistance. All pipes should be fitted with a proprietary sealing system capable of maintaining the fire-resistance of the floor, wall or cavity barrier. Any door in compartment walls should be fire resisting or be able to resist the passage of fire for the designated period and should not be propped or wedged open. They should self-close effectively to sit squarely within the frames. Any excessive gaps caused by warping or dropping of the hinges should be reported for remedial action. Holes in compartment walls or ceilings, formed for the passage of cables or pipes should be fire stopped to the appropriate standard.

Roof and roof voids

8.3 These are also an important feature of the fire resistance characteristics of any building, making their investigation an important aspect of the FRA. Compartmentation of the roof void is an essential element of upgrading the fire performance of the building. Installing fire-insulating barriers that do not line up with the existing compartment lines in the accommodation below will undermine the fire integrity of the structure.

8.4 The existence of hidden voids is sometimes very difficult to ascertain, but original plans of the building may reveal where they can be found. The problem with these voids is that they form hidden paths for fire, smoke and the products of combustion to spread unnoticed to parts of the building quite remote from the place of origin. The fact that the fire is hidden also makes it almost impossible to tackle without a major dismantling of the building fabric.

8.5 Other long forgotten ducts or shafts may be part of the original construction - waste shafts, natural ventilation stacks, bell pulley routes and dumb waiters. Such voids, often interconnecting, are extremely hazardous to a traditional building, providing fire, smoke and the products of combustion with an easy route by which to spread.

Floor construction

8.6 In traditional buildings, floor construction presents a special area of vulnerability. Apart from a small number of buildings that have stone or brick vaulted floors with excellent fire resistance, the most common floor constructions in traditional buildings are of timber construction. Early forms of construction lacked an applied ceiling, with the floor boarding itself laid over the joists

providing little fire resistance. The protection offered by a floor to a fire from below depends on the plaster ceiling. The age and condition of the plaster and the strength of its key to the lath will greatly affect its ability to perform in fire.

8.7 Upgrading the fire resistance of a floor can be a difficult task, which may result in some loss of historic fabric, but there are a number of recognised upgrading methods:

(a) Consolidate any deficiencies in the original construction,

(b) Introduce mineral fibre quilt supported between or below the joists,

(c) Insert intumescent sheet material over or under existing surfaces,

(d) Insert intumescent material at the perimeter of the floor to close the link with the wall cavities in the event of a fire,

(e) Apply intumescent coatings to ceilings,

(f) Apply additional layers of fire resistant boards to ceilings.

Walls

8.8 Thick stone walls have a great resistance to the passage of smoke, heat and flame. However, in many buildings numerous flues and other voids weaken their integrity in fire. The common construction of walls lined with lath and plaster or timber panelling creates narrow continuous cavities, and these present one of the most vulnerable elements in terms of fire resistance. The cavities often link with those present in floors and can run throughout a building, giving an easy fire path with both fuel (timber) and air present. A fire can smoulder unnoticed for many hours before breaking out some distance from the actual point of origin.

8.9 Many compartment walls do not continue up into the roof void, or are compromised by openings, thus permitting the unhindered and rapid spread of fire along the roof space.

8.10 Traditionally, plaster was applied directly onto solid masonry, but later the primary technique employed was lath and plaster. This involved applying plaster to a timber frame, comprising thin strips (laths) that were nailed to upright studs attached to the wall. A cavity was left between the wall and plaster. Whilst theoretically giving a good level of fire resistance, the performance of traditional plaster is usually reliant on the condition of the mechanical bond ('key') between the plaster and laths, and if lost, plaster will start to detach. Performance in a fire may be unpredictable and at a certain stage in a fire complete failure may occur.

8.11 The height of the ceiling has a dramatic effect on the spread of smoke and flames and if sufficiently high will delay the moment when hot smoke starts to descend from ceiling level and mushroom out. The heat in the smoke plume could affect doors and break down the fire resistance. If the windows are higher than the tops of the doors, the heat from the fire could break the glass and allow the hot smoke and gases to vent.

8.12 Surface spread of flame rating of walls and ceilings has an impact on the speed of growth of fire within compartments. Full height timber panels and other wall coverings e.g. wallpaper, layers of paint, artefacts and tapestries can give flames a path from low level to ceiling height, so encouraging rapid fire spread.

Fire Doors

8.13 If a door should be a fire door but does not meet that standard, then advice should be sought from a competent person to explore whether the existing door is of adequate solid construction

to resist the passage of fire, thus making it a Notional fire door. There is still the expectation that Intumescent strips and cold smoke seals will be fitted to the door or the door frame. Or the door can be upgraded in order to achieve the appropriate fire resisting performance. Despite frequently being of intrinsic historic value, doors are often the fundamental weakness in a separating wall. Doors and frames that have gaps in their construction, or contain glazing that is not fire resistant, may readily allow fire to spread beyond the compartment of origin.

8.14 There are a number of techniques that can be employed to improve the fire resistance of a door (remedial joinery work is also often required). It is advised that advice is received from a specialist in relation to this.

8.15 There may be some situations where it is not practical to improve the fire resistance of a door, either because of its method of construction or because its intrinsic value makes an alteration unacceptable. In the latter situation and as a last resort, the doors might be removed and placed in storage keeping the doors safely in a controlled environment to prevent damage or distortion, preferably in the building itself.

8.16 Listed building consent may be required in the case of some buildings, and it may be found that some alternative use, or the blocking up of the side that is of importance behind doors that are fixed shut, offer a more appropriate outcome. Situations such as this can occur for a variety of reasons. In buildings which have undergone changes in use and/or design it is quite common to find door sets in openings which were not intended for that purpose. Structural openings were sometimes oversized to allow flexibility in deciding where ultimately to locate the doors at a later stage in the building process. Large door sets often have brick arch openings covered with decorative panelling. Sometimes voids exist behind the frame assembly.

8.17 When asked to upgrade a door it is important to consider the whole door set, including the voids behind the frame.

8.18 The structural stability of a door in a fire resistance test is related therefore to the size of the door (height, width and thickness) and the size of the stiles and rails. Doors can be upgraded to provide the required level of fire resistance using the same principles. This should be done in collaboration with a suitably qualified expert.

Glass / Glazing

8.19 Every effort should be made to retain historic glass and replacement should be seen as an option of last resort. Any glass removed should be handled carefully and stored for repairs or reuse. During a fire, glass can melt in intense temperatures, or shatter due to gaseous explosions/thermal shock. Glazed openings are a potential weakness in the passive control of fire in otherwise sealed compartment walls. The range of options that could be considered includes improvements to the way glass is held into its frame, provision of secondary glass and frames and replacement of existing glass with thicker or fire resistant glass. Fire resistant glass is available in several forms, including 'wired' glass, modified toughened or laminated glass and insulated glass, to comply with BS 476: Part 22: 1987.

Timber

8.20 Traditional buildings often have a substantial amount of timber. Timber has a degree of fire resistance that increases with the thickness of the component under attack. Therefore, whilst thin timbers such as window shutters and door panels, decorative wall lining boards and other trims will readily burn, large timber stud frames, and structural elements such as beams, columns and roof members will burn at a slower rate and may perform their function for longer and even

beyond the duration of the fire. The fire performance of timber can be adversely affected by factors such as rot or woodworm.

9 Active Fire Safety

9.1 Once consideration has been given to the passive fire safety within the building, the next step is to look at the active fire safety measures which might be present or may be needed.

9.2 The introduction of fire protection systems, to improve the fire performance of the building, should only be done after the following points have been considered:

(a) Essential: The fire systems should be central to meeting the objectives of the protection of life, buildings and contents.

(b) Appropriate to risk: Any system that is installed should be appropriate to the risks being considered.

(c) Compliant with legislation: Systems should be installed according to demonstrable performance-based and other legislatively prescribed standards of safety.

(d) Minimally invasive: The retrospective fitting of fire systems should involve minimal degrees of physical intervention on the historic structure.

(e) Sensitively integrated: Installed systems should be designed to be integrated sympathetically with the historic fabric and its detail.

(f) Reversible: Fire systems should be installed according to a reversible, 'plug-in, plug-out' installation philosophy so that if a feature is removed then the listed aspect of the building remains perfectly intact as it was before.

Fire Detection and alarm systems

9.3 Detection and alarm systems are an effective fire safety measures for heritage buildings and museums. They can be installed to provide property protection or for life safety, both of which should be installed to comply with latest edition of British Standard 5839 part 1 or part 6.

9.4 When installing a detection and alarm system in a historic building the aim should be to install minimum invasive devices. There are several types of systems available on the market but examples of systems that have been sympathetically installed in historic buildings include:

(a) Aspirating smoke detectors offer potential for minimum invasion and reversible installation in sensitive environments. Aspirating smoke detectors have a low probability of false alarms. This is due to an integrating effect: small samples of low density smoke in several sampling points will raise an alarm, while quite dense smoke in one sampling point only will not.

(b) Wireless detector devices can offer high reliability and are unobtrusive. However as signals are via radio waves the effectiveness of these can be reduced where thick brick or stone walls are present It is of vital importance that a radio signal investigation is carried out before any work is undertaken.

(c) Visual and thermal image fire detectors (camera software fire detection) may be used in large indoor spaces from well hidden locations. The visual category is prone to deception by moving objects and shadows. Thermal ones discriminate any movements or shade and detect fire by temperatures exceeding set limits.

(d) Beam smoke detectors can be used in large rooms with ornate ceilings.

9.5 The ideal position for detectors is as detailed in the British Standard, as central as possible. To satisfy aesthetics they are often placed close to the wall above the door, so that they cannot be seen when entering the room. Smoke testing in a variety of premises has shown that natural air currents from windows and doors effectively keeps smoke away from these areas thus reducing the likelihood of the detector operating in the early developments of fire. Detectors that are recessed, or placed above holes in the ceilings, or hidden behind beams and lights are also ineffective.

9.6 Measures should be undertaken to decrease the probability of false alarms while retaining response sensitivity to real fires. There should also be some consideration with regard to the transferring of the call from an automatic signal to a call centre. Fire Rescue Services will attend all calls to fires but consideration must be given to the frequency of false alarm instances and whether it is appropriate to introduce filtering practices to prevent false alarms from being transmitted to the emergency services. Frequent false alarms are an indication of failures in fire safety management which may result in enforcement action by the relevant FRS and/or incur a charge from the FRS who are entitled to recover some attendance costs.

Fire-stopping / dampers

9.7 Traditional buildings rely on relatively high air change rates to ensure that damp and rot are kept at bay, and upsetting this balance may have far-reaching consequences. One way to avoid such unwanted side effects is to use mechanically or electrically operated fire dampers that operate to close off ducts when a fire is detected. Where it is not possible to remove services, attention is required to build-up openings, "fire stop" holes, restore compartmentation and other finishes and where necessary fit fire dampers to ducts or fire collars to pipework.

Emergency lighting and emergency escape lighting

9.8 Systems conforming to BS5266-1 should be provided in those buildings where there is no natural light or where they are used in the hours of darkness. These lights are normally powered by battery packs and only illuminate upon mains or local lighting sub-circuit failure. Where this type of lighting is not possible, an alternative method of providing lighting must be sought which must be assessed as part of the FRA.

Fire exit signage

9.9 These types of signs should be provided with pictograms. They should be large enough to be clearly seen from the furthest viewing distances. The signs should be in the colours detailed in the 'The Health and Safety (Safety Signs and Signals) Regulations 1996'. Signs that meet the criteria in BS 5499 and BS EN 7010 also meet the standard of the Regulations and can be used. Where its not suitable to physically fit signs to walls or ceiling brackets an alternative solution may be possible but this must be fully risk assessed and tested by way of fire drills and staff training (e.g. free standing signs or utilising room wardens to direct people). This should be fully documented in the FRA.

Other signage

9.10 Notices detailing the actions to be taken in case of fire should be provided adjacent to the fire alarm call points where this is possible.

9.11 Blue disc signs stating either 'Fire door keep shut', "Fire door keep locked shut" or "Automatic fire door keep clear" should be affixed to fire doors. Where there are particularly ornate doors, these

notices may be fitted to the leading edge and in the frame of the door, where they will only be seen when the door is open.

Fire fighting equipment

9.12 The type of fire extinguisher provided should reflect the potential fire risk for each area. This could include 10 year service free extinguishers. Training in the use of fire fighting equipment should be given to all staff who are expected to use it. It is sometimes inappropriate to fit fire extinguishers and their associated brackets to some walls, especially where the wall has historical value or protection. Therefore it is recommended that an appointed competent person should liaise with the fire extinguisher technicians when installing fire extinguishers to make sure they are still fitted in the appropriate areas but do not compromise or damage walls.

9.13 Adequate and appropriate maintenance of all fire protection systems and facilities is of the utmost importance as all of these requirements should be available and in good condition at all times. Failure to do so will not only endanger a building and its occupants and place firefighters lives at risk, but could also render the RP liable to prosecution.

9.14 Depending on the risks and hazards identified within the fire risk assessment, the findings may determine that a sprinkler/water mist or oxygen reduction system is required within the premises in order to remove/reduce the risk/hazard to an acceptable level. Where a bespoke suppression system has been installed, this should be fully accounted for within the fire risk assessment.

9.15 Where appropriate, LFB fully supports the use of Automatic Fire Suppression Systems (AFSS) to protect property and to reduce fire deaths and injuries. Comprehensive information on AFSS and useful links are available on the LFB website sprinkler page.

Oxygen reduction systems (ORS)

9.16 Oxygen reduction systems (ORS) are a type of fire prevention technology used in a variety of locations, such as IT server rooms, small warehouses spaces and archive stores. These systems reduce the oxygen content of the air to levels that will prevent the outbreak of fire, based on the materials being stored or the equipment being protected. Oxygen reduction systems begin working before fires start. They do this by introducing nitrogen into the air within closed rooms in order to reduce oxygen concentration levels continuously, thereby creating an atmosphere in which it is practically impossible for fires to start, develop or spread. Oxygen sensors continually monitor concentration levels within the protected area, ensuring that they remain at the predefined value.

9.17 Depending on the oxygen concentration selected within a room or compartment and the duration of stay by any person entering that space, oxygen-reduced air can cause symptoms of acute altitude sickness (headaches, tiredness, nausea, loss of appetite, dizziness), but only after around five to six hours of uninterrupted time in a room with oxygen concentrations under 14% (at sea level) for most people. The lowered oxygen content of the air can be a hazard to persons with advanced heart and circulatory disease, respiratory and lung disorders, or blood disorders and health surveillance should be carried out to ensure that staff with these conditions do not stay within the confines of spaces for long periods of time. Therefore, its recommended that these types of systems should only be fitted within areas where strict access and monitoring measures can be effectively managed and controlled and persons entering the space fully risk assessed.

9.18 Oxygen reduction systems is a fire protection technique which is not designed to extinguish a fire, but is designed to prevent a fire from originating in the first instance and therefore prevent damage from occurring. In archive store rooms where ignition sources cannot be completely

removed and a water-based automatic fire suppression system could cause almost the same level of damage to priceless artefacts, this fire prevention system may offer a suitable solution.

9.19 In order to determine the suitability and effectiveness of this type of system, it is recommended that advice be sought from a professional accredited company that specialize in this field.

10 Emergency Response & Salvage/Damage Control Plan

10.1 The next section of the Fire Safety Manual should consider Emergency Response & Salvage/Damage Control. Any collections or artefacts should be subject to a suitable Salvage/Damage Control Plan to ensure that they survive any fire or other incident and should take into account, out of hours incidents where a responsible/competent person may not be on site.

10.2 The procedures for salvage will vary according to the scale of the incident, but it is a worthwhile exercise to plan for the worst case scenario i.e. the removal of all the objects. Damage control is also a key factor which should be fully considered. For example, there may be a ceiling artwork or section of the building that, wherever possible, cannot be damaged by fire, smoke or water.

10.3 Each organisation is individually responsible for making adequate provisions for the salvage, recovery and protection of the artefacts and collections under their care.

10.4 Individual organisations may want to consider developing a Memorandum of Understanding (MOU) with other organisations with regards to cooperation on issues relating to emergency salvage, recovery and the protection of assets.

10.5 A Salvage Plan should identify the following points:

(a) The Salvage Incident Co-ordinator and their deputy.

(b) Contacts list.

(c) The creation of a Salvage Team that includes suitable numbers of staff.

(d) Training of the salvage teams.

(e) Site and building plans.

(f) Salvage priorities (snatch/grab list).

(g) Salvage procedures.

(h) Emergency first aid conservation, including suitable containers/covers for key items, which allow responders to minimise the risk of damage during salvage operations.

10.6 If the risk due to the severity of the emergency is considered too great then the FRS will take the decision that the building is unsafe to enter. Until the emergency is under control, that decision will stand and no one will be allowed to enter the building.

10.7 Consideration should be given to the time before trained site staff could arrive e.g. 30-60 minutes plus especially during out of hours times. This is the time in which fire crews need quick access to a clear and simple guide that prioritises salvage items and grab sheets according to risk (to the valuable items/building).

10.8 The local Salvage Incident Coordinator will take the lead for their organisation and advise both their own salvage team members and either the FRS Incident Commander or the Sector Commander responsible for salvage. He/she should be easily identifiable ideally by wearing a tabard or similar, and should be able to interpret the salvage plan to hand as well as give advice

regarding any resources required to move priority objects to safety. Once on site it is imperative that they make themselves known to the Incident Commander and do not independently commence a salvage plan.

Incident Commander Tabard

10.9 When a disaster occurs it may be necessary for the first member of staff on site to contact other members of staff in order to help with the many tasks that need to be performed. The initial stages of an incident are of great importance when attempting to organise a salvage operation, therefore the knowledge of the member of staff first on site could be invaluable. Consequently, if they are attempting to contact members of staff whilst liaising with the fire service they will soon be overloaded. With this in mind full consideration should be given by the RP as to how members of staff are going to be contacted quickly without delaying the salvage of items. An alternative solution is to contract the task out to a third party, such as a call receiving centre.

10.10 One of the most difficult items in the plan to keep up to date is the contact lists, both for management teams, members of salvage teams and equipment suppliers. With staff movement and turnover it can be difficult to make sure the list is current at all times. If it was decided to employ a contacts centre then part of the contract would involve the third party periodically checking the lists and making test calls.

10.11 Training of the salvage teams should include practical aspects such as reading plans, identifying objects on the salvage list, removing paintings from their secure fixings, object handling and first aid treatment of damaged objects. All these should be practiced in simulated conditions and the practices should periodically include joint exercises with the FRS.

10.12 Salvage lists ideally include photographs of the items to be rescued, their position in the room and building and any special measures needed to remove them. This can include manual handling requirements and removal techniques, including specific specialist tools required. If a room is completely filled with items of similar value, it is still worth sorting them into an order of removal. This could be by order of rarity, importance, ownership, or ease of removal rather than simply giving them all a priority 1 rating. The procedures for salvage will vary according to the scale of the incident, but it makes sense to plan for the worst case scenario and for removal of all the objects.

10.13 It is recommended that copies of the building plans are made available to fire service personnel. All plans should clearly identify the layout of the premises and the location of the items needing salvaging.

10.14 Ideally there should be a picture(s) of the item(s) that needs to be salvaged, as a minimum there should be a description of the item, including the height, weight, fixing method, number of people required to move it, or what measures are required to protect it in situ.

10.15 There should be a clear indication of exactly how these items should be removed from their location. Considerations include:

(a) Where items are stored in cases, there should be clear instructions how the case can be opened.

(b) Can painting be removed off site in their frames? Does the picture need to be cut from the frame? How should the picture be rolled to minimise the damage to it?

(c) How many people are required to lift/remove an item or will it require specialist equipment?

(d) Do certain items require bespoke cases/containers for safe removal and if so, can they be clearly identified and located in an emergency?

10.16 Once the item has been identified and is ready to be removed from the building the next aspect is to consider how the item will be transported to the designated Recovery Area. In order to avoid any damage to smaller items being transported it may be appropriate to consider a padded bag or other solution.

10.17 Where its only safe for FRS to carry out salvage operations, then once out of the building with a salvaged item, the local firefighters will report to the Entry Control Officer/ Salvage Commander. If the firefighters are in Breathing Apparatus (BA) they will be unable to go past this point to deliver the salvaged item to the recovery area / safe area. At this point the Salvage or Recovery coordinator from the premises will need to have a system ready to transport the salvaged items to the Designated Object Assessment (triage) area.

10.18 It may initially not be possible to get the salvaged items to a permanent safe store area where they will stay in the longer term. It is advisable to consider where an appropriate interim safe area would be in relation to your premises. The incident commander may give the final agreement as to where the location will be but ideas will be welcomed. It would be prudent to consider the weather conditions when considering the location of this interim safe area.

10.19 The first few hours after a disaster are critical to the treatment and long term survival of fragile historic artefacts. If the condition of the objects can be stabilised as soon as possible the long term damage by mildew or rot can be avoided. The salvage plan should include the provision of first aid equipment and a suitable place, either permanent or temporary for treatment.

10.20 It is recommended that salvage teams are provided with personal protective equipment, which includes identification, hard hats, fluorescent vests, steel toed boots/shoes and torches.

10.21 Learning from experience is a very useful tool. All incidents should be reported to management so that a record can be made of their nature, size and potential threat. These reports can then be used to take action before the incident is repeated.

10.22 Useful resources for related information on emergency responses are:

- The Historic England website
- The Historic England Emergency response plans page
- London Fire Brigade (LFB) website
- LFB Five Steps to Emergency Response Plans and Salvage Plans (and see Section 13).

10.23 You can contact the LFB Fire Safety Heritage team by emailing the Heritage mailbox, heritage@london-fire.gov.uk

11 Working with Fire and Rescue Services

11.1 Wherever possible the FRS will attempt to facilitate salvage/damage control as a high priority providing crews of firefighters, who will endeavour to remove artefacts /collections from areas unsafe for in house salvage teams to access. Similarly the FRS can work in support of the salvage team when they have been authorised by the Incident Commander to operate inside the premises.

11.2 To facilitate this, consideration needs to be given to providing simple Aide-memoires for the FRS, to include; The Salvage Sector Commander and the Incident Commander. These should give an overview of your operational procedures and key objectives in terms of salvage.

11.3 In complex buildings, there may be a requirement for layout plans to be made available for firefighters or information on the presence of particular hazards. See London Fire Brigade Guidance Note 70 - Premises Information Box.

11.4 In the event of a fire, the FRS Incident Commander will have to decide on the operational tactics to be employed and quickly develop a plan for dealing with the incident. It is recommended that the responsible person for the historic building establishes a relationship with their local FRS to ensure that planning and potential exercises can be carried out to ensure more effective response in case of an incident. The following sections identify some of the likely operational considerations that should be considered as part of a plan.

11.5 Teams which have been properly trained and are accustomed to working alongside firefighters and complying with their instructions will be much more effective than those which have not been trained.

11.6 Hazards to firefighters: There may be additional risks to fire crews and others resulting from the types of materials stored or used in these premises. For example, it would be likely to encounter a wide range of hazardous chemicals in buildings used for the storage, display or preparation of natural history collections.

11.7 FRS try to cause as little water damage as possible when fighting fires, but the water used for fire fighting may leak into the rooms below. The weight of water may well cause structural damage and leak onto lower floors. It may be possible to cover objects to minimise water damage, but the best course of action would be to divert as much as possible to the outside, using waterproof sheets and hoppers if available. Removal of objects before the water reaches them is another option, but relies on there being enough people and time to remove them safely. Collections of books are a particular problem because of the number and weight of them. If the collection is on upper floors a book chute may be required to get them to ground level quickly.

11.8 All activity aimed at minimising the impact of a fire on people or property is recommended to include regular and effective contact with the local FRS. In the case of larger properties or sites, an invitation should be extended to the local fire station to visit the premises and gain valuable knowledge of the building, its uses and any special factors which might affect the safety of the occupants or the way in which the fire might have to be fought. Table top exercises can also take place.

11.9 The following factors should be taken into account:

(a) Location of the building and signpost information — for example, is the building called one thing by the occupants but known as something different locally

(b) Access to the building: special problems with bridges, roadways and gates any of which might prevent the speedy arrival of fire appliances e.g. weight and width restrictions

(c) Entry to the building - may not always be at the front, possibly a rear service courtyard

(d) Water supplies — apart from public hydrants ware there any private hydrants on site or additional sources of water that could be used for firefighting? Are open water sources such as rivers or ponds/lakes accessible?

(e) Are there any automatic fire suppression systems installed to all or parts of the building?

(f) The activities undertaken — what is the building used for?

(g) Are the occupants likely to have problems evacuating themselves?

(h) The presence of flammable liquids, explosives, compressed gases or radioactive substances

(i) Locations of water stopcocks, meter bypasses, electrical substations, transformers and switchgear, gas shut-offs and the like.

(j) Particular hazards in the construction features of the building (including asbestos);

(k) The use of combustible under floor insulation;

(l) Underground vaults ducts and voids where fire may spread unchecked;

(m) Worn stone slabs in stairway construction; and

(n) The presence of cast iron columns and wrought iron beams.

11.10 Regular contact can be developed and other activities organised. For example, arranging for the attendance of fire appliances at a drill or exercise will benefit all parties and will ensure that crews from the local fire station are able to familiarise themselves with the site. Meetings should be held to ensure that the fire personnel are aware of forthcoming special activities such as major exhibitions and special functions, or of temporary changes in building layouts.

11.11 This is particularly important where buildings may only have a narrow frontage and no side or rear access. Pedestrianisation and narrow streets may also restrict or slow down fire service activities. Access for fire appliances is often provided to pedestrianised areas, but may become more difficult with the provision of street furniture, siting of street traders and the growth of trees. The weight of fire appliances should also be considered, many modern appliances are extremely heavy and/or need space for jacks for aerial appliances and to remove equipment from sliding trays on the appliance. Remote rural locations with no road access will also make access difficult or impossible.

11.12 Where there are significant changes, for example if an access drive is temporarily closed or if there is a long term presence of contractors on a site, the local FRS should be informed immediately. They should also be informed if the fire detection and alarm system or any firefighting equipment such as a fire suppression system is taken out of action for more than an hour or so.

12 Business Continuity

12.1 Business Continuity Management is planning for and managing the unexpected including a fire or flood. A Business Continuity Plan is a management tool specific to your business and designed to help your business survive in the event of any severe disruption that prevents or restricts your business operating from your premises in both the short and long term.

12.2 You need to consider not only loss of stock, equipment and premises but also loss of income. It is surprising how long it can take to fully recover, in some cases up to 2 years or more. An insurance

company could be reluctant to pay out on a claim if appropriate fire safety measures have not been implemented and/or managed correctly.

12.3 Make a list of everything in your plan that is critical to the running of your business and without which your business would be disrupted. The next step is to think of ways of how you could overcome the problem and write them into your plan.

12.4 All IT based records should be backed up regularly and recorded to another location or onto a disc and taken home. If your business operates using books then the books should be taken home at night and kept in a secure metal box or similar to protect them from fire.

12.5 Informing your customers is also important especially where they have left goods for service or repair with you. When you take in goods from customers make sure you take a telephone number to enable you to contact them.

12.6 Having developed your plan keep it alive by ensuring your, managers are aware of the arrangements contained in your plan and by ensuring the procedures you have developed are carried out by appropriate staff. Keep the plans under regular review - place a note in your diary every 3 months to remind yourself to check them. It is recommended to test your plan annually.

12.7 The Local Authority Civil Contingency Planning Team can provide advice and guidance to help you develop your plan but they cannot write your plan for you.

12.8 Templates to assist with writing your business continuity plan can be found on the London Prepared website: www.londonprepared.gov.uk.

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LONDON FIRE BRIGADE

Five Steps to Emergency Response Plans and Salvage Plans

Below is a list of the information you may need to consider as part of your emergency response plans and salvage plans. Tick off the items once you've included them.

Remember to laminate your finished plan to prevent water damage and consider storing it at strategic locations around your building.

Step 1: Roles and responsibilities

- [ ] Internal contacts (e.g. conservator, curator, general manager, facilities manager, front of house manager, incident coordinator, salvage coordinator, security).
- [ ] External contacts (e.g. local authority emergency planning officer, local hospital, local police station, specific utilities companies).

Step 2: Emergency plan/strategy

- [ ] Full address including postcode of the premises, and description of building (e.g. number of floors, approximate size).
- [ ] Full plans of building – these can be basic but must be clear and indicate all significant features such as fixed firefighting facilities, service shut-off valves and potential hazards on site.
- [ ] Full list of significant items/artifacts that require salvaging or protecting in situ (see Step 4 for more information).
- [ ] Risks to firefighters (e.g. radiation, cylinders, gas suppression, chemical storage, hazardous objects).
- [ ] Fire Service Rendezvous Point (RVP) and fire crew access points.
- [ ] Water supplies (e.g. hydrants, open water sources).
- [ ] Salvage handling areas, temporary storage areas, first aid treatment areas (consider gazebo's and out-of-hours).
- [ ] Location of salvage equipment and personal protective equipment (PPE), including hi-vis vests.
- [ ] Full list of salvage equipment required to be kept within storage.
- [ ] Details of welfare areas where salvage staff and fire crews may be able to rest and recuperate if necessary during down time/handover periods.
- [ ] Arrange any necessary contacts with external emergency services, particularly with regard to firefighting, rescue work, first aid and emergency medical care.

Step 3: Develop an incident management/teamwork structure for salvage

- [ ] Roles and responsibilities chart for staff and volunteers that are part of the salvage team (take a look at the Incident Management Structure for Salvage chart on our website).
- [ ] An explanation of how the salvage team will work/liaise with emergency services.
- [ ] Details on how cordons and security arrangements will be implemented for the fire/flooding incidents and ALL salvage areas (consider if staff need identification to pass through any cordon).
- [ ] How will staff be contacted? (e.g. group text messaging).

Step 4: Develop and produce a salvage plan

- [ ] A log of ALL items that need to be salvaged in a priority order (e.g. Priority 1, 2 and 3) with 1 being the highest priority.
- [ ] Salvage item inventory log sheets to identify what items have been recovered and what location they have been taken to.
- [ ] Identification sheets for each item to be salvaged (known as grab sheets). These must include:
  - [ ] a simple description of the item.
  - [ ] a photograph of the item.
  - [ ] a basic plan indicating where it's located within the building and its location within a room.
  - [ ] number of persons required to remove and carry the object.
  - [ ] details of items provided with security fixings and the correct tools required for removal.
  - [ ] any PPE or other important information required for fire crews.
- [ ] If an item cannot be removed, how can it be protected? Consider 'Protect in Situ' this may involve utilising compartmentation, fire resisting/retardant blankets etc.

Step 5: Handling, treatment and storage of salvaged items

- [ ] A list of suitable temporary and long-term locations for the handling, treatment and storage of all salvaged items. Consider:
  - [ ] are locations secure? (e.g. is temporary fencing or additional security staff required).
  - [ ] are locations suitable in all weather conditions and during times of darkness? (e.g. underfoot conditions, trip hazards, temporary lighting required).
  - [ ] can areas be clearly split between 'wet', 'dry' and 'contaminated' salvaged items?
  - [ ] how will items be moved to a more permanent storage location (e.g. secure vehicles).

Further information

For more detailed guidance and templates on the topics listed here, see Historic England's Writing an Emergency Response Plan page.

For more information about creating a salvage plan, visit London Fire Brigade's (LFB) How to Write a Salvage Plan page. You can contact LFB's Heritage Team via our website or email heritage@london-fire.gov.uk

Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
British Standards Institution (Sales) 389 Chiswick High Road London W4 4AL Telephone: 020 7996 9000 Fax: 020 7996 7001 E-mail: cservices@bsi-global.com Web : www.bsi-global.com	BS 5839-1: Fire detection and fire alarm systems for buildings. Code of practice for system design, installation, commissioning and maintenance BS 5839–6: Fire detection and fire alarm systems for buildings. Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises BS 5266-1:Emergency lighting. Code of practice for the emergency lighting of premises BS 5306-3: Fire extinguishing installations and equipment on premises. Commissioning and maintenance of portable fire extinguishers. Code of practice BS 1869: Fire Blankets BS 8214: Timber-based fire door assemblies. Code of practice BS 476-22: Fire tests on building materials and structures. Method for determination of the fire resistance of non-loadbearing elements of construction BS 476-31.1: Fire tests on building materials and structures. Methods for measuring smoke penetration through doorsets and shutter assemblies. Method of measurement under ambient temperature conditions BS EN 1634-1 Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware. Fire resistance test for door and shutter assemblies and openable windows BS 7974-all relevant parts: Application of fire safety engineering principles to the design of buildings. BS 8300-1: Design of an accessible and inclusive built environment. External environment. Code of practice BS 8300-2: Design of an accessible and inclusive built environment. Buildings. Code of practice

The Stationery Office (Counter Service) 123 Kingsway London WC2B 6PQ Telephone: 020 7242 6393 Fax: 020 7242 6394 Web: www.tso.co.uk ALSO: The Stationery Office (Mail, Telephone & Fax Orders) PO Box 29 Norwich NR3 1GN Telephone: 0870 600 5522 Fax orders: 0870 600 5533	Building Regulations Approved Document B Approved Document M Furniture and Furnishings (Fire) (Safety) Regulations Regulatory Reform(Fire Safety) Order 2005 (as amended) S.I.1541 TR/19 HVCA Guide to Good Practice Internal Cleanliness of Ventilation Systems

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Primary Authority partnerships

GN81

Rev 5, 01 May 2022

Contents

Explanatory Note:

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', the Dangerous Substances and Explosive Atmospheres Regulations 2002 and the Petroleum (Consolidation) Regulations 2014 in London.

This Guidance Note provides advice on the Primary Authority scheme and who to contact if your organisation is interested in forming a partnership with the London Fire Commissioner.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please contact your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit our website at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 The purpose of this Guidance Note is to provide information to external organisations on the Primary Authority Scheme. This information should be used to inform potential partners on how Primary Authority operates within LFB, the benefits to the organisation while operating under Primary Authority and details on cost recovery.

1.3 The Regulatory Enforcement and Sanctions Act 2008 as amended by the Enterprise Act 2016, amongst other legislation, made provision for more consistent and coordinated regulatory enforcement by local authorities and fire and rescue authorities by establishing Primary Authority. This scheme was introduced to address organisations' concerns regarding how authorities apply legislation as well as concerns about contradictory advice, wasted resources, duplicated effort and lack of effective dispute resolution when authorities have a variance of approach.

1.4 Primary Authority allows a single organisation or groups of businesses, charities and other organisations that trade either in one or across multiple authority borders to form a statutory partnership with one enforcing authority and they become the Primary Authority Businesses which are part of a trade association or franchise can also benefit from these arrangements as they can form a co-ordinated partnership provided that there is a shared approach to compliance.

Primary Authority is designed to reduce the regulatory burden on businesses and to promote consistent, effective inspection and enforcement processes and should not, from a fire safety perspective, compromise or reduce standards of safety. Under the scheme the organisation, or co-ordinator on behalf of trade associations or franchises, will receive compliance advice and guidance from one particular fire and rescue service , who can liaise with other fire and rescue authorities (known as enforcing authorities) on their behalf.

1.5 Primary Authority does not affect the responsibility of the business to comply with the legal obligations placed upon them but provides support for the business in meeting their statutory obligations, confirming that the business's current or proposed methods to achieve compliance are acceptable or by setting out ways in which the business might achieve and maintain compliance. For fire safety partnerships the legal framework for compliance is The Order. For petroleum partnerships, the legal frameworks are the Dangerous Substances and Explosive

Atmospheres Regulations 2002 (hereinafter referred to as "DSEAR") and the Petroleum (Consolidation) Regulations 2014 (hereinafter referred to as "the PCR").

1.6 In order to provide a Primary Authority service, the fire authority is entitled to charge its partner on a cost recovery basis.

2 What is Primary Authority ?

2.1 Primary Authority is a legally binding agreement between a business and fire and rescue authority. Once the organisation enters into a partnership, this will affect the way in which the organisation is regulated by all enforcing authorities.

3 What can the London Fire Brigade do for an organisation under Primary Authority?

3.1 The London Fire Brigade (hereinafter referred to as "LFB") will work with the organisation at a strategic level reviewing policies and procedures to help the organisation comply with The Order, DSEAR or the PCR. Allocated officers may carry out sample audits of the business's premises in various locations in order to identify any non-compliance issues and to confirm if policies and procedures appears to be are being effectively implemented and managed at local level.

3.2 Primary Authority Advice can be provided in respect of fire safety or petroleum matters, to its partners. Primary Authority Advice, commonly referred to as 'assured advice', allows an organisation to rely on such guidance, provided the organisation follows the advice it, and so should not be subject to enforcement action in relation to that advice. If the organisation faced potential enforcement action by an enforcing authority, The London Fire Brigade (as the Primary Authority) would assess whether the proposed action was inconsistent with any Primary Authority Advice given. If the action was found to be inconsistent, he Commissioner could either request changes to be made to the proposed action or direct the enforcing authority not to take the enforcement action.

3.3 LFB will not take enforcement action in another authority's area. That responsibility remains with the local enforcing authority concerned; nor can LFB direct the resources of another authority.

3.4 An Inspection Plan is another tool that can be produced by LFB to assist an organisation. This document would be created in conjunction with the partner organisation to guide enforcers in exercising their regulatory function in that field, provide information and set specific requirements to be followed. All Inspection Plans are ratified by the Secretary of State and enforcing authorities are legally obliged to comply with the instructions within. For example, an Inspection Plan can instruct the fire safety officer not to audit some aspects of a premises (possibly due to previously high levels of compliance) and/or direct attention at a specific area, in order to receive feedback from the inspecting authority.

4 Benefits to organisations

4.1 There are numerous benefits to an organisation from partnership working with the London Fire Brigade:

- The organisation is provided with consistent compliance advice and guidance on fire safety / petroleum matters for the whole of the organisation's property portfolio

- LFB will liaise with other enforcing authorities to ensure that contradictory guidance or advice is not given
- There is less duplicated effort and wasted resources for the organisation as LFB can provide Primary Authority Advice and Inspection Plans, informing other enforcing authorities that certain fire safety / petroleum matters do not need to be reviewed when audits are being carried out as London Fire Brigade (as the Primary Authority) is satisfied with the organisation's arrangements
- The organisation has access to a single point of contact to provide direction where fire safety / petroleum issues arise
- London Fire Brigade is experienced in running established partnerships for both fire safety and petroleum under Primary Authority with around 30 current partnerships
- The Commissioner has a dedicated team of experienced officers appointed to engage in partnership working with organisations

5 Cost Recovery

5.1 London Fire Brigade can provide an indication of the cost for Primary Authority services and the contact email addresses are listed below. Please note that charges are reviewed annually.

5.2 There is a fixed minimum contract of 60 hours per annum.

5.3 Payment is made annually upon commencement of the agreement

5.4 Full details are available upon request.

6 Who to contact to discuss Primary Authority

6.1 Organisations can choose from a number of authorities in order to engage in the Primary Authority. This need not be the one nearest to the head office, or in the county where there is the greatest number of premises. Primary Authority is a partnership arrangement so time should be taken to ensure that the enforcing authority chosen to partner with is the right one for the organisation.

6.2 Further information on partnership working with London Fire Brigade can be sought by emailing FSRpartnerships@london-fire.gov.uk for fire safety partnerships or petroleum.paps@london-fire.gov.uk for petroleum partnerships.. Information is also available on our website https://www.london-fire.gov.uk/about-us/services-and-facilities/services-we-offer/primary-authority-partnership-scheme/

6.3 Information on Primary Authority is available at:

https://www.gov.uk/government/publications/primary-authority-overview

https://www.gov.uk/government/organisations/regulatory-delivery

https://primaryauthorityregister.info

LONDON FIRE BRIGADE

FIRE SAFETY GUIDANCE NOTE

Number:

Foam inlet systems

GN82

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) in London.

This Guidance Note covers the provision and location of foam inlet adaptors and boxes where a proposed new building is to contain oil-fired boilers or oil storage tanks. It is primarily aimed at architects, building designers and developers for use in the planning of new buildings but may be useful to anyone who is responsible for the adequate provision of firefighting facilities.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit our web site at http://www.london-fire.gov.uk

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1. Introduction

1.1 As a minimum a foam inlet system consists of a foam inlet box housing a single foam inlet adaptor that is connected to a length of distribution pipework that then terminates in one or more fixed foam pourers or discharge outlets.

1.2 These systems are frequently provided to assist the Fire & Rescue Service (F&RS) in fighting fires involving oil storage tanks or oil-fired boilers that are either below ground level or otherwise inaccessible from outside the risk area without the need to place firefighters at unnecessary risk.

2. Location of foam inlet boxes

2.1 A foam inlet box conforming to BS 5041-5:1974 (see Figure 1) should be provided within an external wall adjacent to a suitable building access point.

Figure 1 – Foam inlet box

2.2 The chosen location should be clear of any openings from which heat, smoke or flames from the risk area can pass.

2.3 The inlet box should also be clearly visible from a location suitable for parking a fire appliances and no more than 18m from this location on a route suitable for laying hose.

2.4 Foam inlet boxes capable of housing up to 3 foam inlet adaptors are available. If more than 3 adaptors are required to cover the oil based risk(s) present within the building then more than one inlet box should be provided.

2.5 Where multiple adaptors or boxes are installed, each adaptor should be clearly marked indicating the specific risk area it covers.

3. Provision of foam inlet adaptors

3.1 A foam inlet adaptor (conforming to BS 336:2010) is a pipe fitting consisting of a tapered orifice at one end and a suitable pipe connection at the other and allows the F&RS to connect their portable foam generating and mixing equipment to the fixed foam inlet system within the building.

3.2 Each adaptor should be connected to a system of foam distribution pipework not exceeding 18m in length to the point of foam discharge and supplying a maximum of 3 foam pourers.

3.3 The distribution pipework route should avoid any sharp bends and be provided with a gentle downward gradient from the inlet location to the point of foam discharge to allow the foam to flow without unnecessary restriction.

3.4 At least one foam adaptor should be provided for every area of 45m^2 or larger housing an oil-fired boiler of 45kW capacity or greater, or an oil storage tank of 2000 litres capacity or greater.

3.5 Where the risk area has a floor in excess of 45m^2, one adaptor per 45m^2 should be provided.

3.6 For risk areas far in excess of 45m^2, a foam inlet system may not be adequate and a fully automatic foam installation may be more appropriate, where any doubt occurs early consultation with the relevant Fire & Rescue Service in strongly advised.

4. Bibliography

4.1 Further guidance may be obtained from the following publications —

AVAILABLE FROM	TITLE
British Standards Institution 389 Chiswick High Road London W4 4AL	BS 336:2010 - Specification for fire hose couplings and ancillary equipment BS 5041-5:1974 -Fire hydrant systems equipment — Part 5: Specification for Boxes for foam inlets and dry riser inlets BS 5306-0:2011 - Fire protection installations and equipment on premises — Part 0: Guide for selection of installed systems and other fire equipment BS5306-1:2006 - Code of practice for fire extinguishing installations and equipment on premises — Part 1: Hose reels and foam inlets

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Consultation process with London Fire Commissioner

GN83

Rev 02, 01 May 2022

Contents

Explanatory Note:

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Guidance Note provides fire safety advice in respect of building consultations made under Building Regulations.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit our web site at http://www.london-fire.gov.uk

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 This guidance has been written specifically with aim of improving the statutory consultation process with London Fire Brigade specifically for consultations received in relation to the Building Regulations 2010. It forms part of our drive to improve the quality of our service.

2 Section One – General process

Submitting a Building Regulations consultation

2.1 All consultations should be sent in hard copy to the following address:

Fire Safety Regulation
London Fire Brigade
169 Union Street
London SE1 0LL

2.2 Each consultation package should be accompanied with a letter clearly detailing the Legislation under which we are being consulted;

- Building Act 1984 – Section 15
- The Building (Approved Inspectors etc.) Regulations 2010 – Regulation 12
- The Order Article 45
- The Order Article 46

2.3 The letter should also provide full address details (including postcode) of the premises being consulted upon and we request that each letter covers one premises and not multiple addresses. Where multiple consultations are being sent in one postal package these should be clearly separated from each other by, for example, an elastic band and have the consultation letter attached.

2.4 The consultation should be accompanied by the Building Control Alliance (BCA) pro-forma consultation document populated with the relevant information. Note: a copy of the pro-forma is attached in Appendix 1 of this guidance.

2.5 The consultation should be accompanied by the Building Control Alliance (BCA) pro-forma consultation document populated with the relevant information. Note: a copy of the pro-forma is attached in Appendix 1 of this guidance.

2.6 Where further information is submitted on an existing consultation the same process should be followed and hard copies are still expected to be sent addressed as above and include the LFB reference number from the previous London Fire Brigade consultation response where available.

NOTE: correspondence should be provided via a building control body (BCB - Local Authority or Approved Inspector) and not provided directly from a third party.

Email correspondence

2.7 At present the only correspondence that will be accepted via email are initial notices, pre-completion notices and final certificates but we ask that these are clearly identified in the subject header of the email and include LFB reference number (where available) as this will assist our administrative process. The email address for these types of correspondence is FSR-AdminSupport@london-fire.gov.uk

2.8 All other correspondence should be sent in hard copy to the above address. This ensures that it is logged on our workload systems and allocated to an available fire safety inspecting officer.

Timescale for a response

2.9 As per 'Building Regulations and Fire Safety Procedural Guidance' we aim to complete a written response within 15 working days. Where this is not possible (which is normally due to the complexity of the consultation) a letter will be sent confirming the likely delay to the consultation.

Response format

2.10 Our response will include comments made in respect of the following areas;

- Matters considered under the Building Regulations
- Matters relating to fire precautions that will be necessary to meet their duties under The Order once the building is in use.
- Matters which have to be complied with to meet other Legislation other than Building Regulations
- Matters which are advisory and not enforceable under Legislation

3 Section Two – Consultation submission checklist

3.1 In order to assist in making the Building Regulations consultation process as efficient and effective as possible, formal submissions made to the LFB should consist of the following:

3.2 For consultations relating to simple (code compliant) works, it would be expected as a minimum that these documents/ items are provided by the building control body in one collated submission to the London Fire Brigade.:

- A copy of the formal building control body consultation letter and completed Building Control Alliance consultation pro-forma document. This should provide commentary from the building control body confirming their assessment of the proposed scheme, and if conditional approval is to be provided, confirmation of what fire safety conditions the building control body is proposing to apply. **Consultations should not be sent where the building control body are not satisfied with the proposals**.
- A legible set of scaled current plans relating to the proposed building works, that clearly show the fire safety arrangements being implemented. These plans should ideally be no smaller than A3 size. Elevations and site plans showing brigade access will be required for consideration of B5 access proposals.

- Whether on plan or in writing, confirmation of the passive and active fire precautions being provided in order to demonstrate compliance with the functional fire safety requirements of the Building Regulations.

3.3 For complex submissions or where fire engineered solutions are being applied there will be an internal referral to the LFB's Fire Engineering Group. It would be expected that the following materials are provided in the same collated submission:

- A copy of the formal building control body consultation letter and completed Building Control Alliance consultation pro-forma document. This should provide commentary from the building control body confirming their assessment of the proposed scheme, and if conditional approval is to be provided, confirmation of what fire safety conditions the building control body is proposing to apply. **Consultations should not be sent where the building control body are not satisfied with the proposals**.
- A legible set of scaled current plans relating to the proposed building works, that clearly show the fire safety arrangements being implemented. These plans should ideally be no smaller than A3 size. Elevations and site plans showing brigade access will be required for consideration of B5 access proposals.
- Whether on plan or in writing, confirmation of the passive and active fire precautions being provided in order to demonstrate compliance with the functional fire safety requirements of the Building Regulations.
- Additional commentary from the relevant building control body confirming their assessment of any fire engineered solutions being applied.
- A copy of any fire strategy document and/ or technical notes being used to justify the proposed scheme.
- Where computer modelling (for example, CFD analysis, evacuation modelling, structural fire engineering) is being relied upon as part of the proposed design scheme, then the supporting modelling report should be provided. If the computer models have been completed using Fire Dynamics Simulator (FDS), Pyrosim, or Smartfire software then the relevant input/output computer files should be supplied on a suitable portable media device (CD/DVD, USB, HDD) to this LFB for review.
- Modelling data should be provided along with evidence that the building control body (or their third party reviewer's) have assessed and agreed the analysis. We would request this information as part of the consultation package so that it can be considered as part of our review.
- Where complex active fire safety systems, e.g.: mechanical smoke ventilation, are being proposed, design and equipment specification details should be provided, demonstrating how they are fit for purpose in the context of the specific project in question.

3.4 By providing the above items where appropriate, the LFB will be much better placed to efficiently review and process formal Building Regulations consultations received. We will continue to develop other initiatives internally to help improve response letter times, and will continue to keep all building control bodies informed of any further changes via our regular engagement with ACAI and LDSA fire committees.

4 Section Three – Pre-consultation meetings

4.1 For certain projects, early consultation with London Fire Brigade during the design development stage, particularly in relation to non-standard design approaches to fire service access arrangements or complex fire engineered solutions, is considered beneficial to all stakeholders on a project (including ourselves). Therefore we will consider attending such meetings where possible/ appropriate dependent on available resources.

4.2 Any requests for pre-consultation meetings should be forwarded to the local fire safety team leader for their consideration and should be received via the appointed building control body (BCB). This includes consultations where the LFB's fire engineering group may be involved as the local team retain the overall lead on these projects. The local fire safety team will contact fire engineering group if their

involvement is needed. Requests should be sent to the local fire safety team leader at least 4 weeks in advance of any proposed meeting date (albeit it should be noted that this does not guarantee attendance of the LFB for that particular date; alternatives will be offered if we cannot attend).

NOTE: It is our expectation that the appointed BCB will also attend any meeting and it is unlikely that we will be able to fulfil a meeting request where a BCB has not been appointed on the scheme.

4.3 In order for pre-consultation meetings to be constructive for all parties involved, we please request that the following information is provided when approaching the LFB in order for requests to be dealt with efficiently:

- Confirmation that the project in question does indeed contain aspects of complex fire service access arrangements and/or complex fire engineering and what these are specifically.
- Confirmation of what documents/ materials will be circulated pre-meeting, and how these will be made available. Dependent on the complexity of the issue, a reasonable review period of any materials sent prior to any meeting may need to be agreed between parties.
- Confirmation of the proposed meeting agenda should be confirmed well in advance of the meeting date, it should also be confirmed that formal meeting minutes will be taken by the BCB or a nominated member of the design team and circulated post-meeting for agreement by all parties. Please note that we may not be able to discuss items that have not been included on the agenda so please be specific about what items you would like to discuss.
- The agreed formal meeting minutes should ideally form part of the strategy document or be included in the consultation package provided at formal consultation stage so that any earlier agreements are documented and can be considered as part of the review process.

4.4 Once a meeting is agreed upon then it will be the responsibility of the requesting party to send an outlook diary appointment with the following information;

- Date, time and location of the meeting (London Fire Brigade may be able to host at their headquarters or a local office by agreement)
- Proposed attendees

4.5 Depending upon available resources, we may not be able to fulfil multiple meeting requests on the same project, thus we advise that meeting requests are submitted to the LFB only when the project design team and building control body are in a position to discuss all of the relevant fire engineering issues at one meeting (rather than a piecemeal approach).

4.6 An alternative approach is to request a involvement in a formal Qualitative Design Review (QDR) in line with PD7974-1 which generally relates to more complex or larger scale projects. The process for requesting LFB involvement in a QDR should follow the guidelines above but in addition we would request details on the estimated frequency and length of the meetings and we will then discuss the detailed arrangements.

4.7 Please note that the LFB may charge for pre consultation discussions on a cost recovery basis and information on how charges will be applied will be provided when arranging the meeting.

4.8 Information about who will be invoiced should be provided at the time of arranging the meeting. This should include contact details and any unique reference number etc. Invoices should be paid within 28 days.

5 Section Four – Contacts

5.1 Each area in London has a team responsible for enforcing The Order.

5.2 We divide London into four areas covered by a number of Fire Safety Inspecting Officers. An Area Fire Safety manager is responsible for each area, supported by Fire Safety Team Leaders and a central team of administrative staff.

5.3 There are specialist teams responsible for enforcing petroleum legislation and dealing with sub-surface railway/transport premises.

5.4 If you have any queries about the progress of a consultation, the implementation of The Order or are concerned about a fire risk then please call 020 8555 1200 X89171

Making London the Safest Global City

Appendix 1 – Consultation pro-forma document

FIRE OFFICER CONSULTATION

Project Ref

Description

Location

Building control body Fire Authority

Applicant Agent

1.0 Project Details		
Type of Consultation	Preliminary Design Stage Advice ☐	Statutory Consultation ☐
Site Address		
Scope of Works		
Project Reference		

2.0 Project Information			
Type of Building Work	New Building ☐ Extension ☐ Material Alteration ☐ Change of Use ☐		
Purpose Group – *(please state all)*			
Approx. Floor Area (m^2) *(diagram C3)*		Height to Top Floor (m) *(diagram C6)*	
Number of Storeys *(diagram C5)*		Number of Basement Storeys *(diagram C5)*	
Fire resistance of elements of structure			
Complexity of Scheme	Simple *(code compliant)* ☐	Complex *(engineered solutions)* ☐	
Type of Construction	Timber Framed ☐ Concrete / Steel / Brick ☐ Prefabricated ☐ Other ☐ *(Please specify)*		

3.0 Fire Suppression, Smoke Control, Fire Detection

Is a Fire Suppression Installation Proposed?	Yes ☐ No ☐
Type of Installation	Sprinkler ☐ Watermist ☐ Gas ☐ Other *(detail below)* ☐
Details of 'Other' Fire Suppression System *(where applicable)*	
Automatic Fire Detection?	Yes ☐ No ☐
Details of smoke control provision *(Please specify)*	
Are any of the above 'Compensatory' or 'Trade-Off' features? *Please provide further comments in Section 6.0*	Yes ☐ No ☐

4.0 Access and Facilities for Fire-Fighting

Are facilities in accordance with Regulation B5? *If no please provide further comments in Section 6.0*	Yes ☐ No ☐

5.0 Building Control Bodies Assessment

Documents used in the assessment	AD B ☐ BS9991 ☐ BS9999 ☐ BS7974 ☐ BB100 ☐ HTM ☐ Other ☐
Do the works comply with guidance in Approved Document B or British Standards (prescriptive solutions)	Yes ☐ No ☐
Has a performance based (fire engineered) solution been adopted	Yes ☐ No ☐
Has a quantitative analysis (e.g. CFD Modelling, structural fire engineering) enclosed with this consultation already been reviewed?	Yes ☐ No ☐
If 'Yes', Please provide reviewer's comments of the quantitative analysis, together with any other comments.	

6.0 Comments from the Building Control Body

The BCB confirms that the details submitted have been reviewed in accordance with the Building Regulations and can confirm that:

☐ The submission is considered satisfactory

☐ The submission is considered satisfactory subject to additional information as noted below:

Additional details requested:

Building Control Comments

No.	Item

7.0 List of Supplied Information incl drawing schedule

Drawing Schedule

Title	*Reference*	*Version*

8.0 List of Additional Information to Follow (e.g. CFD modelling discs, third party review, additional drawings

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Fires in Communal Areas - Information for External Partners

GN84

Version: 3, 01 August 2023

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005, as amended by the Fire Safety Act 2021, (The Order) in London.

This Guidance Note, published by the Commissioner's Fire Investigation Unit provides information for both responsible persons, residents, and other interested parties on the danger of fires in the communal areas of multi-occupied residential buildings.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please telephone or visit your local Fire Safety Office (telephone 020 8555 1200 and ask for your nearest Fire Safety Office) or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the LFB Prevention and Protection department; to show how relatively small fires in communal areas can rapidly develop, put the residents in danger, cause significant damage and result in a major cost to the housing provider/insurer. In London, during 2022, there were 281 fires that involved a communal area.

1.2 Although fire safety within communal areas has improved over the years, there remains concern with the storage of combustible items in these areas. Of particular concern is the storage and charging of electric bikes and scooters.

1.3 The economic cost of fire can be hard to appreciate. Table 11 in the DCLG report (3/2011 – The economic cost of fire, estimates for 2008) cited the average cost of fire in a domestic dwelling as £48,092 in London. When the potential costs of mass displacement, re-housing and repairs are factored in, as well as inflation, this figure could prove to be a conservative estimate.

2 Summary of incidents

2.1 All common areas of multi-occupied residential buildings are subject to the Regulatory Reform (Fire Safety) Order 2005 (as amended) and the Fire Safety (England) Regulations 2022. These require the Responsible Person to take general fire precautions to keep occupants safe from fire. Failure to comply with fire safety legislation can result in enforcement action being taken against the Responsible Person, and possible prosecution proceedings where occupants have been exposed to the risk of death or serious injury in the event of a fire.

2.2 Over recent years, the Fire Investigation Team has attended a range of incidents where stored items such as prams or discarded/unwanted items such as household furnishings or rubbish etc. have been involved in a fire. In recent years the storage of e-bikes, e-scooters and the like have increased the number and intensity of fires. Case studies 1-4 below, describe fires involving these Electronic Powered Personal Vehicles (EPPV).

2.3 In other cases, the cause of these fires has often been arson. In one recent case, a serial arsonist was 'at work' for over four years in different blocks in a borough. The fires are made worse due to the materials being burnt, as there are often plastics and synthetic materials which create high volumes of poisonous and acrid smoke.

3 Taking steps to prevent this problem

3.1 It is recognised that the storage of items in communal areas is a problem that can be hard to monitor and resolve. However, this document is put forward to generate awareness and guidance to motivate work to mitigate the risk.

3.2 As many communal areas are used for escape purposes in case of fire, these should be free from combustible materials and obstructions. This would ensure limited ignition sources and sources of fuel. The Home Office guidance on fire safety in purpose-built blocks of flats guide, Part E expands on these issues. It recommends either a managed or zero tolerance approach to storage in these areas because of the risk to persons regarding being able to escape, the risk of fire in common areas and the subsequent risk of death or injury from fire. The most appropriate approach to take will depend upon the specific risks and circumstances within your building.

3.3 This approach is also appropriate to any shared accommodation, including flats, sheltered accommodation, houses of multiple occupation (HMOs), bedsits etc., which have previously been converted from a house or other type of use.

4 What am I required to do as a responsible person or resident?

What am I required to do as a responsible person?

4.1 The management of common parts and escape routes is essential to ensure occupants can escape safely from the premises in the event of a fire.

4.2 The Regulatory Reform (fire safety) Order (as amended) places a responsibility on the person in control of a premises, known as the "Responsible Person" to:

- Carry out a fire risk assessment which must focus on the safety in case of fire of all persons lawfully on the premises.
- Consider persons at special risk, such as disabled people and children.

4.3 The fire risk assessment must consider the means of escape in event of fire. These means of escape must be:

- Kept clear of combustibles and obstructions.
- Be checked on a regular basis to ensure this is the case.

4.4 These actions will reduce the potential for accidental fires to start and it also significantly reduces the threat of deliberate fires.

4.5 Where necessary it may be required to enforce covenants or tenants' agreements.

4.6 The Fire Safety (England) Regulations 2022 require the Responsible Person to provide fire safety instructions to residents and display these instructions clearly in their building's communal areas (or any conspicuous part of the building) and share directly with residents when they move into the building.

4.7 The Equality Act 2010 (the '2010' Act) has a provision to prevent indirect discrimination based on relevant protected characteristics, such as sex, age, or disability. However, the '2010' Act does allow such indirect discrimination where it is shown to be a "proportionate means of achieving a legitimate aim". Fire safety in multi-occupied residential buildings can be considered as a legitimate aim meaning the 2010 Act does not specifically allow for the storage of items such as prams and/or mobility scooters in the common areas nor does it supersede the requirements of fire safety legislation for managing fire risk. The storage of any items in the common parts must be

considered as part of the fire risk assessment and detailed in any fire safety policies for the premises.

4.8 For further information on the application on the Equalities Act 2010 in relation to the common parts of multi-occupied residential buildings specialist legal advice should be sought.

What am I required to do as a resident?

4.9 Your actions should not hinder the landlord in fulfilling their requirements under the Regulatory Reform (Fire Safety) Order (as amended) to maintain and manage the means of escape and keep common areas free from combustibles and obstructions.

4.10 It is essential that escape routes are kept completely clear of items of furniture, prams, buggies, rubbish, clothes drying facilities, bicycles etc.

4.11 Nothing should be allowed to accumulate in the escape route that would hinder the safe evacuation of residents and visitors in the event of a fire.

4.12 Prior to any items being stored in the escape routes, agreement should be sought through the landlord and the fire risk assessment reviewed to assess suitability. Not doing so could result in lease and/or tenancy being enforced up to and including the agreement being revoked by the courts.

4.13 Check your home's safe using our simple Home Fire Safety Checker tool – click here to access.

4.14 Our tool allows you to carry out a thorough check of your home in only a few minutes. It's simple and practical – giving you specific fire safety advice for your family and your home.

5 Case study examples

Example 1 – Electric bike and associated lithium-ion battery pack fire in communal hallway.

5.1 Three fire engines attended a fire which occurred in a mid-terraced shop and dwellings of three floors. Hard wired smoke detectors were fitted to the flats and common areas. The shop had a single entrance at street level. The residential flats had a single communal entrance at street level that opened to a hallway. Two doors led off the hallway, one to a ground floor flat, and one that opened to a staircase that accessed a flat which occupied the first and second floors.

5.2 The fire was discovered, and the fire brigade called when a resident heard the lithium-ion batteries of their converted e-bike fail and catch fire.

5.3 On arrival the fire brigade found the hallway smoke logged and the battery pack of the e-bike on the floor smoking. Firefighters removed the bike to the street (Seen in image right) and immersed the batteries in a bucket of water. The fire damaged the hallway, as seen in the images above.

5.4 Two adult females and one adult male were rescued from a flat roof at the rear of the property. One adult male and one adult female were rescued from the rear garden, but luckily, there were no reported injuries at this incident.

5.5 Fire investigation attended the scene, the cause of this fire has been recorded as the failure of lithium-ion batteries.

5.6 A Senior Fire Safety Officer attended the scene and found minor fire safety issues around fire doors, escape route, fire safety management and detection and warning – factors which could potentially have increased the risk to residents had the fire been more severe.

Example 2 – Electric bike fire in hallway of an HMO.

5.7 A fire occurred in a purpose-built block of flats of three floors.

5.8 The affected flat was on the first floor and was used as a house of Multiple Occupation. It contained three lockable bedrooms, a shared bathroom and kitchen, all accessed from one hallway.

5.9 The fire was discovered by the occupants when a smoke alarm actuated, and they could hear the fire. On opening their bedroom door, they found a fire in the hallway (as seen in the images). Some of the occupants then escaped out of the first-floor bedroom window with the remaining occupants leaving by the front door. On arrival firefighters saw smoke issuing from a side window and a group of people standing in the street. Firefighters extinguished the fire and searched the property.

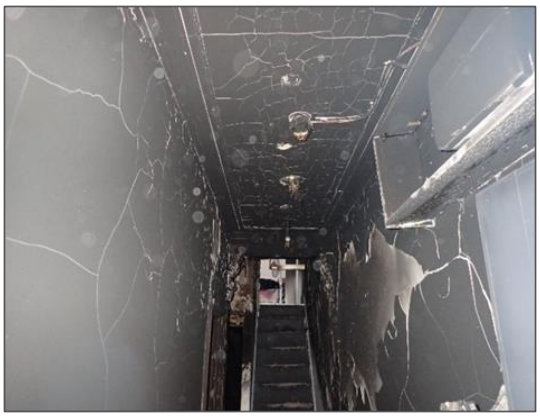
5.10 The flat sustained significant damage by fire heat and smoke. Four adult males were removed to hospital suffering smoke inhalation with one further adult male treated on scene. Fire investigation attended the scene, the cause of this fire has been recorded as accidental due to failure of lithium-ion batteries from an e-bike on charge. A Senior Fire Safety Officer attended the scene.

Example 3 – Electric bike fire in the communal hallway of a converted house into an HMO.

5.11 Four fire engines attended a fire which occurred in an extended end of terraced house of two floors and a loft conversion. The house had been converted into 10 individual bedrooms, with shared communal facilities. The property had hard wired smoke detectors fitted to the common areas and the flats; several detector heads had been removed from the bedrooms.

5.12 The fire was discovered when residents smelled burning. Residents were unable to leave the house via the front door due to smoke logging in the hallway, seven residents escaped by kicking out the windows.

5.13 On arrival the fire brigade found two residents on the canopy of the bay window and rescued them using a short extension ladder and extinguished the fire. The ground and first floor were significantly damaged by fire, as seen in the images.



5.14 Four adult males suffered smoke inhalation and injuries from escaping via the first-floor windows. Three adults were taken to hospital while one was discharged at the scene, 10 residents needed to be rehoused.

5.15 Fire investigation attended the scene, the origin of the fire was located around an e-bike. A four-gang extension lead and transformer from a charger were also located in this area and were sampled by fire investigation.

5.16 A Senior Fire Safety Officer attended the scene and found fire safety issues.

Example 4 – Small buggy set alight in an entrance lobby of a modern low-rise block of flats.

5.17 The image to the right shows a small buggy which was set alight in an entrance area to a low-rise residential block of flats. There was apparently very little additional fuel loading e.g. no toys and extra blankets.

5.18 The damage to the ceiling, plaster work, décor and electrics in the area would have resulted in a significant repair cost. It was lucky that no one came out of their flats during the fire, as there would have been significant amounts of toxic smoke and hot fire gases.

5.19 In another incident, a baby buggy was set alight on the ground floor of a common stairway area. Smoke spread up the stairway cutting of the single staircase escape from the upper floors.

5.20 The occupants were advised to stay in their flats until the fire was extinguished, but 21 persons needed to be assisted to the ground floor by the Brigade. Two people escaped from the upper floor before arrival of the Brigade suffering from smoke inhalation and needed medical attention in hospital.

5.21 There was a history of problems relating to leaving the buggy on the ground floor, as the owner had difficulties carrying it up to top floor flat.

Example 5 – Small cupboard in internal hallway in a high-rise block of flats. Domestic items belonging to one of the residents were stored in it.

5.22 The three images on this example relate to a fire which occurred in a common lobby shared by four flats on the second floor of a high-rise block. The seat of the fire was within a small cupboard (approximately 30-50cm wide) used to house services such as drainage and telephone cables. The cupboard had been filed with old clothes and electrical items (*example image left*).

5.23 One door to the lobby had been wedged open leading to the stairwell becoming heavily smoke logged.

5.24 Several occupants of flats on the upper floors called the Fire Brigade concerned that they were trapped and received fire survival guidance from Brigade control.

5.25 The image to the right shows the cupboard with some fire debris removed. There was not a huge amount of material involved, considering the extensive smoke damage, as seen in the image below.

5.26 The fire was extinguished by breathing apparatus crews using a single main jet.

5.27 The fire was confined to the area of origin with the remainder of the lobby and corridor being damaged by heat and smoke.

5.28 In this case, there was significant life risk, but thankfully there were no casualties.

Example 6 – Papers & stored goods in a mixed-use semi-detached building of three floors.

5.29 In this next example, the fire occurred in an interlinked semi- detached building of three floors, circa 1900s. The ground floor was used as offices, with the adjoining property's ground floor being used as a restaurant. The two properties were connected at ground and first floor levels. The upper floors were used as a house of multiple occupation. The building was undergoing a refurbishment. It is believed that there were nine people living in the building.

5.30 The fire started in the hallway on the ground floor offices at the base of the internal staircase to the flats (as shown in image to the left) and damaged approximately 50% of the ground floor. The remainder of the ground floor was damaged by heat and smoke, with the rest of the building damaged by smoke. The fire was attended by four fire engines.

5.31 There were seven people in the building at the time of the fire. All were unable to escape from the building. Two were rescued from a first-floor window by a road contractor, who put the bucket of his JCB up to the window prior to the arrival of the Brigade. The other five were rescued from a second-floor window by the Brigade with a ladder (as seen in image to the right, with Brigade ladder in situ). All seven were removed to hospital by the London Ambulance Service, suffering from smoke inhalation.

5.32 All seven occupants had to be rehoused. The cause of the fire was believed to be deliberate.

Example 7 – Mattress and chair in lobby area of high-rise block of 10 floors.

5.33 This fire occurred in the 6th floor communal area of a residential block of 10 floors. The deliberate fire involved two separate areas of fire, a mattress in the lift lobby and an upholstered chair in the adjacent stairwell within the same firefighting shaft.

5.34 There was very little lateral smoke spread, however there was considerable smoke damage to the stairway between the 6th floor and the 10th (top) floor. Six fire engines and a turntable ladder attended.

5.35 A 30-year-old female and a four year old child were trapped in a flat at 6th floor level and received fire survival guidance from Brigade control. Both were rescued by a Breathing Apparatus crew and subsequently examined at the scene by the Ambulance Service and treated for smoke inhalation.

Image left: View of communal area with the remains of the mattress in foreground. Note damage to ceiling and walls, doors and wall panels.

Image right: View from other side of doors. Note extensive damage to ceiling, walls, doors and wall panels. Light fitting and electrical wiring indicated by red arrow also damaged by fire.

Example 8 – Papers on a small sofa which was left in a ground floor communal area of a low-rise block of flats.

5.36 Two fire engines attended this fire in the communal hallway of flats in a low-rise residential building. Occupants were unable to escape due to the location of the fire and smoke spread within the building.

5.37 The fire is believed to be caused by the careless disposal of smoking materials into paper (envelopes magazines and cardboard) which were on top of an abandoned two seat sofa in the communal area of the ground floor stairwell (image below), the sofa was only partially damaged, however:

- A one-year-old child needed to be rescued from a 2nd floor window using a ladder.
- Two children and one adult female were rescued from a first-floor window using a short extension ladder.
- Two adult males and one adult female were rescued from the ground floor by crews wearing breathing apparatus.
- One adult male and one adult female were rescued from internal staircase by crews wearing breathing apparatus.
- One adult male and one adult female were rescued by crews wearing breathing apparatus from the first floor and led to safety via the internal staircase.
- Two children and one adult were removed to hospital suffering from the effects of smoke inhalation.

5.38 Crews wearing breathing apparatus extinguished the fire using main and hose reel jets. 25% of the communal stairwell from ground to second floor was damaged by
fire.

5.39 The image (to right) shows the area of origin where the sofa was. Note that the structural damage was not particularly severe in this case, but the smoke travel resulted in the rescues and injuries detailed above.

Example 9 – Motor scooter (similar fuel loading to mobility scooter) left in ground floor entrance lobby of low-rise block of flats.

5.40 The following example involved a small motor scooter in a communal area. What is notable is the extensive damage not only from smoke, but also from the heat. There was apparently relatively little petrol in the scooter; most of the fuel loading was from the plastic body panelling.

entrance.

Note light fittings have melted

Clear burn pattern behind the scooter
Note: rear tyre is still intact

Stairwell opposite the scooter. Note: spalled plaster from the stairwell has fallen onto the stairs

Image to left: View upstairs showing extensive heat and smoke damage.

6 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
The Stationery Office (Mail, Telephone, Fax & Internet Orders) TSO Orders/Post Cash Dept PO Box 29 Norwich NR3 1GN Telephone: 0870 600 5522 Fax orders: 0870 600 5533 Web: http://www.tso.co.uk	Fire safety in purpose-built blocks of flats https://www.gov.uk/government/publications/fire-safety-in-purpose-built-blocks-of-flats

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Sleepovers in non-domestic premises

GN85

Rev 4, 01 October 2023

Contents

Explanatory Note:

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order'.

This Guidance Note gives advice for the Responsible Person on fire safety standards when considering Sleepovers in indoor premises in schools, halls etc.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Prevention and Protection (Fire Safety) Department, London Fire Brigade (LFB).

1.2 This guidance note has been prepared with the objective of informing and educating the Responsible Person (RP) (the term detailed in The Order, about the fire safety standards that LFB staff will expect providers to achieve. The safety and suitability of premises, environment, and equipment, including fire safety advice needs to be carefully considered for the protection of children, staff and other adults involved in the "sleepover".

1.3 It is in the interests of the RP that a high standard of fire safety is maintained in any premises that are used for purposes other than the design considerations. This does not necessarily mean that onerous fire safety measures need be taken but that those measures need to be adequate, appropriate, and proportionate. In order to do this, an assessment of the risks from fire in the premises needs to be made. Once identified, the hazards and any risks posed should ideally be removed or reduced to an acceptable level. Suitable and sufficient arrangements for early detection of fire should be in place and once the alarm is given, safe evacuation will depend upon a well-rehearsed emergency evacuation plan. There should also be arrangements in place for fire safety equipment to be provided and for trained staff to be present in case of an emergency.

2 Fire Risk Assessment (FRA)

2.1 The premises the RP intends to use may be subject to fire safety requirements under The Order. This legislation requires that the RP must carry out an 'Assessment of Risks from Fire' and take general fire precautions. Where a fire safety risk assessment (FRA) has already been completed and changes are intended to be made, such as using the facilities for a 'sleepover', then the assessment will require a review as detailed in the 5 Steps to Risk Assessment included in the Guidance issued by Government under Article 50 of The Order.

2.2 LFB Guidance Note No.66 outlines the actions required by an RP to comply with The Order. In particular, the Guidance Note provides advice on the requirement to carry out an FRA and formulate an Evacuation strategy (ES) which includes an emergency evacuation plan. Where necessary, Personal Emergency Evacuation Plans (PEEP) may also be required as part of the ES. It should be read in conjunction with the appropriate Home Office guide for the premises (see section 4 Bibliography). If the premises forms part of a larger premises, or the premises are used

for different purposes at different times, you will need to co-ordinate planning with other users/occupiers. In this regard the RP will need to see any existing FRA and EEP for the premises and consider how it relates to the proposed 'sleepover' It should be noted that officers of the LFB cannot undertake FRAs but will provide fire safety advice when consulted.

2.3 If the premises are licensed, registered, or certified or more than 5 persons are employed, the RP will need to record the findings of the FRA. Any actions required will need to be undertaken prior to the premises being used for the 'sleepover'.

2.4 In the case of educational facilities, an Ofsted inspector may need to be informed or need to see and discuss with you the FRA and EEP including any Personal Emergency Evacuation Plans (PEEPS) for the proposed event. (PEEPS will be required for any persons with disabilities or any additional needs, such as expectant mothers or those with a special educational need).

2.5 Where any electric bikes, scooters or wheelchairs, including mobility scooters are used for people then they should be stored outside. If charging of these items is to take place, care should be taken that the charging leads are suitable for the vehicle and that a proper charging regime is followed. Charging should not take place near exits or in corridors that lead to exits. See Charging electric bike and electric scooter lithium batteries | London Fire Brigade (london-fire.gov.uk) for more information.

2.6 Where an FRA already exists for the premises, it should be reviewed. This review should focus on the issues that relate to the childcare provision including the following:

(a) **The location of the proposed 'sleepover' within the building**. Ideally, it should be situated on the ground floor with an exit direct to the outside of the building. Where this is not possible it should be as near to the ground floor as possible.

(b) **The layout of the 'sleepover'**. This should be conducive to safe escape with any cooking or heating facility being sited remote from exits.

(c) **Means of Escape**. There should be adequate means of escape from the premises. Fire doors protecting the escape routes should be effectively self-closing and fire resisting. Doors across escape routes and at exits should be easily opened without the need for a key. Escape routes should be free from obstruction and adequately lit. There should be adequate signage indicating escape routes and particularly alternative routes.

(d) **Early detection and alarm of fire**. Additional automatic fire detection may be required to ensure adequate early detection and alarm of fire. If a two-stage fire alarm is installed the evacuation of any children should commence on the first stage alert. This may include visual warnings indicators for disabled people.

(e) **Emergency evacuation plan and the evacuation strategy**. Sufficient numbers of trained staff should be available to enable a safe and efficient evacuation, taking into account the need to assist or carry children. Parents/guardians should be advised of the procedures including the location of the designated assembly point.

(f) Where there is already a standard evacuation process in place, this should be followed as near as possible to ensure familiarity.

Where the first language of the children taking part is not English, measures will need to be taken to ensure that the children understand what to do in case of an emergency.

(g) **Staff training**. This should include knowing the location of, and how to use, any fire extinguisher or fire blanket provided. The importance of keeping fire doors shut. The means

of raising the alarm, the EEP, external assembly point and how to call the emergency services. **However, the most important issue is to ensure the safe evacuation of all persons**

(h) **Fire Safety Procedures and Notices**. There should be written procedures and notices providing information to staff and visitors about the ES, EEP and PEEP. Where invacuation is a consideration staff should ensure that they and the other people in attendance follow the details in the ES.

3 Reviewing the Arrangements for Overnight Care

3.1 Fire risks are potentially greater at night when people are asleep. In addition to the items mentioned above, you will therefore need to ensure that:

- In all cases where a "sleepover" is being considered, the FRA must be reviewed to ensure that the fire protection provisions are considered suitable for such an event.
- The means of escape can be safely used at all times, loose items such as shoes and bags should also be kept out of the way of the escape routes.
- The RP should maintain an adequate balance between security and safety. Exits routes including windows and doors must be easily opened in an emergency.
- The RP may need to review the door furniture to ensure that all door handles, or opening devices are able to be used by all person's present.
- Additional emergency escape lighting and exit signage may be required. Subject to the fire risk assessment for the premises and its use this may be battery operated floor lights or handheld torches.
- There is adequate automatic fire detection to ensure early detection of a fire including coverage of the areas used for overnight care and the escape routes from it. This may include the provision of visual devices for people with impaired hearing.
- A night-time routine should be followed ensuring that gas and electrical appliances are turned off and that where smoking/vaping is allowed outside of the premises all smoking materials are safely extinguished. All fire doors should be closed including any that have electronic hold open devices.
- Each member of staff should have a clear understanding of the emergency procedures and their own responsibilities, be trained in the plan, and be reassured that the plan operates by undertaking that training in exercises and/or drills.
- Sufficient trained staff are available to ensure a safe and efficient evacuation considering the need to assist children in accordance with the premises risk assessment.
- Where disabled people are in attendance, PEEPs, should be undertaken and be included within the overall EEP for the premises. The same should apply for those with a special educational need, where their need requires additional support or assistance.
- Where smoking is allowed outside of the premises, facilities should be available for people that smoke, and arrangements made for the disposal of smoking materials.

- The use of naked flames for candles or other night lights should be banned due to the inherent dangers in this situation, It is preferable to utilise battery operated tea lights. Indoor barbecues should not be considered, and any cooking should be undertaken or supervised by trained staff.

- Where children, staff and parents/guardians introduce further electrical items into the premises, such as mobile phones and tablets the electrical installation should be checked. This is to ensure that it can accommodate any additional electrical use without the need for extension leads and cables.

- In case of an incident, pre-planning is vital and in places where there is normally a daytime risk and is now a night-time risk, notices indicating this should be positioned on entrance doors to alert emergency services to this fact.

- A complete roll of names of all the persons present should be made and kept in a secure place. If an evacuation is required, then this document should be checked to ascertain if all persons have evacuated.

- Furniture, furnishings, and curtains should be inherently non- flammable and where these have been subject to a cleaning regime in the past, they must have been cleaned in accordance with the manufacturer's instructions.

- There needs to be adequate lighting for children and adults to access toilet facilities within the hours of darkness without the use of any naked flame devices.

- Receptacles for waste products should be made available for use and emptied where necessary into outside waste storage facilities.

- Premises owners should ensure that the property insurers have been informed of the event and that their insurance cover includes any sleepover occurrence.

4 Bibliography

4.1 Responsible Persons should be advised that further information or advice may be sought from the local Fire Safety Office or our website: www.london-fire.gov.uk

4.2 Further guidance may be obtained from the following publications:

AVAILABLE FROM	TITLE
HM Government Building Bulletin 100: design for fire safety in schools - GOV.UK (www.gov.uk)	Building Bulletin 100: Design for fire safety in schools
The Stationery Office (Mail, Telephone, Fax & Internet Orders) TSO Orders/Post Cash Dept PO Box 29 Norwich NR3 1GN	Fire safety risk assessment in offices and shops ISBN-13: 978 1 85112 815 0 Fire safety risk assessment factories and warehouses ISBN-13: 978 1 85112 816 7 Fire safety risk assessment premises providing

Telephone: 0870 600 5522 Fax orders: 0870 600 5533 Web: www.tso.co.uk	sleeping accommodation ISBN-13: 978 1 85112 817 4 Fire safety risk assessment residential care premises ISBN-13: 978 1 85112 818 1 Fire safety risk assessment educational premises ISBN-13: 978 1 85112 819 8 Fire safety risk assessment small and medium places of assembly ISBN-13: 978 1 85112 820 4 Fire safety risk assessment large places of assembly ISBN-13: 978 1 85112 821 1 Fire safety risk assessment theatres and cinemas ISBN-13: 978 1 85112 822 8 Fire safety risk assessment outdoor events ISBN-13: 978 1 85112 823 5 Fire safety risk assessment healthcare premises ISBN-13: 978 1 85112 824 2 Fire safety risk assessment the transport network ISBN-13: 978 1 85112 825 9 Fire safety risk assessment animal premises and stables ISBN - 978 1 85112 884 6 Fire safety risk assessment - Means of Escape for Disabled People ISBN: 978 1 85112 873 7

The "Fire Safety" guides listed above may also be downloaded free of charge from the Fire Safety Law at Fire safety in the workplace: Fire risk assessments - GOV.UK (www.gov.uk)
The above details are current at the time of preparation of this Guidance Note (see date at foot of last page)

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Catering kitchen extract systems

GN86

Rev 4, October 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Guidance Note provides fire safety advice in respect of Catering kitchen extract systems

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local fire safety office, telephone 020 8555 1200 and ask for the nearest fire safety office, or visit our web site at http://www.london-fire.gov.uk

1 Introduction

1.1 This document has been prepared by the prevention and protection department, London Fire Brigade (LFB).

1.2 The term catering has a dictionary definition of "the business of providing food service at a site such as a hotel, public house, restaurant or any other locations". Where cooking facilities utilise ductwork as part of their kitchen extract system, consideration should be given to the potential impact on some domestic premises.

1.3 Catering kitchen extract systems are designed to collect smoke, steam, grease, cooking odours and fumes from combustion appliances into a canopy, through filters, ductwork, and then be discharged to atmosphere. Therefore, where food is prepared for business purposes in a kitchen and that kitchen is a place of work, it will be subject to The Order.

1.4 LFB fire investigation team (FIT) state that 'by far the most common problem and cause of ducting fires is the lack of proper cleaning and maintenance'. Therefore, any failure to observe a proper cleaning and maintenance regime could potentially result in a fire, affecting the ongoing operations of your business.

2 Matters for consideration

2.1 A kitchen extract system would typically consist of some of the following components:

- Canopy - This can be referred to as the hood or cooking hood, and is where the grease filters are housed.
- Canopy grease filters – The purpose of these is to reduce the amount of grease passing into the ductwork.
- Canopy/extract plenum – This is typically the area immediately behind the grease filter housing and below where the ducting commences.
- Sound attenuators – Internal sound deadening material to allow the fan noise to be absorbed.
- Turning vanes – These may be found at changes of direction within the ducting.
- Extract fan – To create extraction from the canopy an extract fan would be connected to the ductwork.
- Discharge duct – On the exhaust side of the fan a discharge duct would direct extract air out of the building via an outlet.

2.2 All the internal surfaces of the kitchen extract systems are affected by grease and oil deposits and no filter is 100% effective. Grease deposits can, in certain circumstances, ignite with the application of flame, heat, sparks, embers etc. This can then cause rapid fire spread through the ductwork, and can

cause ignition of surrounding materials at various points along the ductwork path, allowing fire spread into the fabric and voids of the building.

2.3 Kitchen extract ductwork travelling outside the kitchen compartment is either constructed from fire rated materials, or a protective material is applied to suitably constructed and supported conventional ductwork. Alternatively, the ductwork runs from the kitchen directly to the outside of the building through a protected shaft containing no other services and with no fire dampers fitted. Ductwork within the kitchen compartment does not have to be fire rated. Maintaining the fire integrity of fire-rated ductwork should be a consideration when installation takes place.

2.4 In accordance with British Standard 476 Part 24 *Fire tests on building materials and structures. Method for determination of the fire resistance of ventilation ducts*, ductwork is tested to ensure that a fire outside the duct does not ignite flammable grease inside or, if the grease itself is already alight, that there is no spread of fire by radiant heat to any adjacent combustible material. The ductwork must also be rated for stability, integrity and insulation for the same period of time as the compartment through which it passes. The ductwork supporting hangers should be capable of supporting the ductwork for not less than the period of time as the compartment through which it passes.

2.5 As part of the fire safety integrity of the premises, the building should be checked to ascertain if kitchen extract ducting systems pass through areas within the building, determining whether a ducting fire would affect the means of escape, and the ability of relevant persons to escape both safely and effectively.

2.6 Access is essential to all interior surfaces of the kitchen extract system and canopy/extract plenum for cleaning and inspection purposes. Access panels should be of sufficient number, quality and size to enable unrestricted access for regular cleaning and inspection of the interior surfaces and in-line components. All panels shall be in accordance with the requirements of the Building and Engineering Services Association (BESA) DW172 *Specification for Kitchen Ventilation Systems*.

2.7 Access panels should be fitted at the side of the ductwork and incorporate quick release catches, sealing gaskets and thermal, acoustic and fire rated insulation properties equal to that of the duct to which they are fitted. Access holes should not be cut into the ductwork, sheet metal should not be fitted to the ductwork with screws and gaffer tape/duct tape.

3 Cleaning

3.1 There are various cleaning methods that cleaning contractors use, and any cleaning method must be capable of meeting the standard for post-clean verification as detailed in the BESA Guide TR19® Grease and/or the National Association of Air Duct Specilaists Guide Part 1: GREASE (Kitchen Extract). It is the responsibility of the premises owner/occupier to facilitate access to any third party premises if any part of the kitchen extract ductwork is located in third party property.

3.2 The frequency of cleaning should be such that grease deposit limits are not exceeded. These limits are measured in microns by using testing methods that are explained in the BESA Guide TR19® Grease. In addition, the National Association of Air Duct Specilaists Guide Part 1: GREASE (Kitchen Extract) details the testing methods for grease extract systems and other important information for business owners regarding grease extract systems. Included within this document are diagrammatic examples of all parts of a dcutwork system.

3.3 Many extraction systems will need a higher frequency of cleaning based on hours in use and the type of usage. For example, kitchens that produce high levels of fried or chargrilled food will produce much higher grease levels than those using less intensive cooking methods such as baking and boiling.

3.4 The canopy and canopy/extract plenum is an area of higher fire risk and consideration should be given to more frequent cleaning in accordance with insurers' requirements. Periodic specialist cleaning

should be accompanied by daily or weekly cleaning of canopies and filters and are typically carried out by the kitchen operator.

3.5 After cleaning the extraction systems, the cleaning contractor should provide the client with a Post-Clean Verification of Cleanliness report. This report shall include the following:

- The system(s) cleaned;
- Pre and post clean measurements;
- Pre and post clean photographic records;
- COSHH data on any chemicals used;
- Recommendations for future cleaning requirements;
- A certificate summarising the cleaning works completed;
- A sketch or schematic of the system indicating access panels and testing locations and clearly highlighting any un-cleaned/inaccessible areas with an explanation as to why the area could not be accessed/cleaned.

4 Catering kitchen extract systems and The Order

4.1 The General Fire Precautions (GFP) of The Order in Article 4 (1) (a) in relation to kitchen extract systems are 'measures to reduce the risk of fire on the premises and the risk of the spread of fire on the premises. Fire safety staff will assess the line of the kitchen extract ductwork through the building, noting whether the entire ductwork has sufficient access panels for cleaning and inspection purposes, and that it is a separate and independent extract system.

4.2 A detailed assessment of catering kitchen extract systems should be contained in the fire risk assessment (FRA) for the premises in accordance with Article 9. The RISC Authority document RC44, *Recommendations for Fire Risk Assessment of Catering Extract Ventilation*, is aimed principally at the person responsible for ensuring that such an assessment is performed. RC44 provides for a risk assessment of extract systems in catering kitchens. All catering kitchen extract systems systems will require annual cleaning as a minimum, unless the fire risk assessment recommends otherwise.

4.3 Any catering kitchen extract measures identified in the FRA, should be actioned for safety purposes.For example, the FRA may highlight that access panels are required in the kitchen extract ducting and the Responsible Person (RP) would be required to plan, organise and control the fitting of the access panels by a competent person.

4.4 Whilst conducting an audit, the fire saftey officer will ask to see post-clean verification of cleanliness records. Absence of cleaning, or an ineffective cleaning regime of catering kitchen extract systems, is a risk of fire, and the risk of the spread of fire on the premises, and could also invalidate commercial liability/property insurance policies. When carrying out an audit following a fire, fire safety staff will determine if any highlighted uncleaned/inaccessible areas contained in the report were dealt with, as a failure to act on these highlighted issues could have increased the risk of fire and exacerbated the spread of fire.

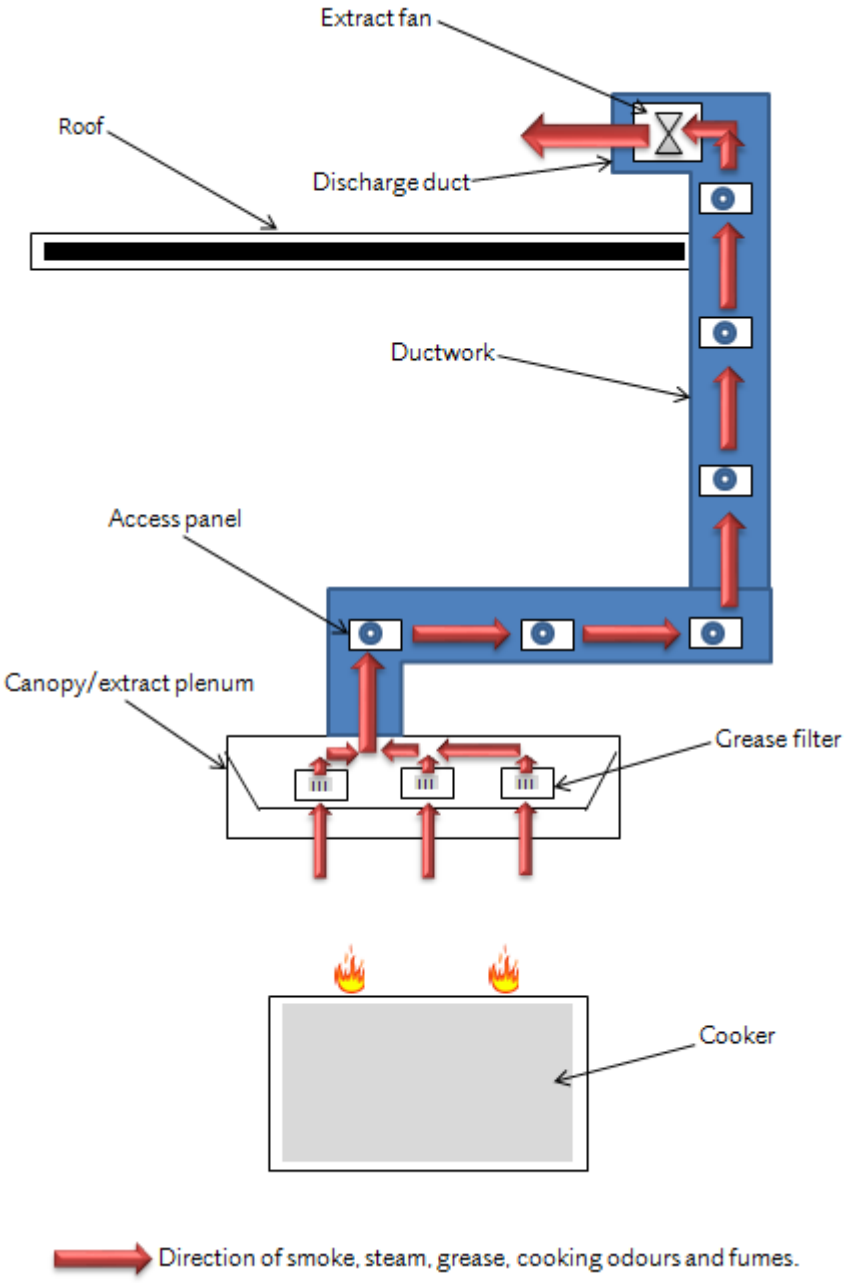
4.5 Some kitchen extract systems will pass through areas of the building where there could be shared cleaning responsibilities e.g. in a shopping mall where the restaurant's extraction system travels into ductwork in an area that the building's landlord/owner/managing agent has responsibility for. It is important that when it comes to the cleaning of the ductwork, there is co-operation and co-ordination between the various RP to ensure that all interior surfaces of the ductwork are cleaned at the same time, and not on different days/dates.

5 Bibliography

AVAILABLE FROM	TITLE
The Building and Engineering Services Association Address: Rotherwick House 3 Thomas More St St Katharine's & Wapping London E1W 1YZ Phone: 020 7313 4900 https://www.thebesa.com/	The Building and Engineering Services Association DW172 Specification for Kitchen Ventilation Systems The Building and Engineering Services Association DW144 Specification for Sheet Metal Ductwork The Building and Engineering Services Association guide to good practice Internal Cleanliness of Ventilation Systems TR19® The Building and Engineering Services Association Guide TR19® Grease The Fire Protection Associationon behalf of RISCAuthorityRC44 Recommendations for fire risk assessment of catering extract ventilation
National Association of Air Duct Specialists UK Registered Office:- 12a Flightway, Dunkeswell, Honiton, Devon, EX14 4RD Tel: 01404 891539 www.naaduk.co.uk Email: admin@naaduk.co.uk	National Association of Air Duct Specialists Edition 1 Part 1: GREASE (Kitchen Extract) Legal Standards and Guidance applicable to the risk management of the fire and grease levels within commercial kitchen extract systems to EC852:2004
British Standards Institution (BSI) Address: 389 Chiswick High Rd, Chiswick, London W4 4AL Phone: 020 8996 9000 https://www.bsigroup.com/en-GB/	British Standard 476 Part 24

Additional information is available on the Fire Gateway (www.fire.gov.uk), a national website providing access to related information as well as links to all Fire & Rescue Services and the Communities and Local Government website (www.communities.gov.uk/fire/).

Appendix 1 - Diagram of a catering kitchen extract system



LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN87
Identifying vulnerable persons at risk from fire

Rev 04, 01 May 2022

Contents

The London Fire Commissioner is the fire and rescue authority for London.The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Guidance note will support those that work or communicate with the elderly and vulnerable persons in their homes to identify whether they are at risk from fire.

It provides a link to a web page with a 'checklist person-centred fire risk assessment form', which can be used for an initial quick and easy check of elderly or vulnerable residents in their own private dwellings and will provide specific and relevant information to aid in the completion of a full person-centred fire risk assessment where one is required. It can also be used for 'Specialised Housing' premises (i.e.: Care Homes, Sheltered Housing, Extra Care and Supported Living type premises) to inform the fire risk assessment process for the whole premises and the evacuation strategy.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit our web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 Occupants of a building can vary greatly. In some buildings they can be a mixture of employees, visitors and members of the public and they may be old, young or infirm and could have differing levels of familiarity with the building. For those people who are living in specialised housing, or live in other types of accommodation but are considered to be vulnerable, greater support may be required or a differing evacuation strategy dependent on their individual needs.

1.2 It is essential in any building, especially those of a large or more complex nature and those that cater for vulnerable people, for the management to develop a fire safety strategy, including an evacuation strategy, that accounts for all people in a documented assessment for the premises and individuals at risk.

2 Legislation & Responsibilities

2.1 The Order places a requirement on the 'Responsible Person' to manage fire safety and to carry out a fire risk assessment. Article 9 (7)(b) states that an FRA should take into account "any group of persons ….being especially at risk". To achieve this, a person–centred risk assessment needs to be carried out for the individuals identified as particularly vulnerable.

2.2 Therefore, the onus is on the management to formalise a fire and evacuation strategy to enable effective fire safety procedures to be followed in the event of an emergency. This strategy must be "unified" throughout the building and should be inclusive of all people.

3 The person-centred approach

3.1 The person-centred fire risk assessment will help identify residents who are at higher risk from fire in their own accommodation – whether this is due to their behaviours or their ability to respond and escape from a fire. The risk assessment should include an action plan that specifies what steps will be taken to improve the safety of the vulnerable resident.

3.2 This approach is particularly appropriate for residents in 'Specialised Housing' where the number of residents in each property/scheme is usually limited and the person-centred fire risk

assessment can easily be carried out for every resident. It can also be applied to 'general needs' and other types of accommodation when vulnerable persons are identified.

3.3 A person-centred fire risk assessment should consider whether behaviours of the resident indicates signs of increased fire risk (i.e.: unsafe smoking/cooking, etc.). It should also consider whether the resident has the ability or the mental capacity to respond appropriately to signs of fire, detection and warning signals, and the ability of the resident to evacuate the premises in the event of fire.

3.4 The appropriate person to carry out the full person-centred fire risk assessment for a resident will depend on the circumstances of the scheme and the resident. It may be carried out by specialised housing scheme managers, care providers or any other party that has the ability to complete risk assessment forms and regularly engages with the resident

3.5 A person-centred approach should consider a" safety from fire" approach, such as use of fire-safe ashtrays or smoking aprons by those who smoke. The method should also consider how a fire might develop and spread causing possible harm to the occupier. Items such as fire-retardant bedding or personal watermist systems can assist in the protection of a resident at risk and should be considered in appropriate cases.

3.6 The detection and warning system for the premises needs to be appropriate for the building and any person at risk. Therefore, fire alarm systems to British Standard 5839 parts 1 and 6 and social alarm systems that are connected to alarm receiving centres should be a requirement. The National Fire Chiefs Council (NFCC) Specialised Housing Guide can be utilised to ensure that the correct approach is taken.

3.7 In the event that a number of vulnerable people are found to be residents within the same building then it may be more suitable to install a full building automatic fire suppression system (sprinkler or water mist). The design and installation of any system to comply with the appropriate British Standards or an equivalent recognised standard.

3.8 The fire evacuation strategy and any associated systems put in place to support it must be communicated and explained to residents and staff. In order to monitor the effectiveness of an agreed fire and evacuation strategy, periodic evaluation should be undertaken. Any deficiencies highlighted can then be investigated and rectified where necessary. Such evaluation will enable the strategy to be kept up-to-date and reflect the changing design occupancy of the building.

4 Steps in a person-centred fire risk assessment

4.1 There are considered to be 9 steps in a person–centred fire risk assessment. These are noted below and full explanations of these are available in the NFCC Specialised Housing Guidance document.

Step 1: The characteristics, behaviours and capabilities of the resident that may lead to fire risk.

Step 2: Determine the potential causes of fire and the existing measures to prevent fire.

Step 3: Identify any circumstances that could lead to the rapid development of fire.

Step 4: Identify existing measures to protect the resident if fire occurs.

Step 5: Consider capacity of resident to respond appropriately to fire alarm signals or signs of fire.

Step 6: Consider ability of resident to make their way to safety.

Step 7: Determine the level of risk to the resident from fire.

Step 8: Prepare action plan.

Step 9: Determine period for review of the assessment.

4.2 An initial 'checklist' form that can be downloaded and completed by a relative, carer, scheme manager or other designated person is available on our website – www.london-fire.gov.uk, as the Person-Centred Risk Assessment Checklist on this page: https://www.london-fire.gov.uk/safety/carers-and-support-workers/fire-risk-checklist. If risks are identified, this should be passed to a manager or person who has responsibility for the safety of the residents (such as the care provider or housing provider) for further action.

4.3 Where such a person is not identifiable or does not exist then the checklist should be passed to the Local Authority Social Care Department. They will make arrangements for a more detailed assessment and referrals involving key stakeholders such as the Local Authority, Fire Service, Housing and Care Providers.

5 TSA On-line training package – 'Fire Safety in the Home'

5.1 The link below takes you to the TSA on-line training package that has been developed with the London Fire Brigade (LFB) . The first module focusses on 'Fire safety in the Home' and is available as a resource to anyone who comes into contact with vulnerable people.
www.tsa-voice.org.uk/e-learning

6 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the our website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:

AVAILABLE FROM	TITLE
The Stationery Office (Mail, Telephone, Fax & Internet Orders) TSO Orders/Post Cash Dept PO Box 29 Norwich NR3 1GN Telephone: 0870 600 5522 Fax orders: 0870 600 5533 Web: www.tso.co.uk	Fire Safety – Risk Assessment: Sleeping Accommodation ISBN: 978 1 85112 8174 Fire Safety – Risk Assessment: Residential Care Premises ISBN:978 1 85112 818 1 Fire Safety – Risk Assessment: Healthcare Premises ISBN: 978 1 85112 824 2 Fire Safety - Risk Assessment: Means of Escape for Disabled People Supplementary Guide ISBN: 978 1 85112 873 7
The National Fire Chiefs Council (NFCC) West Midlands Fire Service Headquarters 99 Vauxhall Road Birmingham B7 4HW Telephone: +44 (0) 0121 380 6067	Fire safety in specialised housing https://www.nationalfirechiefs.org.uk/write/MediaUploads/NFCC%20Guidance%20publications/NFCC_Specialised_Housing_Guidance_-_Copy.pdf
The "Fire Safety" guides listed above may also be downloaded free of charge from the '*Fire safety law and guidance documents for business*' section of the CLG website at: **www.gov.uk/workplace-fire-safety-your-responsibilities**	

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Personal Protection Watermist Systems

GN88

Rev 2, 01 May 2022

Contents:

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) in London.

This Guidance Note provides fire safety advice in respect of Personal Protection Watermist Systems

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit our web site at http://www.london-fire.gov.uk

1 Introduction

1.1 This Guidance Note has been prepared to give advice on Personal Protection Watermist Systems. The information provided is based upon the publication "Guidance on the use, deployment and limitations of Personal Protection Watermist Systems in the homes of Vulnerable people" prepared by BRE Global in partnership with London Fire Commissioner.

2 What is a Personal Protection Watermist System?

2.1 A Personal Protection Watermist System is a self contained watermist system (conforming to LPS 1655:- Requirements and test methods for the LPCB approval and listing of personal protection watermist systems) designed to protect a vulnerable person from a fire within their home. These systems are designed for people who spend a significant amount of time confined to a specific area of their home ie. bedroom or front room.

3 Persons not suitable for protection by Personal Protection Watermist Systems

3.1 Personal Protection Watermist Systems (PPS) are not suitable for all vulnerable persons such as those individuals who are mobile and live in a multi roomed flat. In addition, people who display hoarding characteristics are unlikely to benefit from PPS due to the inability of the fine water spray to penetrate hoarding materials to control/extinguish the fire.

4 Typical risk profile of vulnerable persons

4.1 Analysis of the underlying cause of fatal fires in dwellings has identified that a combination of risk factors increases the likelihood of being involved in a fire. A significant percentage of victims are at greater risk due to a physical/mental impairment that makes them unaware of, or unable to respond to, a fire in their home. They are also more likely to have a fire in their home due to lifestyle/mental capacity issues.

Examples of typical risk factors are given below:

- Having previous fires
- Unsafe disposal of handling of smoking materials
- Burn Marks on carpets, furniture, clothing/bedding
- Unsafe use of candles

- Poor quality of damaged electrical wiring
- Unsafe use of electrical equipment, overloaded sockets or extension leads
- Unsafe use of space heaters
- A history of falls
- Living with dementia or similar cognitive impairment
- Mobility difficulties
- Decision making difficulties
- Alcohol or drug misuse
- Home oxygen use
- Sensory impairment

5 Why is the risk profile important?

5.1 Care needs to be taken to ensure that the risk profile of the vulnerable person is appropriate for PPS. For example, a vulnerable person who is mobile and living in a multi roomed flat has the potential to be affected by a fire anywhere in their home. As a result they would possibly require a full Automatic Water Fire Suppression system (such as a sprinkler system that is designed, installed and maintained to BS9251 Fire sprinkler systems for domestic and residential occupancies.

6 Cost

6.1 The typical cost of a PPS unit (including installation and legionella treatment) is £2,700 based on 2017 figures.

7 General Features

Features include:-

- Self contained unit consisting of a water container connected to an open mist nozzle
- Full portable and can be moved/reused as required
- Usually mains powered with battery back up
- Detects and suppresses fire at an early stage preventing the spread of fire
- Fire detection and alarm arrangements included
- 10 minutes activation time using 110 litres of water

8 Remote monitoring arrangements

8.1 Connection of a PPS to a permanently monitored fire detection or warden/care system is recommended so that if the system actuates, management action can be initiated and the fire and rescue service mobilised if necessary.

9 Additional/alternative control measures

9.1 If a person's characteristics make them unsuitable for protection by a PPS or further enhancements to the safety to the individual need to be made (as identified by their person centred fire risk assessment) then additional typical control measures as listed below can be considered.

- Fire Safety Ashtray
- Fire retardant bedding, blankets or clothing
- Personal protection watermist system
- Sprinklers
- Electrical circuit testing
- Space heater fire guard
- Alternative meal arrangements:eg Microwave or "meals on wheels"
- Electric thermostat controlled deep fat fryer
- Cooker fire detector & alarm
- Electric/gas cooker auto cut-off
- Arson control letterbox
- Smoke detection fitted in all areas of risk
- Heat alarm in cooking area
- Remote monitoring with interlinked smoke detection (e.g. Telecare)

10 Images of typical Personal Protection Watermist systems

11 Bibliography

11.1 Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting our website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
BRE Global Ltd	'Guidance on the use, deployment and limitations of Personal Protection Watermist Systems in the homes of vulnerable people'
LPCB Redbook Live	' LPS 1655:- Requirements and test methods for the LPCB approval and listing of personal protection watermist systems'

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN89
Retrofitting Automatic Fire Suppression Systems in Residential Premises

Rev 3, 19 May 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) in London.

This Guidance Note provides fire safety advice in respect of Retrofitting Automatic Fire Suppression Systems in Residential Premises.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please telephone or visit your local Fire Safety Office (telephone 020 8555 1200 and ask for the nearest Fire Safety Office), or visit our web site at http://www.london-fire.gov.uk

1 Introduction

1.1 This document has been prepared by the Fire Safety Department, London Fire Brigade (LFB).

1.2 The purpose of this Guidance Note is to provide advice to housing providers, local authorities and stakeholders on issues that should be considered in the design and installation of the retro-fitting of a domestic/residential Automatic Fire Suppression Systems (AFSS).

1.3 This information should be used as guidance allowing appropriate AFSS to be installed as part of a fire safety risk based approach that should include consideration of the vulnerability of the residents.

1.4 The LFB is committed to reducing the impact of fire on people, property and the environment. There is clear evidence that Automatic Fire Suppression Systems (AFSS) can be effective in the rapid suppression of fires and can therefore play an important role in achieving a range of benefits for both individuals and the community in general.

1.5 Automatic Fire suppression Systems is a term used to describe various types of systems that will act to control or suppress a fire in the early stages (i.e Sprinklers or Water mist) and they can be generally divided into two principal categories:

- Domestic/residential, life risk protection.
- Business/ commercial/ educational, property protection and business continuity.

1.6 This policy Guidance Note focuses on life protection in domestic/residential property.

1.7 In accordance within the aims and objectives contained within the LFB's London Safety Plan, the LFB has produced an AFSS position statement which confirms our commitment to the promotion of AFSS in London.

1.8 Within the statement, our objective is to play a key leadership role in promoting a better understanding of AFSS and encourage building owners and developers to install such systems, particularly in domestic and residential sleeping accommodation where vulnerable people live or regularly visit.

1.9 AFSS can provide complimentary life safety functions by controlling or suppressing a fire. The historical use of the suppression systems has been to limit the fire to the room of fire origin.. However, in many AFSS retrofit situations, it is not building regulations that will determine the use of suppression, it is the duty of care to vulnerable occupants. These may have a limited mobility,

cognitive or sensory abilities which could impair their evacuation response from the room of origin, or ability to deal with a fire to which they are in close proximity to.

1.10 As a result of the above, it can be further categorised as the following, which have different performance expectations: a) limit the fire to the room of origin, b) maintain a level of tenability in the room of origin by temperature reduction and c) protect an occupant who is in close proximity to the fire.

1.11 There is not a one-size-fits all solution and AFSS, whose purpose, by definition, is not to extinguish but to suppress a fire, may in some circumstances be of limited help for persons that are in close proximity of a fire The proposed AFFS should be evaluated against the three intended outcomes above, for the specific occupant and built environment.

1.12 The National Fire Chiefs Council and the National Fire Sprinkler Network have worked together to investigate the 'Efficiency and Effectiveness of Sprinkler Systems, An Analysis from Fire Service Data' 'Efficiency and Effectiveness of sprinkler systems: An analysis from Fire Service Data'.

1.13 This report indicates that where installed, sprinkler systems operate on 94% of occasions, demonstrating very high reliability. Furthermore, it is evident that when they do operate, they extinguish or contain the fire on 99% of occasions which demonstrates that they are very effective. In support of this publication, a supplementary publication has now ben published 'Incidence of deaths and injuries in sprinkler buildings' on the argument that sprinklers also have a role to play in reducing harm and protecting vulnerable people in particular, thus supporting the case for a greater inclusion of sprinklers in purpose built block of flats. This analysis also shows that the occupiers are safer and less likely to be harmed if a flat is protected by a sprinkler system.

1.14 It has become evident, for the retrofitting of AFSS, that local authorities , social housing partners, care operators, housing associations, private landlords and others in the housing sector have limited knowledge and/or experience of the systems available and their design parameters.

1.15 This document provides practical guidance and advice on issues that should be considered in the design and installation of the retro-fitting of a domestic/residential AFSS in the following stages:

- Pre installation
- During installation
- Post Installation

2 Automatic Fire Suppression Systems

2.1 There are a range of different types of AFSS for use in domestic/residential premises.

2.2 Such systems are designed to detect a fire and then control and suppress it, thus preventing the spread of the fire. AFSS in the traditional, most common form consist of a network of pipes charged with water from a water main or fire pump and tank. Nozzle heads are fixed to the pipework for the locations to be protected.

2.3 A common myth is that when one nozzle head operates they all actuate. This is not the case. Nozzle heads are activated by heat, only the nozzle head nearest to the fire will actuate when the temperature at the head is between 68 – 74 degrees Celsius.

Two of the most widely used types of nozzle heads fitted in traditional systems are the 'Concealed' and 'Pendant'.

Concealed nozzle head

Pendant Nozzle

2.4 Retrofitting AFFS should be designed and installed in accordance with the following standards for residential/domestic premises when the proposed system is within the scope of an applicable standard:

- **BS 9251: 2021** Fire sprinkler systems for domestic and residential occupancies-Code of practice for design and installation. This standard covers fire sprinkler systems for residential and domestic premises that are more than four storeys or above 18 m in height; additionally fixed residential fire sprinkler systems in buildings for residential occupancies up to four storeys or 18 m in height, whichever are lower, are covered in BS EN 16925.
- **BS EN 16925:2018** Fixed firefighting systems- Automatic residential sprinkler systems-Design, installation and maintenance.
- **BS 8458:2015** Fixed fire protection systems-Residential and domestic watermist systems-Code of practice for design and installation.

Guidance available for Personal Protection Watermist Systems.

- **LPS 1655:Issue 1**, Requirements and Test Methods for the LPCB Approval and Listing of Personal Protection Watermist Systems.

Innovative/alternative systems may be out of scope of the above Standards. In which case such systems are not expected to comply to the British Standard. However the same underlying performance requirements should apply to them, including matters as; performance in fire test, water supply and distribution adequateness.

2.5 For all AFSS's it is important to take a risk appropriate approach to the proposed system requirements including, but not limited to:

- Is the AFSS proposed fit for purpose for the risk and required protection?
- Are the installers competent?
- Are the ongoing maintenance arrangements and costs understood?

2.6 It is strongly recommended that the premises fire risk assessment/fire strategy are reviewed with specific reference to the suitability of the proposed AFSS focusing on the following areas:

- When considering sprinklers, specialist advice should be taken from an accreditedcontractors who should be in possession of 3rd party accreditationfor the proposed work undertaken regarding the suitability of the proposed installation.
- When considering watermist, the specialist contractor should provide evidence that they are an authorised installer for the proposed system.
- AFSS should be designed in accordance with an appropriate National or International standard, when applicable.
- System components should have been tested in accordance with an appropriate standard.

2.7 A key part of this review is a requirement to demonstrate the effectiveness of the system in fire performance tests that are appropriate to the real life application. These fire tests are now specified in the standards that cover residential watermist fire suppression systems.

2.8 It is recommended that the appropriate fire test data sheets are requested for the mist nozzles confirming that the nozzle has passed testing as per BS8458 at a laboratory such as Warrington FIRAS or the Building Research Establishment.

3 Legislation and Statutory Guidance

3.1 In England, there is no Statutory requirement on housing providers/developers to retrofit AFSS in existing dwellings, whatever the height.

3.2 For AFSS in new purpose built residential buildings reference should be made to the current Building Regulations and Approved Document B (ADB) Statutory Guidance.

4 Mobility Scooters

4.1 The position of the LFB regarding mobility scooters is that the provision of an AFSS does not compensate for allowing a mobility scooter to be parked/charged in a protected route which should be reflected in the fire risk assessment for the building.

4.2 If it is identified that a engineered solution or a compensatory feature is proposed for the storage/charging of mobility scooters that includes the provision of AFSS we request contact is made with the LFB's Sprinkler Coordinator who will co-ordinate with Fire Engineering Group as necessary Email:SPRINKLERS@london-fire.gov.uk.

4.3 Further guidance can be found in the National Fire Chiefs Council (NFCC) publication "Fire Safety In Specialised Housing" where a number of solutions are proposed for the safe storage and charging of these vehicles

5 Personal Protection Systems

5.1 The current range of Personal Protection Systems (PPS) are local application watermist systems designed to detect and suppress a fire at a very early stage before significant heat and smoke has developed and caused serious injury.

5.2 PPS are designed as semi portable units to protect vulnerable persons in residential and domestic occupancies and can be located as required. They are not a substitute when coverage is required to all areas.

5.3 PPS manufacturing companies have carried out their own bespoke tests and demonstrations over the past few years. Building Research Establishment Global (BRE) have now published a testing standard - LPS 1655 - "Requirements and test methods for LPCB approval and listing of personal protection watermist systems 2015".

5.4 LPS 1655 is a specification which outlines the test criteria and minimum levels of performance for PPS, it will not assist the end user in confirming if a PPS is suitable given the vulnerable persons characteristics and home environment.

5.5 To overcome this BRE Global (Building Research Establishment) has co-authored guidance with the LFB on identifying vulnerable people at risk and assessing when a PPS or other measures should be implemented. This guidance is available in the published document 'Guidance on the use, deployment and limitations of personal protection watermist systems in the homes of vulnerable people'.

6 Modular Water Mist Suppression Systems

6.1 Pre-engineered systems are packaged systems where the hydraulic design has been pre calculated by the manufacturer to eliminate the need for engineering work beyond the original product design. Due to the design of these systems it must be understood that it may not be possible for them to comply with BS 8458:2015 due to various elements of their design falling beyond the scope of the standard.

6.2 These systems are increasingly being applied by designers to domestic occupancies, including blocks of flats.

6.3 Proposals to apply these systems are being submitted to the LFB as part of Building Regulations and HMO (Houses Multiple Occupancy)/Housing Act consultations as an alternative to providing BS9251:2014 or BS8458:2015 Automatic Fire Suppression System protection in blocks of flats.

7 Pre Installation

7.1 When considering installation of AFSS, the responsible person should seek advice in the early design stages; communication is crucial between all the relevant stake holders. It is strongly recommended advice is sought from the LFB and the fire sprinkler and watermist industries:

- LFB has a designated Coordinator who deals with AFSS enquiries, contact email: SPRINKLERS@london-fire.gov.uk.
- Residential Sprinkler Association, a non-profit organisation providing support to the residential sector.
- British Automatic Fire Sprinkler Association, the UK's trade association for the fire sprinkler industry, whose primary objectives include providing authoritative information on the benefits of AFSS and how sprinklers can play a significant role in saving life and property from the devastating effects of fire.

7.2 The responsible person should choose a contractor with care and confirm all trades are suitably qualified, with the appropriate third party accreditation. Within the building regulations, Fire Safety:Approved Document B (Fire Safety) identifies the need for third party accreditation.

- FIRAS is a voluntary, third party accreditation for installation contractors of both passive and active fire protection systems, operated by Warrington Accreditation and accredited by UKAS to EN 45011.
  Further guidance can be found in the BAFSA Information file Third Party, Accreditation number 20
- Loss Prevention Certification Board (LPCB) offers third-party approval confirming that products and services have met and will continue to meet these standards.
- IFC Certification Ltd is a UKAS accredited and internationally recognised provider of high quality, customer focused, independent, third party certification.

Feasibility Study

7.3 It is advisable for the client to ascertain the suitability of the existing building construction and services for the retro-fitting of AFSS.

7.4 It is recommended that guidance is sought from an approved AFSS contractor with third party accreditation who has expertise in accordance with the aforementioned British Standards.

7.5 The designer should, at an early stage, ensure that consultation has taken place with any relevant Authorities Having Jurisdiction (AHJ) or others who might have a direct interest in the installation,

allowing the appropriate AFSS to be integrated into the overall design. This may also need to be submitted as a building regulations application dependent on the works being undertaken.

Areas to be considered include:

7.6 Sample individual dwelling layouts in the building with assessment of the following:

- Routes of horizontal pipe work and the necessity for core holes to be formed.
- Existing electrical and mechanical services that may be affected including the dwelling fire alarm, if appropriate.

7.7 Communal areas, floors, entrances, corridors, plant rooms with assessment of the following:

- Location of existing risers and suitability for use as AFSS risers or drops.
- Location of proposed new risers if the existing riser is unsuitable.
- Routes of horizontal and vertical pipe work and the necessity for core holes to be formed/flooring removed.
- Existing electrical and mechanical services that may be affected including the premises fire alarm if appropriate remote monitoring is in place.
- Location of isolation valves.

7.8 Drawings/plans, if available should be provided to the AFSS contractor:

- Construction, room shape, dimensions.
- Structural beams, steelwork.
- Services, mechanical i.e. water services, plant locations electrical.

7.9 Identify water supplies:

- Town mains.
- Cold water tanks and booster pumps.
- Dedicated tank and pump - identify possible sites with consideration to using structural. engineers who may recommend joists/flooring to be reinforced.

7.10 Where AFSS is to be installed as a fire safety mitigation measure then a part installation is unlikely to be sufficient. All dwellings/flats should be installed in accordance with the applicable standard or code of practice and any deviations should be agreed with the Responsible Person.

7.11 The Premises Fire Risk Assessment is be completed/reviewed taking into consideration the benefits to both the premises , the occupants and any vulnerable persons; in the areas where the AFSS system is to be installed.

7.12 Consideration should be given to the guidance provided in the National Fire Chiefs Council publication Fire Safety in Specialised Housing regarding AFSS back up pumps/stand by power supplies. Further commentary regarding power supplies, cabling and installation can be found in BS9991:2015 Fire safety in the design management and use of residential buildings where alternative solutions are referred to.

Landlord & Tenant Issues

7.13 In residential high rise blocks a significant percentage of dwellings may be found to be leasehold. These residents own their homes and pay a service charge to the landlord for servicing and cleaning of common areas and general maintenance/repair.

7.14 Depending on the lease agreements it may be found that the landlord does not have a legal right to access the leasehold dwellings to install/maintain a retrofitted AFSS.

7.15 If this is the case, the proposed works would require full consent of the leaseholder. Prior to the start of the proposed installation, it is recommended that a formal consultation process with the premises leaseholders is commenced in accordance with the Landlord & Tenant Act 1985 and other leasehold legislation.

Communication with Residents

7.16 It is recognised that in order to complete the installation successfully whilst the premises is occupied, the full support and cooperation of the residents is required.

7.17 Consider "Meet the Builder" meetings before the planned commencement of the installation programme, allowing residents concerns to be addressed regarding AFSS. This was successfully demonstrated in the Sheffield Low Rise Sprinkler Installation project & Callow Mount Sprinkler Retrofit Project.

7.18 The provision of resident information packs are recommended in order to explain the scope of the works focusing on sprinkler facts/myths/frequently asked questions.

7.19 Alternatively, consideration should be given to the appointment of a Communications Consultant to develop a consultation strategy. The primary objective being to encourage local residents to fully engage in the proposal.

7.20 It is crucial that homeowners/residents understand how sprinklers operate. The publication 'Householders guide to sprinklers' provides specific information for new homeowners on domestic fire sprinkler systems. This guidance is produced by the Welsh Government, and provides suitable guidance on AFSS in residential premises that can be applied across the UK.

Water Supply

7.21 For a small domestic premises connecting the AFSS to the existing supply within the property is the most cost effective method of supplying water to the installation.

7.22 In the event that the existing supply is not suitable, an application will need to be made to the water authority for a water supply upgrade. Your sprinkler contractor will assist in completion of this application, as the authority will require details of the flow and pressure required for the proposed system. This will determine if the water pressure is adequate and what diameter supply pipe will be required, typically 32 or 50mm. The water authority will upgrade the supply from the town main to the boundary of the property. The pipe from this point will need to be installed by others. This pipe will then be connected to the AFSS valve group.

7.23 In the event the existing supply is not suitable a static bespoke water storage supply can be used with a bespoke pump, the capacity dependent on the system design. A system in a domestic property must be capable of putting water on the fire for a minimum of 10 minutes and will typically require a storage capacity of between 500 and a 1000 litres. For a residential system the run time must be 30 minutes and will require a minimum water storage capacity of 6000 litres in accordance with the appropriate standard.

7.24 The water sector regulator Ofwat sets the standards covering the flow and pressure of water supplies which are specific to domestic/residential properties.

7.25 Flows and pressure will vary throughout the day, seasonally and supplies may be interrupted at any time for various other reasons. The water company may need to carry out planned and unplanned maintenance on its network and on rare occasions the network can be affected by third party activity.

7.26 All of these factors mean that flow and pressure cannot always be guaranteed. It is paramount that the designers take these factors into account when designing a system that relies on direct mains flow, pressure and continuity of supply for their satisfactory operation.

7.27 Consultation and approval from the water company will always be required for AFSS installations where it is necessary to connect to the water mains or where a larger diameter main is required to achieve the necessary AFSS flow rates

7.28 Further information is available in the following publications "Guideline For The Supply Of Water To Automatic Fire Sprinkler Systems", published by Water UK alternatively Thames Water have produced a sprinkler connection policy.

Microbial Risk

7.29 There are a number of guides and regulatory documents that should be referred to when managing the risk of legionella in fire sprinkler systems one such publication is RC63: Recommendations for minimising the impact of legionella in firefighting systems developed thorough RISCA Authority, published by the Fire Protection Association .

AFSS Alarm Device

7.30 Confirmation is to be sought prior to the start of the project on how the AFSS alarm system is to be incorporated into the fire strategy. In accordance with the standard the device should initiate a AFSS alarm signal instigating the appropriate emergency procedure.

7.31 In high rise residential blocks the alarm may be configured to serve an alarm zone, rather than each individual dwelling provided:

a) the alarm zone should cover no more than a single floor.
b) Individual dwellings should be fitted with an BS5839 Part 6 2013, LD1 alarm* connected to suitable control and indicating equipment in accordance with the appropriate BS Standard.

* A system installed throughout the dwelling incorporating detectors in all circulation spaces that form part of escape routes and all areas where a fire might start, other than bathrooms, shower rooms or toilets.

Maintenance

7.32 Consideration should be given to ensure a maintenance regime is in place prior to the installation warranty expiring. It is recommended that the servicing is undertaken by a competent contractor with the appropriate third party accreditation.

8 During Installation

8.1 It is best practice that site management should be informed as early as possible to ensure the AFSS requirements are taken into account regarding future work, and resolve any arising issues resulting from or impacting on the AFSS.

8.2 On appointment of a contractor, method statements should be agreed, stipulating processes and sequence of works including:

- Temporary and permanent fire stopping procedures for duration of installation works.
- Liaising with other trades.
- Systems to be enclosed/concealed, ensure pressure testing is run prior to final enclosure. (Post install leakage in concealed spaces will lead to additional works and expense).
- Ensuring compressive checking systems are put in place to snag and de-snag all areas.

- Unwanted fire signals (UwFS) hot works, arrangements are to be made by the responsible person raising the awareness of false alarms and UwFS.

8.3 Where variations of design are identified, agree deviations as soon as possible. Look to the contractor to provide alternative solutions.

8.4 Protection of installation: Whilst malicious damage to AFSS is not a common issue, consideration should be given to the following:

- Concealed sprinkler heads and pipe work.
- Keeping sprinkler controls out of public areas, restricting access.
- Routing of pipework within communal areas.
- Ensuring building security throughout duration of contract.
- Agreeing site storage areas within the blocks and ensuring these are kept tidy.
- Design features to stop occupants tampering with component lockable locks provided on individual isolation valves if fitted.

9 Post Installation

9.1 Commissioning of the system is to be completed in accordance with the appropriate standard (sprinklers) or Design Installation Operation and Maintenance (DIOM) manual (watermist) design, installation with consideration to the attendance of the Brigade for larger Residential premises including High rise/Specialised Housing and care homes. This will allow Operational Crews/Fire Safety Inspecting Officers to familiarise themselves with the fixed installations and update records accordingly.

Information for the Brigade

9.2 Increasingly, fire-engineering is being incorporated in building design to enable developers to meet functional building requirements specifically with regard to means of escape and fire fighting. Attending crews may need to interact with these systems and therefore need accurate, concise and up to date information when developing firefighting tactics.

9.3 The sprinkler alarm indicator panel is to be located at an appropriate location for both staff and firefighters responding to a fire/AFSS signal. This should normally be in an area on the ground floor close to the entrance of the building likely to be used by The Brigade, or a suitably sited, continuously staffed control room.

9.4 Following the actuation of the system, water egress can be a major issue, particularly if insufficient information is available allowing operational crews to isolate the supply following the successful extinguishment of the fire.

9.5 It is recommended that arrangements are made allowing documentation for the sprinkler installation to be available on site that should include:

- General overview of the system.
- Coverage of the installation.
- Type of water supply/duration.
- Block plan identifying location of the pump room and isolation valves for each floor.
- 24 hour contact number for the sprinkler contractor.

9.6 Consideration should be given to the provision of Premises Information Boxes. These plans boxes will provide information which should be simple and useable relating to your building. The information contained is immediately available to the Brigade on arrival.

9.7 Further guidance can be found in the Fire Safety Guidance Note 70, LFB Premises Information Boxes. available from our fire safety admin team, email: FSR-AdminSupport@london-fire.gov.uk.

10 Further information

10.1 Building Research Establishment report - Monitoring of installation of fire sprinklers in pilot schemes in Wales.

Prior to the Welsh statutory requirement for sprinklers to be installed in all new and converted flats from 1st January 2016, the Welsh Government provided funding for the installation of a number of sprinkler systems in social housing schemes in Wales. The objective of this initiative was to undertake research into the issues associated with the design and installation of sprinkler systems, including costs.

10.2 Callow Mount Sprinkler Retrofit Project - A project funded and directed by the British Automatic Fire Sprinkler Association (BAFSA) for the Sprinkler Coordination Group (SCG) with the main objective of seeing if it was practical to fit a sprinkler system without relocating residents in a high rise block.

10.3 Sheffield Low Rise Sprinkler Installation report - Sheffield City council identified a serious fire risk potential in a specific type of property in their property portfolio with a decision taken to install a suppression system in 540 individual ranch style properties sited in four locations.

10.4 Thames Water - This publication is a clear and concise Asset management policy "Fire Fighting Supplies in Domestic, Commercial and Industrial premises" it should be noted that every water company have a different set of standards.

10.5 Water Uk - "Guideline For The Supply Of Water To Automatic Fire Sprinkler Systems" This guide has been developed to reflect the legislative framework at the time of writing.

10.6 Fire Safety In Specialised Housing - This guide provides specific guidance regarding the provision of Automatic Fire Suppression Systems in Specialised Housing.

10.7 Studley Green Experience: Ten years on - This report details the success on the UK's first large scale fitting of sprinklers in social housing.

11 Acknowledgements

11.1 LFB would like to acknowledge the contributions and support of the following:

1. British Automatic Fire Sprinkler Association
2. Water UK
3. Residential Sprinkler Association
4. National Fire Chiefs Council
5. National Fire Sprinkler Network

12 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting our website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
BSI Shop Customer Services 389 Chiswick High Road London W4 4AL UK https://www.bsigroup.com/en-GB/	**BS 9251:2014** Fire sprinkler systems for domestic and residential occupancies – Code of practice for design and installation. **BS 8458:2015** Fixed fire protection systems- Residential and domestic watermist systems – Code of practice for design and installation. **BS 8489-1:2016** Fixed fire protection systems- industrial and commercial watermist systems – Code of practice for design and installation. **BS EN 12845:2015** Fixed firefighting systems – Automatic sprinkler systems – Design, installation and maintenance. (This should be considered if the use of BS9251:2014/ BS 8458:2015 is not suitable /adequate for a specific premises)
Redbook Live Headquarters Bucknalls Lane, Garston, Watford, UK WD25 9XX http://www.redbooklive.com/search/searchresults.jsp	**LPS 1655 - 1.0 -** Requirements and test methods for LPCB approval and listing of local application watermist systems for use as Personal Protection Systems (PPS) in residential and domestic occupancies within buildings.

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Shisha Bars

GN91

Rev 4, 01 July 2023

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order'.

This Guidance Note provides fire safety advice in respect of Shisha Bars.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office or visit our web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by Prevention and Protection Policy and Strategy Group at London Fire Brigade (LFB).

1.2 This Guidance Note has been prepared to give advice on Shisha bars. The information provided is based on research and data available online. The documents detailed in this guidance: The Order; the Smoke Free Legislation, The Smoke-free (Premises and Enforcement) Regulations 2006 and the Smoke-free (Signs) Regulations 2012 which amended the Regulations and relaxed the requirement for signs to be displayed at every entrance to smoke free premises, both of .which form part of the Health Act 2006. For relevant guidance see Section 8.

2 What is a Shisha Bar?

2.1 The term "Shisha Bar" includes premises such as lounges and cafes where water pipes, used for the smoking of tobacco products, are offered, with or without food and beverages, and which are collectively known as Shisha Bars.

2.2 Shisha Bars are subject to the terms and conditions of The Order which is enforced by London Fire Brigade (LFB) and the Smoke Free Legislation which forms part of the Health Act 2006 which is enforced by the Local Authority (LA).

3 Matters for Consideration

3.1 Staff who manage and run Shisha Bars should be aware that there are additional matters to take into consideration.

These issues can be summarised as:

- The hazardous properties of the coals.
- The effect on the fire safety measures in place if the coals are involved in a fire.
- The need to consider additional safety procedures to ensure that the fire control measures are suitable and sufficient.
- The measures that need to be implemented to eliminate the risk or reduce the risk to as low as reasonably practicable.
- The strategy for controlling the coals, and the recording of this in the premises fire risk assessment (FRA).
- The arrangements for safe handling, storage and transport of the coals and waste materials.

- The build-up of carbon monoxide within a premises.

4 Common storage issues

4.1 Managers and staff should note that there are two different types of coals used for the purpose of smoking Shisha, traditional charcoal coals, and fast lighting coals. Fast lighting coals are assumed to be the safer of the two varieties as the coals quickly burn down into an ash. However, on first ignition, these coals do emit a large amount of energy and if stored in large quantities could pose a higher fire risk. The following 'common principles' should be applied to ensure the safe storage of the coals used during Shisha smoking:

- protect the coals from sources of ignition
- prevent any outbreak of fire from spreading
- avoid unsuitable storage conditions
- ensure accurate control and record-keeping arrangements; and
- ensure a good standard of housekeeping.

5 Storage facilities

5.1 The storage facility should preferably be located on the ground floor with consideration being given to reducing the distance that the stock has to be taken to the point of sale/area of use. Coals should preferably not be stored in a cellar or basement or in any place that would prejudice escape from the premises, for instance in or under a staircase enclosure.

5.2 The method of transportation of the coals should be considered to avoid overspill of hot coals into areas where a fire could potentially grow unnoticed i.e. through/below wooden decking.

5.3 The method of storage and disposal of coals also needs to be considered as the risk from hot colas becoming an ignition source is very high.

5.4 The careless disposal of smoking materials and hot coals is a fire hazard and there is a risk of smoking materials and coals becoming an ignition source unless they are fully extinguished. These should not be disposed of with other waste materials. A suitable container, such as a metal bin, should be provided for the safe disposal of these items.

6 Shelter structures

6.1 Within the Regulations, the definition of an 'enclosed premises' is as follows:

- Premises will be considered to be 'enclosed' if they have a ceiling or roof, and except for doors, windows or passageways are wholly enclosed, whether on a permanent or temporary basis.

  The definition of 'substantially enclosed' is as follows:

- If 50% of the walls or more are missing, then it is legal to smoke in the area.

  Therefore, where an outside shelter is used to smoke this product, the 50% rule for the shelter applies. Appendix 2 shows examples of an enclosed and a substantially and non-substantially enclosed structure.

6.2 Any roof structure must also not encroach within 1.5 metres of any 2 perimeter walls. This is to ensure an adequate level of ventilation and smoke dispersal.

6.3 Where outdoor smoking areas are provided, shelter structures, heating devices should be correctly installed and properly maintained, this is also important where patio type heaters using gas cylinders are used. These must be connected and disconnected form the gas cylinder correctly and the cylinders stored and disposed of in accordance with the suppliers and manufacturer's instructions.

7 Fire safety issues

Ducting

7.1 In premises where traditional coals are used, a large amount of coal may be prepared and left to burn until it is required by a customer. This presents a risk of Carbon Monoxide (CO) poisoning, and generally this prepared coal will be placed near the kitchen extract ducting to reduce this risk. Details of these systems should be referenced in the FRA for the premises. It is also essential that there is appropriate fire stopping where ducting passes through compartment floors and walls. This fire resistance should match that of the compartment that the ducting passes through.

7.2 Commercial kitchen extract ducting should be maintained in accordance with TR/19 HVCA/BESA Guide to Good Practice Internal Cleanliness of Ventilation Systems, and/or the NAADUK NAAD 21 guidance, (see Bibliography) which should ensure that ignition and fire growth from grease and oil deposits in extract equipment is minimised. In order to carry out cleaning and maintenance on the entirety of the ducting system, an adequate number of access panels needs to be provided at regular intervals along the length of the ducting. The regularity of the cleaning regime should also take into consideration the introduction of hot embers of the lighted coals. Best practice for premises would be to have two separate extract duct systems

7.3 There is a standard for companies to meet for the effective cleaning and maintenance by defining the LPCB requirements for the approval of companies carrying out inspection, cleaning and maintenance of ductwork systems that may be contaminated with combustible deposits. LPS 2084 assesses companies to ensure that they:

- Have appropriately trained and have competent named individuals undertaking the cleaning works.
- can verify that the completed works meet the requirements of the standard (LPS2084);
- can document and report correctly.
- can identify and record areas of limited access where inspection, cleaning and maintenance are impractical and communicate these limitations to the client.
- can provide recommendations for access improvements to better facilitate the ongoing cleaning and maintenance of the ductwork system.
- The certificated companies are audited by BRE Global on an ongoing regular basis to ensure that they continue to adhere to the requirements of the standard and are listed on www.redbooklive.com

Décor and furniture

7.4 Shisha Bars generally have a common theme in their décor of their premises. It is important for staff and managers to consider this décor to assess its flammability and effect on flame spread during a fire. The decor will generally consist of wall and ceiling covers of fabric or carpet like material. The seating areas will also contain a lot of padded cushions/seats. All linings should be

non-flammable so as to allow for the safety of the people within the premises at all times. Details of linings should be included within the FRA.

7.5 Any furniture and furnishings provided should meet the commercial standards for furniture in BS 7176 +A1-Specification for resistance to ignition of upholstered furniture for non-domestic seating by testing composites, BS 7177 + A1-Specification for resistance to ignition of mattresses, mattress pads, divans and bed bases and BS 5867Textiles and textile products —Curtains and drapes.

7.6 The use of ignition sources such as candles, sparklers and other similar devices should be restricted due to the inherent dangers of the risk of ignition and detailed as such in the FRA. Where decorations such as dried floral displays on walls and ceilings and temporary decorations for special events are to be put in place, the RP should consult the manufacturer to ensure that the decorations to be used are safe for the environment they are to be placed in.

Fire detection and fire alarm Systems and firefighting equipment

7.7 Provision of a fire detection and fire alarm system along with any firefighting equipment, will need to be considered on a case by case basis. Shisha Bars are found in many different types of premises of different heights and dimensions. The requirement for a fire detection and fire alarm system and any firefighting equipment will need to be considered in relation to the hazards and subsequent risk found within the premises and should be detailed in the FRA for the premises.

8 Relevant Guidance

8.1 Relevant guidance is available here under the letter 'S'

https://www.cieh.org/policy/resources/health-and-safety/

Appendix 1 – Shelter Structures

1 Premises will be considered to be enclosed if they have a ceiling or roof and except for doors, windows, or passageways, are wholly enclosed, whether on a permanent or temporary basis.

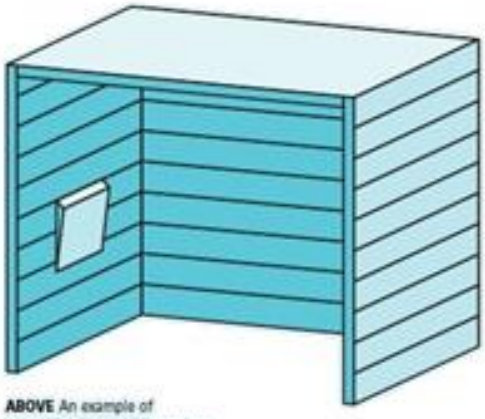
2 Premises are substantially enclosed if they have a ceiling or roof, but there are permanent openings in the walls which are less than half of the total areas of walls and constitute the perimeter of the premises. When determining the area of an opening, no account can be taken of openings in which doors, windows or other fittings that can be open or shut. This is known as the 50 per cent rule.

3 A roof includes any fixed or movable structures, such as canvas awnings. Tents, marquees or similar will also be classified as enclosed premises if they fall within the definition.

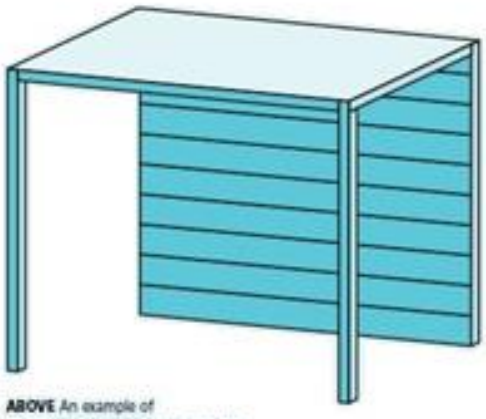
4 Non substantially enclosed shelters are allowable for smoking areas whereas enclosed and substantially enclosed shelters are not.

5 Access and egress arrangements for disabled persons should also incorporated as should the consideration of an extension to the fire detection and fire alarm system.

6 A fire extinguisher may be required subject to the results of the FRA and should be of a type considered suitable for all weathers.



ABOVE An example of substantially enclosed premises



ABOVE An example of non-substantially enclosed premises

9 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting our website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
https://www.legislation.gov.uk	Health Act 2006
The Building Services Research and Information Association	TR/19 HVCA Guide to Good Practice Internal Cleanliness of Ventilation Systems LPS 2084
National Association Of Air Duct-Cleaners UK (NAADUK) 12a Flightway, Dunkeswell, Honiton EX14 4RD 01404 891539 www.naaduk.co.uk	NAAD 21
Communities and Local Government Publications Cambertown House Goldthorpe Industrial Estate Rotherham S63 9BL	CLG Guide 'Fire Safety Risk Assessment –Small and medium places of assembly.

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN92
Fire Resisting Separation (including advice on fire doors and self-closing devices)

Rev 3, 01 May 2022

Contents

Explanatory Note:

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) in London.

This Guidance Note provides fire safety advice in respect of Fire Resisting Separation including fire doors and fixings supporting fire compartmentation.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit our web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB).

1.2 The purpose of this Guidance Note is to provide information to the general public, designers, building managers, the Responsible Person and others. This guidance has been written with the aim of improving knowledge and giving understanding to the term, 'fire separation' and the materials and items that are used to achieve this. In the following paragraphs, the reader can acquire information with regard to construction and the need to achieve fire resistance for a building.

1.3 Items such as floors, walls and doors are referred to alongside surface finishes and glazing. Each of these elements may comprise the fire resisting fabric of the building where it needs to be in place and which are there to provide protection to building occupants in the event of fire. It must be remembered that not all floors, walls, doors and glazing are required to be fire resistant.

1.4 References are made in the text and the Bibliography to 'Standards and guidance' which will provide a higher degree of interpretation and knowledge should the reader require further information.

1.5 In many cases, LFB asks for an element of structure to have a minimum period of fire resistance. This minimum period is usually of at least 30 minutes to protect means of escape routes. Sometimes, a period of 60 minutes or more will be required when separating areas of high fire risk from low risk, separating basements from the remainder of the building, or separating two or more differing occupancy groups (types). Some other areas, such as a firefighting shaft, will require a higher level of fire resistance than the stated minimum as referenced in current guidance documents such as Approved Document B (ADB), British Standard (BS) 9999: Fire safety in the design, management and use of buildings. Code of practice and BS 9991: Fire safety in the design, management and use of residential buildings. Code of practice

NOTE : The periods of fire resistance quoted in this guidance note are when tested in accordance with the relevant part of BS 476.

NOTE : Fire resistance can be defined as: The ability of a component or a building to satisfied, for a stated period of time, some or all of the appropriate criteria given in the relevant standard.

2 Fire Resisting Separation

General

2.1 The materials from which premises are constructed may determine the speed with which a fire may spread with the potential for it to affect the escape routes that people will use. A fire starting in a building constructed mainly from materials that may promote rapid fire spread may accelerate a fire more quickly than one where fire-resisting construction materials have been used.

2.2 If materials of limited combustibility are used and the internal partitions are made from fire-resisting materials that have been built and maintained correctly, the fire will be contained for a longer period. This will allow more time for the occupants to escape as through the requirements of relevant guidance, some walls and floors will be fire-resisting and there are limitations on the surface finishes to certain walls and ceilings.

2.3 Consideration will need to be given as to whether the standard of fire resistance and surface finishing in the escape routes is satisfactory, has been affected by wear and tear or alterations and whether any improvements are necessary. The following paragraphs give basic information on how fire-resisting construction can provide 30 minutes protection to escape routes. This is the standard recommended for most situations. However, in certain situation this can be a longer period of time.

2.4 An 'element of structure' is a construction that normally performs an important function within a building e.g. a load bearing wall, ceiling, separating wall etc. When a requirement or recommendation is made for an existing 'element of structure' to be made fire resisting, the materials should be applied to the 'risk' side(s), e.g., if a cupboard under the stairs is to be made fire resisting, the interior of the cupboard should be lined with fire resisting materials.

Fire-resisting construction

2.5 The fire resistance of a wall or floor is dependent on the quality of construction and materials used. Walls that are required to be fire resisting must extend from floor to ceiling and be imperforate. Suitable materials for this would be brick, blockwork or studwork partitioning with a 12.5mm thickness of Portland cement plaster, or fire resisting plasterboard on each face of the studwork with joints taped, filled and provided with a plaster finish to cover exposed nail or screw heads and jointing material.

2.6 There are other methods and products available which will achieve the required standard of fire resistance and may be more appropriate for the existing construction in a premises. If there is any doubt about how a building is constructed, further advice should be sought from a competent person or alternatively the Association for Specialist Fire Protection (ASFP) who have produced guidance on passive fire protection. https://asfp.associationhouse.org.uk/default.php?cmd=213

Fire-resisting floors and ceilings

2.7 The fire resistance of floors will depend on the existing floor construction as well as the type of ceiling finish beneath. If the fire resistance of a floor needs upgrading it may not be desirable to apply additional fire resistance to the underside of an existing ornate ceiling. In older buildings there may be a requirement to provide fire resistance between beams and joists. A typical example of a 30-minute fire-resisting timber floor is tongue and groove softwood of not less than 15mm finished thickness on 37mm timber joists, with a ceiling below of one layer of plasterboard to a thickness of 12.5mm with joints taped and filled and backed by supporting timber.

2.8 An alternative method of fire resistance is often chosen when an existing ornate lath and plaster ceiling is to be maintained. For this to be effective, it is essential for the existing ceiling to be 15 or 22mm plaster on striated (rough) wood or reed lath, and to be in sound condition. To assist in preventing ignition sources from entering the area between the ceiling and the floor above, boarding should be applied to the floor. It should be 3.2mm standard hardboard Type S to BS EN 13501-1: Fire classification of construction products and building elements. Classification using data from reaction to fire tests (or 4mm plywood) nailed at not more than 150mm centres on the line of joints. The joints are to coincide with the line of joists. Alternatively a suitable fire resisting material may be positioned below the floor boards instead of the hardboard above.

2.9 There are other, equally valid, methods and products available for upgrading floors and ceilings; ask the advice of a competent person and ensure that the product is installed in accordance with instructions from the manufacturer or supplier.

Fire-resisting glazing

2.10 The most common type of fire-resisting glazing is 6mm Georgian wired glazing, which is easily identifiable. Clear fire-resisting glazing is available and can quickly be identified by a mark etched into the glass, usually in the corner of the glazed panel, to confirm its fire-resisting standard. Although this is not compulsory, the marking of glass is supported by the Glass and Glazing Federation. Please note that some glazing marking is visible only when a light is shone directly on it, e.g., by a torch. The markings are found in the corner of the glass or may be hidden behind the beading in which case written evidence would need to be provided to demonstrate that it was to the appropriate standard.

2.11 Fire resisting glass is categorised as ' insulating' or ' non-insulating'. Approved Document B of the Building Regulations limits the use of ' non-insulating' glazing in certain locations. Fire resisting glazing must also meet the requirements for safety when used in critical locations as defined in Approved Document 'N' (impact resistance) of the Building Regulations.

2.12 The glazing should have been installed in accordance with the manufacturer's instructions and to the appropriate standard to ensure that its fire-resisting properties are maintained. The performance of glazed systems in terms of fire resistance and external fire exposure should, wherever possible, be confirmed by test evidence.

2.13 The Glass and Glazing Federation may also be of assistance. Their address is:

40 Rushworth Street,
London
SE1 0RB

(Tel: 020 7939 9100)

Website: http://www.ggf.org.uk/

Fire separation of voids

2.14 A common problem encountered with fire separation is fire-resisting partitions which do not provide separation from floor to ceiling level. This may result in unseen fire spread and a loss of vital protection to the escape routes. It is important therefore to carefully check all such partitions have been installed correctly. For example;

- Care Homes, which utilise Progressive Horizontal Evacuation (PHE) as an evacuation strategy, where the separation for the strategy does not extend in to, and form part of, the roof void.

- Converted office to flats projects where the compartmentation has not been completed properly or compartment lines do not match up.

CLASP and SCOLA type construction

2.15 CLASP (Consortium of Local Authorities Special Programme) and SCOLA (Second Consortium of Local Authorities) are total or systematic methods of construction that were developed to provide consistent building quality.

2.16 They consist of a metal frame upon which structural panels are fixed. This results in hidden voids through which fire may spread. It is important that cavity barriers that restrict the spread of fire are installed appropriately, especially to walls and floors that need to be fire-resisting to the manufacturers instructions.

Breaching fire separation

2.17 To ensure effective protection against fire, walls and floors providing fire separation must form a complete barrier, with an equivalent level of fire resistance provided to any openings such as doors, ventilation ducts, pipe passages or refuse chutes.

2.18 The passing of services such as heating pipes or electrical cables through fire-resisting partitions leaves gaps through which fire and smoke may spread. This should be rectified by suitable fire stopping and there are many proprietary products available to suit particular types of construction. Such products should be installed by competent contractors and be installed in a manner which reflects any test certification. . Guidance is available on this and Approved Document B has details of this. https://www.gov.uk/government/publications/fire-safety-approved-document-b

2.19 In addition, the ASFP have produced guidance on fire stopping that is available from the link in paragraph 2.6 above.

Décor and surface finishes of walls, ceilings and escape routes

2.20 The materials used to line walls and ceilings can contribute significantly to the spread of flame across their surface. Most materials that are used as surface linings will fall into one of three classes of surface spread of flame as noted in ADB. There are other, equally valid, methods and products available for upgrading floors and walls. You should ask the advice of a competent person and ensure that the product is installed in accordance with instructions from the manufacturer or supplier.

Further details about internal linings and classifications are available in Approved Document B. Appropriate testing procedures are detailed in BS 476-7: Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products and where appropriate BS EN 13501-1 Fire classification of construction products and building elements. Classification using data from reaction to fire tests. Further guidance on types of fire-resisting construction has been published by the Building Research Establishment.

3 Fire-resisting doors

Requirements of a fire-resisting door

3.1 Effective fire-resisting doors are vital to ensure that the escape route is suitably protected so that occupants can evacuate to a place of safety. Correctly specified and well-fitted doors will hold back fire and smoke, preventing escape routes becoming unusable, as well as preventing the fire

spreading from one area to another. Fire-resisting doors are necessary in any doorway located in a fire-resisting structure. Most internal doors are constructed of timber. These will give some limited protection against fire spread, but only a purpose-built fire-resisting door that has been tested to an approved standard will provide the necessary protection.

3.2 The common term 'Fire Door' usually means one of two door uses:

Doors on escape routes or Final Exit doors:

In order to allow persons to evacuate from buildings in the event of a fire, doors on the means of escape routes must satisfy certain criteria to allow persons to easily pass through them. Generally, this means that the doors must be unobstructed and easily opened without the use of a key.

Fire Resisting Doors:

Protected escape routes i.e. staircases and certain corridors are constructed from fire resisting material to allow persons to escape without being obstructed by fire, heat and smoke and therefore doors within these escape routes may also have to be fire rated and fitted with self-closing devices.

3.3 Any door in a fire resisting wall should comprise of a fire resisting doorset.

a) This means a door and its frame fitted as one complete unit conforming to the recommendations of BS 476-22: Fire tests on building materials and structures. Method for determination of the fire resistance of non-loadbearing elements of construction and BS 476-31.1: Fire tests on building materials and structures. Methods for measuring smoke penetration through doorsets and shutter assemblies. Method of measurement under ambient temperature conditions.
b) The door, or frame, should be fitted with an intumescent strip and cold smoke seal, normally on all sides. The gap at the base of the door should not exceed 6mm and the gap to the frame or between door leaves between 2 and 4mm. (See Note below)
c) The door fixings and furniture are to be suitably fire resisting and the self closing mechanism is to conform to BS EN 1154: Building hardware. Controlled door closing devices. Requirements and test methods.

3.4 All fire-resisting doors are rated by their performance when tested to an appropriate standard. The level of protection provided by the door is measured, primarily by determining the time taken for a fire to breach the of the door assembly, together with its resistance to the passage of hot gases and flame. Tests are conducted to BS 476 parts 22 and 31.1 or to BS EN 1634-1: Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware. Fire resistance test for door and shutter assemblies and openable windows. All fire doorsets should be classified in accordance with BS EN 13501-2: Fire classification of construction products and building elements. Classification using data from fire resistance tests, excluding ventilation services

3.5 Fire doors should be installed in accordance with the fire test data as detailed for the testing process. Modifications to the door can, unless completed by an authorised specialist and noted as such, invalidate the test certification supplied with the door.

3.6 Note: This information is taken from the ASDMA Best Practice Guide to fire doors, paragraph 14.11 which references BS 4787-1: Internal and external wood doorsets, door leaves and frames — Specification for dimensional requirements and BS 8214: Timber-based fire door assemblies – Code of practice – clause 9.5.2.

3.7 It may be possible to upgrade the fire resistance of existing doors. Further information is available from the Building Research Establishment or Timber Research and Development Association (TRADA).

Doors on escape routes/final exit doors – general principles

Automatic Sliding Doors

3.8 Where automatic sliding doors are to be installed, whether operated electrically or pneumatically, the fail safe arrangements should be either:-

a) that the doors fail safe in the open position, or

b) that the door may fail safe in the closed position if the doors have provision for pivoting outwards in the direction of the means of escape, or there is a door in the immediate vicinity that has that facility. The pivoting sliding doors should display a notice "In emergency push to open" in conspicuous plain letters.

Mechanical Revolving Doors

3.9 In general, revolving doors are not acceptable for means of escape purposes, thus installations using revolving doors must include suitable pass doors of a conventional pattern. Each bypass door should be considered as a single unit of exit width for exit calculations

The door should be connected to the fire alarm system so that upon an evacuation signal in any part of the building it stops rotating. Preferably, the doors should stop with each leaf in contact with an edge of the enclosure. This will avoid the edge of a free-swinging door causing an obstruction hazard.

Each door leaf should be clearly indicated on each side "In an emergency push to open" in white plain letters of adequate size on a green background. Suitable push rails should be provided on each side of the door.

The spring loading on the articulated door leaves should not exceed the normal loading of an average self-closing device.

When fully opened against the core, each leaf should be automatically held in that position until released manually. When released, each leaf should return to its normal position at a safe, controlled speed.

Emergency stop switches should be positioned on each side of the enclosure.

The electrical supply to the doors should be arranged so that when stopped, either as a result of a deliberate action (e.g. fire alarm) or as a result of a power failure, the doors can only be restarted by the manual operation of a switch. The switch should be sited to give the operator a clear view of the doors, with instructions that the doors should not be restarted with persons in the enclosure.

Swing Leaf Doors

3.10 Doors and gates forming part of an escape route should be hung to open in the direction of escape, clear of any steps, landings or the public way where :-

- more than 60 persons may require to escape from office or shop accommodation;

Where an outward opening door cannot be provided, e.g., because it would obstruct a public right of way, the inward opening door should be kept locked in the open position whilst the premises are in use.

In special circumstances where the fire hazard is considered to warrant it, exit doors may be required to open in the direction of escape irrespective of the number of occupants (e.g., spraying booths and premises licensed for entertainments purposes).

Sliding Doors

3.11 Sliding doors may be permitted on parts of routes of escape which would normally be used by staff such as in factories, warehouses or similar premises where a particular use may necessitate the provision of such doors. They should be marked "Slide to open" and be provided with a direction arrow indicating the direction of opening.

Rolling Steel Shutters, Iron Doors and Collapsible Gates

3.12 Rolling steel shutters, iron doors and collapsible gates on escape routes should be kept in the open position during the time the building is occupied and an appropriate notice fixed adjacent to each such shutter.

Wicket Doors

3.13 Full size wicket doors should be provided in large sliding doors and in large rolling shutters on escape routes and such doors should be clearly defined and be permanently marked as a fire exit using the appropriate signage. Where a wicket door is not of standard size it may not be suitable for the number of persons that may need to escape.

Glazing in fire-resisting doors

3.14 Although glazing provides additional safety in everyday use and can enhance the appearance of fire-resisting doors, it should never reduce the fire resistance of the door. The opening provided in the door for the fire-resisting glazing unit(s) and the fitting of the beading are critical, and should only be entrusted to a competent person. In nearly all cases the door and glazing should be purchased from a reputable supplier who can provide documentary evidence that the door continues to achieve the required rating.

Fire-resisting door furniture

Hinges

3.15 To ensure compliance with their rated fire performance, fire-resisting doors need to be hung with the correct number, size and quality of hinges. Hinges, in common with other hardware, must be of suitable quality and strength for the purpose for which they are intended. Thus hinges and the screws used to attach them to fire doors and frames should be made of iron, steel or brass and not of aluminium, plastic or an alloy with a melting point of less than 800 degrees centigrade.

3.16 Fire doors are normally of such a weight that they need to be fitted with three hinges per door. For extra large or unusually heavy doors four hinges should be used; hinges should be a least 100mm long. The hinges should be fixed as indicated in BS 4787-1: Internal and external wood doorsets, door leaves and frames. Specification for dimensional requirements. Also, BS EN 1935: Building hardware. Single-axis hinges. Requirements and test methods is the appropriate standard is a reference to be used.

3.17 Screws and bolts used in the fitting of any item of hardware to fire doors should be of iron, steel or high melting point alloy and of sufficient strength to carry the load, even under fire conditions, but not so long or placed that heat can be conducted through the thickness of the door.

Alternative door mountings

3.18 Although the most common method of hanging a door is to use single axis hinges, alternative methods are employed where the door is required to be double swing or mounted on pivots for other reasons. Floor mounted controlled door closing devices are the most common method regularly found with timber, glass and steel doors while transom mounted devices are commonly used with aluminium sections. In each case reference should be made to the fire test report for details as to compliance with the composition of the door assembly including the door mounting conditions.

Self-closing devices

3.19 All fire-resisting doors, other than those to locked cupboards and service ducts, should be fitted with an appropriately controlled self closing device that will effectively close the door from any angle. In certain circumstances, concealed, jamb-mounted closing devices may be specified and in these cases should be capable of closing the door from any angle and against any latch fitted to the door; spring hinges are unlikely to be suitable. Further information is available in BS EN 1154: Building hardware. Controlled door closing devices. Requirements and test methods. Rising butt hinges are not suitable for use as a self-closing device due to their inability to close and latch the door from any angle.

Signage

3.20 Except in the case of doors to hotel bedrooms and doors to and within dwellings (including flats and maisonettes), fire resisting doors should be marked with a permanent notice 'Fire door keep shut' which should comply with the Health & Safety (Safety Signs & Signals) Regulations 1996. Fire doors that are kept locked should be provided on the outer side with a sign that states' Fire Door keep locked'. Other signs for automatic doors are available and should be placed on the appropriate doors.

Letterplates

3.21 Letterplates can be fitted in fire doors and should be installed in the door and tested as required. Where a letter plate is fitted into a door it should be fitted together with an intumescent liner, as the use of intumescent liners significantly inhibits the spread of fire through the letter plate aperture of the door leaf. Only letterplates that have achieved the appropriate fire resistance period when tested in situ in a fire door should be used. They may be able to be retrofitted, but specialist advice should be sought.

Door viewers

3.22 In a door required to be fire-resisting, the incorporation of a door viewer device is satisfactory provided that it is fitted into a drilling that perforates and extends across the whole thickness of the door leaf. The presence of a viewer creates a weakness in a fire door and it must be shown by test that both the viewer itself and its installation do not result in early loss of integrity.(See Note)

Note: This information is taken from the ASDMA Best Practice Guide to fire doors, paragraph 19.3

Automatic door hold-open/release devices for self-closing fire doors

3.23 These devices are designed to hold open self closing fire doors or allow them to swing free during normal use. In the event of a fire alarm the device will then release the door automatically, allowing the self-closing mechanism to close the door. Such devices are particularly useful in situations where self-closing doors on escape routes are used regularly by significant numbers of

people, or by people with impaired mobility who may have difficulty in opening the doors. Typical examples of such devices include:

- electro-magnetic devices fitted to the fire resisting door which release when the fire detection and warning system operates, allowing a separate self-closer to close the door;
- electro-magnetic devices within the controlled door closing device which function on the operation of the fire detection and warning system; and
- 'free swing' controlled door closing devices, which operate by allowing the door leaf to work independently of the closing device in normal conditions. An electro-magnetic device within the spring mechanism linked to the fire detection and warning system ensures that the door closes on the operation of the system.
- 'Dorguard' type devices that are acoustic (listen for the sound of a fire alarm)

3.24 The standard for these devices is BS 7273 – 4 Code of practice for the operation of fire protection measures. Actuation of release mechanisms for doors.

Note: Free swing devices may not be suitable in some situations, such as corridors, where draughts are a problem and the doors are likely to swing uncontrolled, causing possible difficulty or injury to certain people e.g. those with certain disabilities, the elderly and frail, or young children. Automatic door hold open/release devices fitted to doors protecting escape routes should only be installed in conjunction with an automatic fire detection and warning system incorporating smoke detectors, that is designed to protect the escape routes in the building.

3.25 In all cases the automatic device should release the fire-resisting door allowing it to close effectively within its frame when any of the following conditions occur:

- the detection of smoke by an automatic detector;
- the actuation of the fire detection and alarm system by manual means e.g. operation of break glass call point;
- any failure of the fire detection and alarm system; or any electrical power failure.

3.26 Other devices, including self-contained devices which perform a similar function, that are not connected directly to a fire alarm system and are not therefore able to meet the above criteria are available and may be acceptable where a site specific risk assessment can show that they are appropriate. Such devices are unlikely to be suitable for use on doors protecting single stairways or other critical means of escape. In all cases where a door hold open device is used it should be possible to close the door manually.

3.27 A site specific risk assessment should be undertaken before any type of automatic door hold open/release device is installed. If you are unsure about the suitability of such devices in your premises, you should seek the advice of a competent person. Further guidance about automatic door hold open/release devices is given in BS EN 1155: Building hardware. Electrically powered hold-open devices for swing doors. Requirements and test methods or BS 5839-3: Fire detection and alarm systems for buildings. Specification for automatic release mechanisms for certain fire protection equipment.

Door co-ordinators (door selectors)

3.28 Where pairs of doors with rebated meeting stiles are installed it is critical that the correct closing order is maintained. Door coordinators to BS EN 1158: Building hardware. Door coordinator

devices. Requirements and test methods, should be fitted and fully operational in all cases where the doors are self-closing.

Installation and workmanship

3.29 The reliability and performance of correctly specified fire-resisting doors can be undermined by inadequate installation. It is important that installers with the necessary level of skill and knowledge are used. Accreditation schemes for installers of fire-resisting doors are available. Fire-resisting doors and shutters will require routine maintenance, particularly to power operation and release and closing mechanisms. Poor installation and modification may invalidate the test certificate.

3.30 Further information is available on fire-resisting doors in BS 8214: Timber-based fire door assemblies. Code of practice. For further guidance on the selection and maintenance of door furniture suitable for use on timber fire resisting and escape doors refer to The Building Hardware Industry Federation (BHIF) Code of Practice – Hardware for Timber Fire and Escape Doors.

4 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting our website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
Timber Research and Development Association Stocking Lane Hughendon Valley Bucks HP14 4ND Telephone: 01494 569600 Fax: 01494 565487 Web: www.trada.co.uk	Timber Research and Development Wood Information Sheet 1-32 : Fire Resisting Doorsets by Upgrading
Building Research Establishment Fire Research Station Bucknalls Lane Garston, Watford Herts. WD2 7JR Telephone: 1923 664000 Fax: 1923 664910 Web: www.bre.co.uk	Building Research Establishment Increasing the Fire Resistance of Existing Timber Floors 'Building Research Establishment Digest 220, Timber framed doors'.
British Standards Institution (Sales) 389 Chiswick High Road London W4 4AL Telephone: 020 8996 9001	BS 476-7: Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products

Fax: Web:	020 8996 7001 www.bsi.org.uk	BS 476 -20: Fire tests on building materials and structures. Method for determination of the fire resistance of elements of construction (general principles) BS 476 -21: Fire tests on building materials and structures. Methods for determination of the fire resistance of loadbearing elements of construction BS 476-22: Fire tests on building materials and structures. Method for determination of the fire resistance of non-loadbearing elements of construction BS 476-23: Fire tests on building materials and structures. Methods for determination of the contribution of components to the fire resistance of a structure BS 476-31.1: Fire tests on building materials and structures. Methods for measuring smoke penetration through doorsets and shutter assemblies. Method of measurement under ambient temperature conditions. BS 9999: Fire safety in the design, management and use of buildings. Code of practice BS 9991: Fire safety in the design, management and use of residential buildings. Code of practice BS 13501-1: Fire classification of construction products and building elements. Classification using data from reaction to fire tests

	BS 13501-2: Fire classification of construction products and building elements. Classification using data from fire resistance tests, excluding ventilation services BS 8214: Timber-based fire door assemblies. Code of practice BS 4787-1: Internal and external wood doorsets, door leaves and frames. BS EN 1935: Building hardware. Single-axis hinges. BS 7273–4: Code of practice for the operation of fire protection measures. Actuation of release mechanisms for doors PD 6512: Part 3: Guide to The Performance of Glass BS EN 1155: Building hardware. Electrically powered hold-open devices for swing doors. Requirements and test methods BS 5839-3: Fire detection and alarm systems for buildings. Specification for automatic release mechanisms for certain fire protection equipment. BS EN 1158: Building hardware. Door coordinator devices. Requirements and test methods
The Stationery Office (Mail, Telephone, Fax & Internet Orders) TSO Orders/Post Cash Dept PO Box 29 Norwich NR3 1GN Telephone: 0870 600 5522	Building Regulations- Approved Document B and Approved Document N Fire safety risk assessment offices and shops ISBN-13: 978 1 85112 815 0 Fire safety risk assessment factories and warehouses ISBN-13: 9778 1 85112 816 7

Fax orders: 0870 600 5533 Web: www.tso.co.uk	Fire safety risk assessment premises providing sleeping accommodation ISBN-13: 978 1 85112 818 1 Fire safety risk assessment residential care premises ISBN-13:978 1 85112 818 1 Fire safety risk assessment educational premises ISBN-13: 978 1 85112 819 8 Fire safety risk assessment small and medium places of assembly ISBN-13: 978 1 85112 820 4 Fire safety risk assessment large places of assembly ISBN-13: 978 1 85112 821 1 Fire safety risk assessment theatres and cinemas ISBN-13: 978 1 85112 822 8 Fire safety risk assessment outdoor events ISBN-13: 978 1 85112 823 5 Fire safety risk assessment healthcare premises ISBN-13: 978 1 85112 824 2 Fire safety risk assessment the transport network ISBN-13: 978 1 85112 825 9 Fire safety risk assessment animal premises and stables ISBN 978 1 85112 884 6 Fire safety – Means of Escape for Disabled people ISBN 978 1 85112 873 7
ASDMA https://www.asdma.com/knowledge-centre/ ASFP https://asfp.associationhouse.org.uk/default.php?cmd=213 Glass and Glazing Federation	Best Practice Guide to Timber Fire Doors Free Download ASFP Publications Glazing information

http://www.ggf.org.uk/ The Building Hardware Industry Federation (BHIF) https://www.thenbs.com	Code of Practice – Hardware for Timber Fire and Escape Doors.

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN93

1. Person Centred Fire Risk Assessments (PCFRAs)
2. Personal Emergency Evacuation Plans (PEEPs)

Rev 1, 01 May 2022

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Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) in London.

This Guidance Note provides information on the requirement and responsibilities for implementing PCFRA and PEEP processes in residential buildings that cater for people that are, to varying degrees, dependant or vulnerable.

If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Person Centred Fire Risk Assessments (PCFRA)

(Ref: National Fire Chiefs Council - Fire Safety in Specialised Housing Guide)

What is a Person Centred Fire Risk Assessment (PCFRA)?

1.1 A PCFRA is a simple risk assessment process, completed with the residents, that considers their individual characteristics, behaviours and capabilities. This is to identify those that may have a 'higher risk' from fire, and to help consider what actions/control measures may need to be taken to reduce those risks to a reasonable level. In order to help simplify this process a quick and simple 'Checklist' PCFRA has been attached as Appendix 1 for information.

What are the 'higher risks' that should be considered and identified by the PCFRA?

1.2 The 'higher risks' are

- Resident behaviour that generates an increased risk of a fire starting – signs of unsafe smoking, unsafe cooking, unsafe use of heaters, unsafe use of candles, faulty or misuse of electrical equipment, previous fires, burns or scorch marks, oxygen use, etc.
- Reduced capacity of a resident to respond to a fire or alarm – mental health, cognitive/decision making, alcohol/drug dependency, sensory impairments, etc.
- Impaired ability of a resident to make their way to safety – restricted mobility/bed/chair bound, sensory impairments, hoarding, etc.

Who should complete the PCFRA process and when?

1.3 This will depend on the building type, ownership and operation, whether managers/staff are present and existing arrangements for engagement with residents. In general – it can be completed by the landlord/housing provider, housing managers, care or support providers, carers, family members or a person that has regular contact with the resident. However, the PCFRA results should be considered within the premises Fire Risk Assessment as they should inform the overall emergency plan, and consider any provision of additional protection systems or measures that are needed to assist people to evacuate their own flat/room and leave the premises if appropriate. For this reason it is likely that the landlord/housing provider and the care and support providers are best placed to collaborate and implement this process. The table below provides an overview of these factors.

Premises Type	PCFRA Required	Who should take responsibility for implementing the PCFRA process?	Further Guidance

Sheltered Housing Staffed	√	Housing Provider/Owner (or individual care or support providers for those residents receiving support)	Fire Safety in Specialised Housing Guide
Sheltered Housing Not staffed	√	Housing Provider/Owner (or individual care or support providers for those residents receiving support)	Fire Safety in Specialised Housing Guide
Extra Care facilities Staffed	√	Housing Provider/Owner or Care or support provider organisation (or individual providers for those residents receiving care)	Fire Safety in Specialised Housing Guide
Extra Care facilities Not staffed	√	Housing Provider/Owner (or individual Care Providers for those residents receiving care)	Fire Safety in Specialised Housing Guide

Premises Type	**PCFRA Required**	**Who should take responsibility for implementing the PCFRA process?**	**Further Guidance**
Supported Living Staffed	√	Housing Provider/Owner or Care/Support Provider organisation	Fire Safety in Specialised Housing Guide
Supported Living Not Staffed	√	Housing Provider/Owner or a Care/Support Provider organisation	Fire Safety in Specialised Housing Guide

1.4 It is anticipated that a PCFRA process will be completed when a resident first occupies a flat/room and is reviewed annually or if a residents circumstances are known to change (eg, following illness, deterioration in mental/physical health, use of medication). For existing residents it is anticipated that the process can be completed at the same time as other regular contacts (ie tenancy checks, gas safety inspections, welfare visits, care visits etc.) or as a one off exercise by property managers/care or support providers etc. It is accepted that some residents may be difficult to engage and coverage may be incomplete.

What actions/measures need to be taken if residents at higher risk are identified, and who should take those actions?

1.5 This will depend on the building type, ownership and operation, and the nature/number of risks identified. In general – if limited risks are identified they may be resolved quickly by one of the agencies - housing or care and support providers, Local Authority or Fire and Rescue Service. Examples of control measures are included as Appendix 2.

1.6 However, it is recommended that if a number of significant risk factors are identified a referral should be made to the Local Authority Adult Social Care Team and local Fire and Rescue Service to trigger collaboration between them and the housing/care providers/resident. Control measures can than be considered to reduce the risks from fire – such as safer smoking/cooking equipment, fire retardant bedding; provision of additional protection systems such as telecare enabled smoke detection, water suppression, or relocation to more suitable accommodation.

1.7 The outcomes of the PCFRA may also identify that a resident has reduced ability to self evacuate from the property and in such cases the PCFRA will also inform a documented "PEEP" that will provide information to staff (if present) and operational fire crews to prioritise evacuation and rescue if needed. See the next section of this guide for more detail on 'PEEPs'.

Where should PCFRAs be kept?

1.8 A PCFRA will only need to be kept for those residents at higher risk that need additional control measures. In these cases the content of the PCFRA may contain some personal information and it is recommended that they are retained by the person/organisation that has taken responsibility for implementing the process. The organisation collecting and processing personal information should ensure that this is in accordance with their data policies and the requirements of legislation.

2 Personal Emergency Evacuation Plans (PEEPs)

What is a Personal Emergency Evacuation Plan (PEEP)?

2.1 A PEEP is a documented plan of action agreed with residents of flats/rooms that have a mobility impairment or reduced capacity to self evacuate in the event of a fire.

What should they include?

2.2 It should include any actions that they should take themselves if a fire occurs in their own flat/room, such as operating an alarm or pendant, and what actions may then be needed by staff (if present) or by the Fire Service if they decide that the resident needs to be evacuated due to a fire in another part of the building. It may also include more details about the methods of evacuating the resident and any equipment needed.

2.3 As a minimum for Fire Service purposes - it should be a simple list that includes the flat number, an indicator that the occupier will need assistance to evacuate if required to leave the building, and any critical medical equipment that it may be essential to take (e.g. Oxygen cylinders/ inhalers).

Where should PEEPs be kept?

2.4 The PEEPs should be available to staff if present, and in addition the key information should be available to the fire service as they arrive at an incident. As a minimum requirement a simple list should be kept in a Premises Information Box or similar arrangement near the entrance lobby to the building for the Fire and Rescue Service to access, together with a plan of the building showing layout and flat locations. You will need to have a process that to achieve this whilst also keeping the data secure from unauthorised access.

What types of premises should have PEEPS in place?

2.5 Premises that require PEEPS are as follows:

Premises Type	PEEP Required	Purpose (Who for)	Guidance
Sheltered Housing 24/7 staffed	√	For Staff to initiate building evacuation plan & for FRS operational crews on arrival	PBBF Guide, BS 9991, Specialised Housing Guide
Sheltered Housing Not 24/7 staffed	√	For FRS Operational crews on arrival	PBBF Guide, BS 9991, Specialised Housing Guide
Extra Care facilities 24/7 Staffed	√	For Staff to initiate building evacuation plan & for FRS operational crews on arrival	Fire Safety in Specialised Housing Guide
Extra Care facilities Not 24/7 staffed	√	For FRS operational crews on arrival	Fire Safety in Specialised Housing Guide
Supported Living 24/7 staffed	√	For Staff to initiate building evacuation plan & for FRS operational crews on arrival	Fire Safety in Specialised Housing Guide
Supported Living Not 24/7 staffed	√	For FRS Operational crews on arrival	Fire Safety in Specialised Housing Guide
General Needs Blocks of Flats (if Temporary Total Evacuation in place)	√	For Staff to initiate building evacuation plan & for FRS Operational crews on arrival	NFCC Guidance – Simultaneous Evacuation

General emergency evacuation for communal areas

2.6 As well as the PEEPs mentioned above to support individual residents with reduced mobility/capacity within their own flats/rooms it should be noted that a 'general emergency evacuation plan' should also be in place. This will inform residents and visitors using communal areas (corridors, lounges, dining areas, laundry rooms etc.) what they should do in the event of a fire or a fire alarm sounding. Generally this will be to leave the building via the nearest safe exit.

Appendix 1

Checklist for Person-Centred Fire Risk Assessment

This simple checklist can be used by anyone who has contact with vulnerable residents -family members, informal or paid carers, housing providers, adult Social Care, Health or Care Services. Organisations using the checklist should ensure their contact details are included on the reverse. The content (notably the checked boxes) may be adapted if required.

Name of Resident			
Full Address			
Date		Form completed by:	

1. Does the individual have an increased fire risk?

Yes ☐ If yes, tick all the fire risk factors they exhibit

No ☐ Skip to next question

- ☐ Smoking – with signs of unsafe use of smoking or vaping materials (e.g. smoking in bed).
- ☐ Use of emollient creams that are petroleum or paraffin based.
- ☐ Air pressure mattress or oxygen cylinders are used.
- ☐ Unsafe use of portable heaters (e.g. placed too close to materials that could catch fire).
- ☐ Unsafe cooking practices (e.g. cooking left unattended).
- ☐ Overloaded electrical sockets/adaptors or extension leads.
- ☐ Faulty or damaged wiring.
- ☐ Electric blankets used.
- ☐ Previous fires or near misses, burns or scorch marks on carpets and furniture.
- ☐ Unsafe candle/tea light use (e.g. left too close to curtains or other items that could catch fire or within easy reach of children or pets).
- ☐ Other (please specify):

2. Would the individual be less able to react to an alarm or fire?

Yes ☐ If yes, tick all the fire risk factors they exhibit

No ☐ Skip to next question

- ☐ Mental health issues (e.g. dementia, anxiety or depression).
- ☐ Cognitive or decision making difficulties.
- ☐ Alcohol dependency or misuse of drugs, debilitating prescription drugs.
- ☐ Sensory impairments (e.g. hard of hearing or sight loss).
- ☐ Other (please specify):

3. Does the individual have a reduced ability to escape?

Yes ☐ If yes, tick all the fire risk factors they exhibit

No ☐ Skip to next question

- ☐ Have restricted mobility, are frail or have a history of falls.
- ☐ Are blind or have impaired vision.
- ☐ Lacks capacity to understand what to do in the event of a fire.
- ☐ Is a hoarder, or there are cluttered or blocked escape routes.
- ☐ Are bed or chairbound.
- ☐ Internal doors are left open at night.
- ☐ Would be unable to unlock front door to escape.
- ☐ Other (please specify):

4. Are there any smoke or heat alarms fitted within the individual's home?

Yes ☐

No ☐

If yes, please specify which rooms have them fitted:

5. Has a carbon monoxide alarm been fitted anywhere that gas or solid fuels are used?

Yes ☐

No ☐

If yes, please specify which rooms have them fitted:

What to do next

If there are any questions in sections 1–3 that have been answered 'Yes', or you have identified that there are no smoke or heat alarms fitted, or they are broken or poorly sited, this suggests there is a risk from fire. Immediate actions are required to ensure agreed safety measures are in place:

If you are a family member or an informal carer:

Contact your local Fire & Rescue Service to arrange for a free home fire safety visit:

Tel:

Email:

Web:

In addition, extra support and advice can be sought from Adult Social Care Teams and your housing provider or landlord where serious risk has been identified.

If you are employed by a company or organisation:

- Return this checklist to your manager for a full Person-Centred Risk Assessment to be conducted where necessary.
- Inform the resident or other family members of the risks identified, if you are certain they will understand.
- If a care plan exists, all actions taken should be noted in that plan.
- Ensure appropriate partnership referrals are made as required.

Fire safety in the home

What happens during a home fire safety visit? Firefighters or trained staff will visit the home and offer advice based on individual needs, this includes information on how to **prevent** fires, the importance of smoke alarms to **detect** a fire and having **escape** plans in the event of a fire. They will usually also fit smoke alarms if required.

Some basic fire safety advice has also been provided below:

Prevention

- It is safer not to smoke; but anyone who does should try to smoke outside and always make sure cigarettes are put out properly.
- Never smoke in bed, or anywhere else, if there's a chance of falling asleep.
- Use fire-safe ashtrays and fire-retardant bedding, nightwear and throws.
- Ensure paraffin based emollient creams are replaced with non-flammable alternatives.
- Candles, tea lights and incense burners should only be placed in stable, heat-resistant holders. Keep these items or any other type of naked flame well away from curtains, furniture and clothes.
- Sit at least one metre away from heaters and keep them well away from anything that can catch alight.
- Don't overload electrical sockets.
- Close all doors at night as this helps to prevent fire and smoke spreading.
- Switch off and unplug electrical items such as TVs and avoid charging devices like mobile phones whilst asleep.

Early warning and detection of a fire is essential

- As a minimum, fit at least one smoke alarm on every level of the home and in any room where a fire could start. The ideal position for these are usually in rooms that are used the most, in hallways and anywhere electrical equipment is left switched on.
- Fitting multiple linked smoke alarms, that all activate together, is the best way to be alerted in the event of a fire. For some, the provision of a Telecare monitoring system may also be beneficial.
- Specialist alarms can be fitted for people who may have a delayed response to escape – for example; strobe light and vibrating pad alarms for the deaf or hard of hearing.
- Remember to test all alarms monthly.

Escape

- Make sure escape routes are kept clear of anything that may slow down or block exit routes.
- Ensure security gates can be easily opened from the inside without the need for a key. Keep door and window keys where everyone can find them.
- Mobility aids and any methods of calling for help should always be kept close to hand (e.g. mobile phone, link alarm/pendant).

Appendix 2

Person Centred Fire Risk Assessment
Control measures to reduce fire risk

Risk	Fire risk factors:	Control measures recommended to reduce fire risk:
High	☐ **Unable to respond** to a fire alarm or has poor mobility through dementia, learning difficulties or sensory impairment, alcohol or drug misuse, debilitating prescription drugs. ☐ Signs of unsafe smoking practices e.g.; smoking in bed, careless disposal of smoking materials, scorch marks or burns on clothing, flooring or furniture. ☐ Smokes and uses home oxygen or paraffin based emollient creams. ☐ History of previous fires. ☐ Unsafe cooking practices ☐ Unsafe use of electrical items (such as heaters to dry clothes or overloaded electrical sockets) ☐ Extensive hoarding (clutter image rating of level of 5 or above).	☐ Contact the local FRS to arrange a priority Home Fire Safety Visit. ☐ Provide items such as; fire retardant bedding, aprons, nightwear, safer ashtrays and give immediate safe smoking and safe cooking advice. (Local FRS may provide) ☐ Arrange for the installation of a Social Alarm monitoring service (Telecare) and fit specialist interlinked smoke detection in all areas of risk. ☐ Consider fitting Domestic Fire Suppression System (sprinklers) or Personal Protection System (water mist for non mobile people) ☐ If complex - notify the relevant local authority, care and housing co-ordinators to initiate safeguarding procedures and a multi agency review of care and housing needs. ☐ Develop PEEP for use by staff (if present) and FRS. ☐ Ensure all preventive measures regularly reviewed.
Medium	☐ **Able to respond** to a fire alarm. ☐ Signs of unsafe smoking practices e.g.; smoking in bed, careless disposal of smoking materials, scorch marks or burns on clothing, flooring or furniture. ☐ Smokes and uses home oxygen or paraffin based emollient creams. ☐ History of previous fires. ☐ Unsafe cooking practices ☐ Unsafe use of electrical items (such as heaters to dry clothes or overloaded electrical sockets) ☐ Hoarding - clutter image rating to level 4.	☐ Contact the local FRS to arrange a Home Fire Safety Visit. ☐ Provide items such as; smoke alarms, fire retardant bedding, aprons, nightwear, safer ashtrays and give immediate safe smoking and safe cooking advice. (Local FRS may provide) ☐ Arrange for the installation of a Social Alarm monitoring service (Telecare) linked to smoke detection where required ☐ Consider fitting Domestic Fire Suppression System (sprinklers) or Personal Protection System (water mist) ☐ If complex - notify the relevant local authority, care and housing co-ordinators to initiate safeguarding procedures and a multi agency review of care and housing needs. ☐ Ensure all preventive measures regularly reviewed.
Low	☐ There is currently no evidence of fire risk indicators (see list above). ☐ Is able to respond to smoke/fire alarms and leave the property unaided.	☐ Test smoke alarms monthly to ensure they are in good working order. ☐ Regularly review fire risk and fire safety provisions if there is significant change to either the individuals needs or any property modifications.

LONDON FIRE BRIGADE

Fire Safety Guidance Note: Fires involving balconies in Residential Premises – Information for Housing Providers, Residents Groups and Individual Residents

GN95

Rev 1, 01 May 2022

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Guidance Note, published by the Commissioner, provides information for Housing Providers, Residents Groups and Individual Residents, highlighting the hazards, risks and the danger of fires on and involving balconies in residential premises.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given here or require advice on another topic please visit your local Fire Safety Office, Telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the LFB web site at https://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by the Fire Safety Regulation Department, London Fire Brigade (LFB)

1.2 The purpose of this Guidance Note is to provide information to Housing Providers, Residents Groups and Individual Residents on the hazards, risks and causes of fires on and involving balconies. This information should be used to inform the review of fire risk assessments and the management of balcony fire risk by stakeholders responsible for fire safety in premises including the Responsible Person (RP), premises management resident groups and individual residents.

1.3 Following a number of fires that have occurred on balconies within the London area, the LFB have carried out a review of fires involving balconies. This Guidance Note summarises some of the key findings and provides case studies to illustrate some of the risks.

1.4 The Building Regulations 2010 (Par. B4, Sched 1) sets out that:

" the external walls of the building shall adequately resist the spread of fire over the walls and from one building to another, having regard to the height, use and location of the building".

1.5 Approved Document B (Par. 12.5) sets out that:

" the external envelope of a building should not provide a medium for fire spread if it is likely to be a risk to health or safety"

2 Summary of Incidents Discussed

Key findings

2.1 Over recent years the LFB Fire Investigation Team have attended a large number of incidents where fires have occurred on balconies. The cause of those fires has often been due to unsafe disposal of cigarettes by the resident or the resident above, or the use of barbecues on the balconies.

2.2 Balconies may sometimes be used to store items of furniture or electrical appliances, which has in some cases contributed to the fire or has been the cause of the fire. The majority of these type of incidents have occurred in purpose built blocks of flats where the balcony is private.

2.3 The research has shown that there have been 388 fires on balconies in this 26 month period. The frequency of balcony fires equates to an average of 16 fires per month.

Key causes of balcony fires were:

- Smoking materials 67%
- Lighters at 10%
- Matches10%
- Barbecues 7%

2.4 The type of premises involved, tend to be purpose built blocks of flats and maisonettes with balconies. Some of the newer build premises are frequently constructed with timber or composite material decking and in many cases, these have provided additional fuel to the fire. In addition, the structure has become involved and spread the fire to the flat or maisonette, other balconies and other flats.

3 Taking steps to prevent this problem

3.1 There is a need for both the Responsible Person and residents to minimise the risk of fires on balconies. In particular, residents should keep storage on balconies to a minimum in order to reduce the fuel load.

3.2 The storage and use of white goods on balconies should be discouraged or prohibited as they contribute to excessive fire-loading and are potential ignition sources.

3.3 The use of BBQs on balconies should be discouraged. All stakeholders should encourage the responsible use of BBQs if permitted, with guidance on safe usage. However, the terms of an individual lease / tenancy agreement etc. may prohibit their use..

3.4 Smoking on balconies should be discouraged. All stakeholders should encourage responsible smoking behaviours; when smoking is permitted, to ensure careless disposal does not cause a fire on a balcony or elsewhere. This note should be widely distributed to ensure residents understand the consequences of careless use and disposal of smoking materials..

3.5 The premises fire risk assessment (FRA) should identify and propose mitigation for where balconies are utilised for storage and other uses.

3.6 The use of sprinklers/Automatic Fire Suppressions Systems vastly reduces the risk of a fire developing into a major fire and spreading inside the property.

3.7 In 2018/19, The Ministry of Housing, Communities & Local Government issued a range of guidance that relates to balconies. https://www.gov.uk/government/publications/balconies-on-residential-buildings-advice-note See Section 5 (Case Study Examples) for further details.

4 What am I required to do as a Landlord or resident?

What am I required to do as a Landlord?

4.1 As a landlord you are required to consider the materials used in construction of the external envelope of the building. This should include the construction of balconies which have the potential for vertical and horizontal fire spread.

4.2 A suitable and sufficient Fire Risk Assessment needs to be carried out and should consider the use of balconies and external areas in regard to managing associated risks such as use of barbecues on balconies and reducing risks from smoking related fire hazards.

4.3 It is the responsibility of building owners to inform residents of the risks associated with the presence of combustible materials on balconies. This includes the use of barbecues, flammable materials and smoking; as this increases the risk of fire and fire spread. It also includes the monitoring of storage on balconies by residents in order to reduce fire load and potential ignition sources.

4.4 Under The Order there is a requirement for the Responsible Person (RP) to manage the premises to ensure the safety of residents and staff in the common areas and escape routes in the event of a fire. However, private balconies are not classed as common areas and the management of these should be incorporated within individual lease/tenancy agreements.

What am I required to do as a Resident?

4.5 Residents should not hinder the landlord in managing the property.

4.6 Residents should adhere to tenancy/lease agreements in particular to the use of the balconies.

4.7 Residents should not store combustible materials, including white goods or use barbecues and potential ignition sources on their balconies. Residents with concerns about the fire safety of their premises should contact their managing agent, management company or landlord in the first instance. They should be able to provide them with information on fire safety of the building and how this is being managed. Building owners should respond promptly to any such requests.

4.8 If residents are unable to obtain fire safety information, or believe their concerns are not being addressed appropriately, then there is information on the government website about organisations who can provide support at: https://www.gov.uk/guidance/building-safety-programme-other-fire-safety-concerns

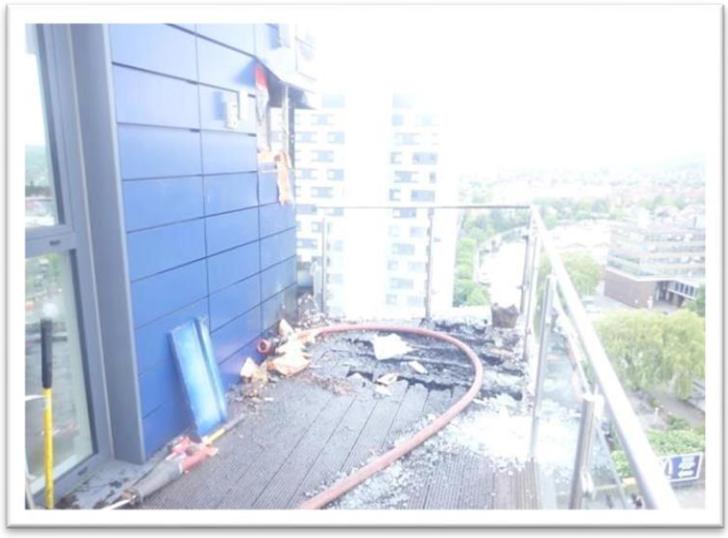
5 Case Study Examples

Case Study 1

A fire occurred on the balcony of a flat on the 13th floor of a 14 floor purpose built block of flats, built in 2015.

The fire occurred as a result of unsafe disposal of a cigarette into a planter that contained dry peat. There was no fire spread into the flat.

There was some fire spread via the external fabric of the building and insulation board.



The image above shows the area of origin and the spread of fire to the external fabric of the building. There was also fire damage to the wooden decking boards. The Building (Amendment) Regulations 2018 now require that balconies attached to external walls of buildings over 18 metres are constructed of non combustible materials.

In terms of wood material, classifications need to be followed. The highest possible European class for fire retardant treated wood is class B. External use wood requires re-application of fire retarding to allow for weathering.

The image above shows the spread of the fire upward along the exterior cladding.

Fire Safety Issues:

- During this incident it was noted that the Automatic Opening Ventilation (AOV) system failed to operate upon activation of a break glass override on the 13th floor.
- The dry rising main appeared to be faulty and this was reported to the housing provider at the time of incident.

Case Study 2

A fire occurred on the 4th floor of a six floor purpose built flat in the balcony area.

Below are the main points of the incident.

Fire Spread:

The fire was contained to the flat of origin and was believed to have been caused accidentally by candles/tea lights being to close to combustible articles. The whole of the balcony was damaged and the lounge had approximately 80% damage due to the spread of fire, heat and smoke. The smoke also travelled throughout the flat leading to further damage. The fire was able to spread from the balcony to the adjacent dwelling / flat via an open window.

Fire Safety:

The block of flats was noted to have good fire safety measures in place that worked well and the smoke had been contained within the flat.

Evacuation: 75 persons self evacuated the block and LFB firefighters worked hard to bring the incident under control as quickly as possible.

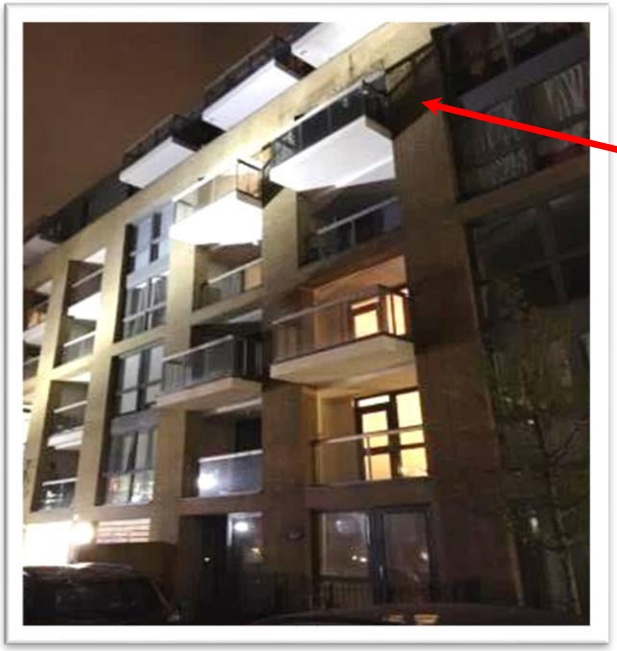


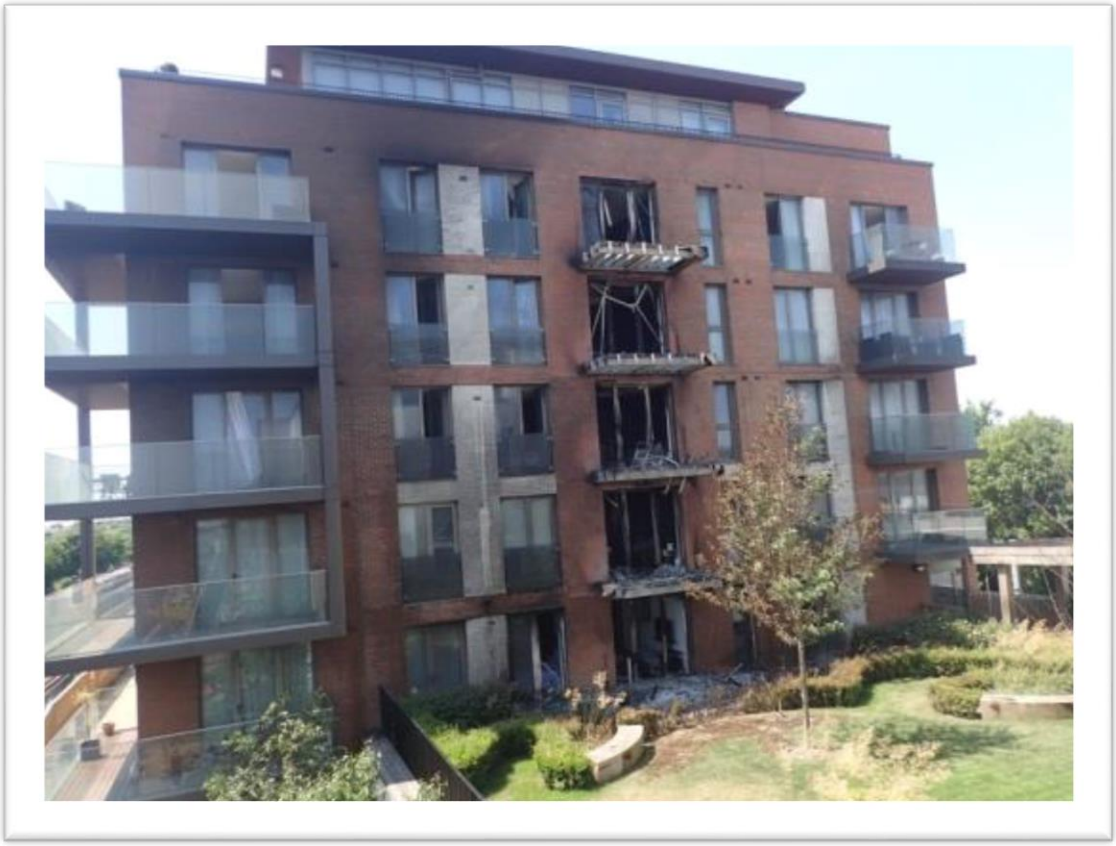
Image of balcony where smoke damage is visible on the 4th floor but the balcony appears to be relatively intact.

The fire doors at the premises were well constructed and effectively held the smoke back from the common parts.

Case Study 3

A fire involving balconies outlined the difference that Automatic Fire Suppression Systems can make in terms of controlling fire spread. The balconies were constructed of steel frames, aluminium fascia, composite decking, plastic soffits complete with balustrade glazing. The composite decking added to the fuel load of the fire.

The fire originated on the third floor balcony then spread to the balconies above, up to the sixth floor. Sprinkler activation prevented fire spread into each of the dwellings adjacent to the balconies. A research report on the fire emphasised that the progression of the fire would have been much more severe if the sprinklers were not in place.



The image above showing the extent of the fire damage. (see Section 6, Further Information).

Case Study 4

This fire occurred in a student accommodation of 9 floors. Originating on a 4th floor balcony, of which 10% was damaged by fire.

There was no fire spread externally or internally although smoke was able to enter the premises.

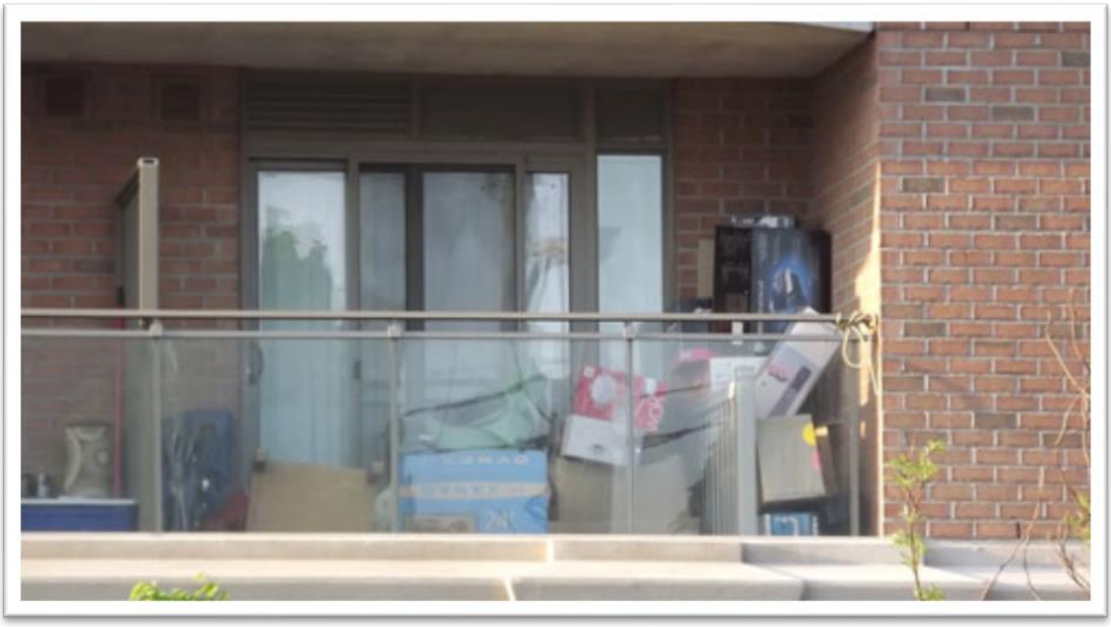
The premises were arranged in a maisonette style and each flat occupying two floors contained up to 6 bedrooms with a shared kitchen, lounge and bathroom facilities.

Each flat had a balcony with wooden decking. The cause of the fire was unsafe disposal of smoking materials. A large amount of discarded cigarette ends were found on the balcony area. The student accommodation had a 'No Smoking' policy.

Fire Safety Issues:

- Detection and warning The fire alarm had been silenced prior to the evacuation of the premises with smoke still logging within corridors. There were active zones on the fire alarm panel showing 'Fire' on several floors.
- Approximately 30 people had evacuated to the reception area and were unaware of the agreed Emergency Rendezvous Point.
- Staff training records were unavailable during the incident.
- No smoking policy. This would appear to have been poorly managed as there was clear evidence of smoking on balconies.
- Staff training. Crews had to explain the fire alarm panel operation to the onsite security staff during the incident.

It is essential that the Responsible Person ensures that fire safety measures, policies and training are fit for purpose and up to date. An uncontrolled fire has the potential to lead to injury or death.



Example of storage on a balcony that should be avoided.

Example of barbecue on a balcony and the risk of fire. This use should be avoided.

6 Further Information/Resources

6.1 There was a significant fire in West Hampstead Square on 3 July 2018 which involved a range of balconies. The property was fitted with sprinklers that actuated and despite the intensity of the fire, mitigated the impact, fire spread and damage. A report was produced by the Brigade's Automatic Fire Suppression Systems (AFSS) coordinator and can be found on the LFB website or via the link here: West Hampstead Square AFSS Activation - Case Study.

6.2 The Building Research Establishment (BRE) carried out research into balcony fires with a report published in July 2016. The report can be found either by searching BRE's website or via the link here: Fire-safety-and-balconies-July-16.pdf

6.3 The Ministry of Housing Communities and Local Government (MHCLG) have issued a letter https://www.gov.uk/government/publications/circular-letter-regarding-the-application-of-requirement-b4-of-the-building-regulations-2010 in regards to the amended building regulation (Requirement B4) which states that from December 2018 "the ban on combustible construction materials in the external walls of buildings below 18m are not expressly prohibited, it is necessary to consider the risk from fire spread to health and safety in relation to buildings of any height". This is in reference to The Building Amendment Regulations 2018. The link above will open the letter.

6.4 The following link opens a Government issued advice note on balconies for residential premises. https://www.gov.uk/government/publications/balconies-on-residential-buildings-advice-note

6.5 The following link is the amended Building Regulations 2018.
http://www.legislation.gov.uk/uksi/2018/1230/contents/made

6.6 The following links provide documents advising on the Fire Risk Assessment in regards to premises where there is a sleeping risk:

- https://www.gov.uk/government/publications/fire-safety-risk-assessment-sleeping-accommodation
- https://www.local.gov.uk/fire-safety-purpose-built-flats

General fire safety advice

General fire safety advice can be obtained from the London Fire Brigade website: Follow link https://www.london-fire.gov.uk/safety/

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN 101
Smoke ventilation controls for use by firefighters – residential premises

Rev 1, 01 May 2022

Contents

Explanatory Note:

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended), hereafter referenced as 'The Order', in London.

This Guidance Note provides fire safety advice in respect of smoke ventilation controls provided for use by firefighters when responding to emergencies in residential premises.

This Note is one of a series produced by the Fire Authority to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit the London Fire Brigade web site at http://www.london-fire.gov.uk.

1 Introduction

1.1 This document has been prepared by London Fire Brigade (LFB), Fire Safety Department.

1.2 The purpose of this Guidance Note is to provide information to those designing smoke ventilation systems, Approving Authorities/Building Control bodies and Responsible Persons on smoke ventilation controls provided for use by firefighters. This Guidance Note addresses controls for smoke ventilation systems in residential premises, such as purpose-built blocks of flats.

1.3 Although some of the guidance will also be relevant to other premises types, in some instances this will not be the case and it is recommended that you contact the local Fire Safety team for further advice. For more complex or fire-engineered premises or systems, the local Fire Safety team may consult LFB Fire Engineering Group.

1.4 The design of smoke ventilation systems for residential premises has become increasingly complex over the years, with a greater proportion of premises where a performance-based/fire-engineered design approach has been adopted. The variety of different systems available means that firefighters may encounter a wide range of system types and they cannot be expected to have a comprehensive level of knowledge in this area.

Therefore, there is a need to standardise the appearance and functionality of override controls, control panels and indication equipment.

1.5 The Building Regulations 2010 (Requirement B5, Schedule 1) sets out that:

"(1) The building shall be designed and constructed so as to provide reasonable facilities to assist firefighters in the protection of life

(2) Reasonable provision shall be made within the site of the building to enable fire appliances to gain access to the building."

1.6 Regulatory guidance, including Approved Document B and BS 9991, provides recommendations as to how Requirement B5 can be satisfied. This includes the use of smoke ventilation to protect the means of escape and assist firefighters within the common parts of residential premises.

1.7 BS 9991 makes reference to the Smoke Control Association *Guidance on Smoke Control to Common Escape Routes in Apartment Buildings (Flats and Maisonettes)* (hereafter referred to as the SCA Guide), which provides industry best-practice guidance on the design of smoke ventilation systems for residential premises. LFB has been involved in the development of this guidance and encourages its use.

1.8 The SCA Guide includes recommendations as to how systems can be designed to facilitate fire and rescue service operations, including systems which fall outside of the scope of Approved Document B and BS 9991, such as smoke ventilation serving extended common corridors.

1.9 The information in this Guidance Note is supplementary to regulatory and industry guidance and is intended to help explain LFBs preference for the design of the elements of smoke ventilation systems that firefighters may need to interact with during an emergency incident.

2 Identification and signage

2.1 It is important that all elements of a smoke ventilation system that firefighters may be expected to interact with are clearly identified, whether the purpose is to provide them with information about the status of the system or to enable them to alter its operation.

2.2 To discourage use by unauthorised persons and to clearly identify controls as being for fire and rescue service use only, all override controls should be labelled 'for firefighter use only'.

2.3 Manual control points and control and indicating equipment (e.g. system control panels) should be clearly identified as to their use and function. Labels/signage should indicate the area served by the system and each position/function of the control should clearly indicate its function, e.g. 'SMOKE VENT: STAIR' with 'AUTO', 'OPEN' and 'CLOSE' switch positions.

Guidance for specific types of override controls and systems is provided in section 3.

2.4 The requirements given in BS ISO 21927-9 *Smoke and heat control systems Part 9: Specification for control equipment* should be followed. These requirements cover the dimensions of control enclosures and lettering as well as the following requirements for the colour of manual override controls:

(i) **5.3.4.2 Colours**

The following colours shall be used:

- visual operation board: clean white to RAL 9010;
- lettering: deep black to RAL 9005;
- housing: deep orange to RAL 2011.

2.5 The housing and visual operation board of any manual control points which are intended for maintenance and not for firefighter use should be coloured white.

Premises information

2.6 Except in the case of simple buildings, LFB recommends that premises information for firefighter use is provided and is housed in a enclosure located where it is readily accessible to firefighters upon arrival at an incident.

Further guidance is provided in LFB Guidance Note 70 *LFB premises information boxes*.

2.7 Where a smoke ventilation system is provided, premises information plans should clearly identify the areas served/ventilated and the location of override controls, including any central control and indication/override panel. The type of system should be identified in each case.

2.8 For more complex systems, for example mechanical smoke ventilation systems serving extended common corridors, it may be more appropriate to provide a separate set of plans for the smoke ventilation system with the protected spaces shaded/hatched and inlet/extract points identified.

2.9 A brief and simple summary of each system, cross referenced to the relevant plans, should be provided. As a guide, this summary should be no more than two sides of A4 paper in length and should include the following information:

- Part(s) of premises protected – *for example, stair cores, levels and areas protected*.
- Reference to any other systems covered by other summary sheets
- Type of system – *for example, natural window AOVs, natural smoke shaft, mechanical smoke shaft, pressurization of lobby, stair and lift shaft etc.*
- Brief description of system operation/function
- Locations of override controls
- Function of override controls

  This should include basic instructions for firefighters on how to initiate smoke ventilation manually in any protected space, how to turn off the system and how to select a different protected space to ventilate. Information should also be given on the location of any keys required to access and operate the system (where applicable, although please refer to paragraph 3.8, below).

  The amount of time required for system components to cycle and commence extract from a different space should be clearly stated.
- Emergency contact details for the Responsible Person(s) or any Competent Persons who they may have appointed to maintain smoke ventilation systems/equipment

2.10 An exemplar smoke ventilation coverage plan and summary sheet are given in Appendix 1.

2.11 The summary sheet and plans should be laminated/encapsulated and presented in 12 point type.

2.12 It is recommended that the local LFB Fire Safety team is contacted if further guidance is sought on the format of premises information plans and documentation. Contact with our Fire Safety teams can be made by calling 020 8555 1200 x89171.

2.13 In addition to providing basic system information and operating instructions for firefighters to refer to during an incident, the summary sheet and plans are intended to assist firefighters during familiarisation visits to premises, which are undertaken in accordance with our duties under Section 7(2)(d) of the Fire and Rescue Services Act 2004 and also to provide information to our Fire Safety Inspecting Officers when undertaking fire safety audits of premises under The Order.

3 Function of controls

3.1 Systems (with the exception of openable vents) should be automatic in their operation and not rely upon the interaction of firefighters to achieve their performance objectives during either the means of escape or fire-fighting phases. However, controls or overrides are useful for firefighters to turn particular aspects of a system off or on if conditions change during firefighting.

3.2 These controls should be logical and intuitive to operate. Fire and rescue services have experience of controls which have been unclearly labelled which has meant they are unable to be used by attending fire crews.

3.3 Firefighters will be reluctant to interact with systems whereby the outcome is unclear, particularly if that interaction has the potential to worsen conditions rather than improve them.

3.4 Variable speed mechanical systems should be controlled using pressure sensors or other means and should not require firefighters to operate controls in order to initiate a high speed mode (sometimes referred to as a 'boost' or 'fire-fighting' mode).

3.5 Where an existing variable speed system with a high-speed mode provided for fire-fighting operations is installed, clear information should be provided at the smoke ventilation system main control panel (where provided), adjacent to the fire alarm panel (where provided) or at the fire and rescue service access point to the building to make clear to firefighters that they need to operate controls prior to commencing fire-fighting operations. Figure 1 gives an example of the type of information and signage we recommend to be provided.

Figure 1: exemplar signage recommended to be provided for firefighters in cases where a variable speed system has been provided. Further information should be provided in the smoke ventilation summary sheet. Type should be 16pt minimum.

3.6 As a general principle, for residential buildings designed according to a 'stay put' or 'defend in place'strategy, it is anticipated that a fire will be confined to a single dwelling on a single floor of a building.

3.7 To prevent a smoke ventilation system from contributing to the spread of smoke, for example between common corridors on different levels of a building via the smoke extract shaft, systems should be configured with an interlock such that extract cannot be initiated from multiple protected spaces simultaneously. For example, dampers/AOVs serving a smoke shaft should be configured such that they cannot open on multiple floors if smoke is detected on additional floors after the initial activation.

3.8 Due to the possibility of keys being misplaced, manual control points for fire-fighting use should not be key operated.

3.9 Manual control points for lobby or corridor vents should only become live for firefighter use once the system is in emergency/fire mode, either as a result of fire detection or manual override by firefighters. This will reduce the opportunity for tampering.

3.10 Wherever practicable, manual control points with an 'AUTO' position should be configured to default to the 'AUTO' mode if switched to another position outside of the emergency/fire condition. For example, if a corridor smoke vent override switch is tampered with and switched to the 'OFF' mode, the system should start in 'AUTO' mode upon detection of smoke in the corridor, irrespective of the position of any manual control point/override switches.

Head of stair vents

3.11 Smoke vents may be provided within the stair enclosure or as part of a smoke ventilation system. It should be possible for firefighters to control the operation of the stair smoke vent independently of the lobby/corridor smoke vents should it be necessary to clear smoke from within the stair.

3.12 Stair smoke vent manual control points should consist of one control box at the ground or access floor, and be sited in a conspicuous position adjacent to the stair. The location of manual control points should also be indicated on premises information plans.

3.13 The manual control point switch positions should be associated with their function, e.g. 'OPEN' and 'CLOSED' rather than 'ON' and 'OFF'. Systems that operate automatically—for example in small, single stair buildings—should also have an 'AUTO' position.

3.14 The stair smoke vent should be labelled 'SMOKE VENT: STAIR'.

3.15 As the stair vent itself may not be visible from the location of the control, especially in some taller buildings and/or where the vent is located on a side wall, it is preferable that the manual control point is provided with indication of the status of the vent.

3.16 Status indication should be derived from direct feedback, for example via a damper end-switch or equivalent. A green LED on or adjacent to the 'OPEN' switch position be used to indicate that the ventilator/damper has fully opened and an amber LED labelled 'VENT FAULT' should be used to indicate that the ventilator/damper has failed to open fully, or has only opened partially.

Lobby or corridor vents

3.17 A number of different types of system, whether natural or mechanical, will have smoke ventilation dampers or AOVs located within stair lobbies or common corridors.

3.18 Manual control points for lobby or corridor smoke vents should be located within the stair enclosure on each level protected, preferably adjacent to the door to the lobby or corridors. The location of manual control points should also be indicated on premises information plans.

3.19 Switch positions should be labelled according to their function, e.g. 'OPEN , 'CLOSE' and 'AUTO' rather than 'ON', 'OFF' and 'AUTO'.

3.20 Lobby/corridor manual control points should be labelled 'SMOKE VENT: LOBBY' or 'SMOKE VENT: CORRIDOR'.

Smoke ventilation systems serving ancillary accommodation

3.21 In some cases, residential buildings may incorporate, or be directly connected to, ancillary spaces such as enclosed car parks, gymnasia, building management offices, amenity spaces etc. These spaces may also be protected by smoke ventilation systems.

3.22 Where there are smoke ventilation systems serving ancillary accommodation, these systems should be provided with separate firefighter override controls and should be clearly distinguished from the system(s) protecting the common parts of the residential premises.

3.23 Where ancillary/amenity spaces are accessed via the same stair as the residential accommodation, the manual override controls and control and indication equipment for smoke ventilation systems serving those spaces should generally be located in the vicinity of controls for the residential system(s).

3.24 However, in some cases it may be more appropriate for the controls relating to the ancillary/amenity space systems to be located adjacent to the fire and rescue service access points to the areas protected. In all cases, it is the preference of LFB that premises information clearly identifies all smoke ventilation systems at a premises and the location of their respective firefighter override controls.

3.25 It is recommended that you contact the relevant LFB Fire Safety team for further advice about the location of the manual override controls and control and indication equipment for smoke ventilation systems serving ancillary/amenity spaces.

3.26 Your attention is drawn to the recommendations of Approved Document B and BS 9991 with regard to the suitability of stairs serving ancillary accommodation and the design of smoke ventilation for basement car parks.

4 Central control and indication panels

4.1 It may be beneficial to have override functionality replicated within control and indication equipment/a smoke control panel. Control panels should be simple and logical to operate in fire conditions without reliance upon operational manuals. Smoke control system control and indicating equipment should be clearly distinguished from fire alarm panels (where provided). Central control and indicating equipment may also be provided in a fire control room, where applicable.

4.2 Further guidance on the design of control and indication panels for smoke ventilation systems can be found in sub-section 8.2.5.5 'Centralised control and indication equipment' of the SCA Guide.

5 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

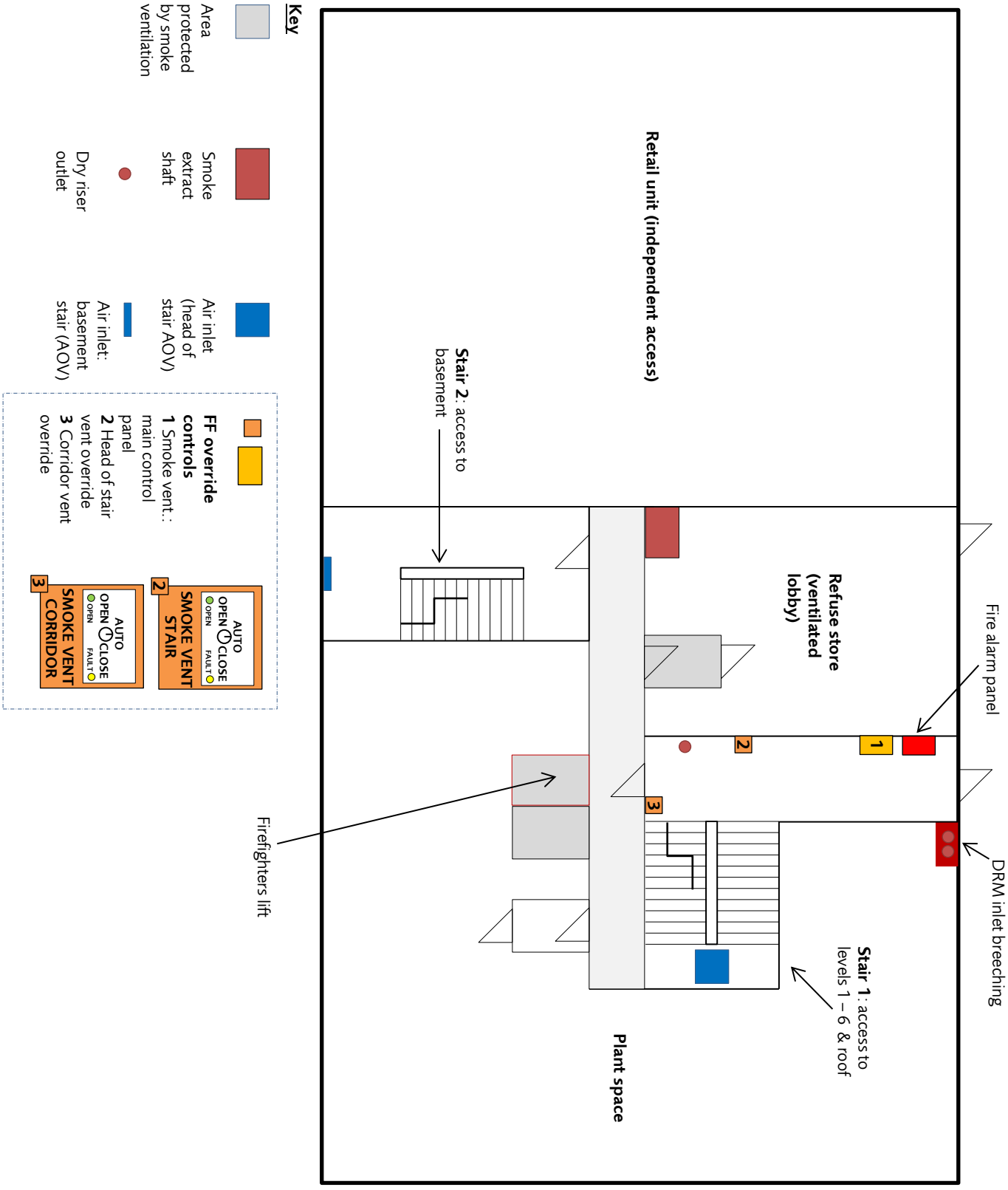
AVAILABLE FROM	TITLE
The Stationery Office TSO Orders/Post Cash Dept. PO Box 29 Norwich NR3 1GN Telephone: 0870 600 5522 Fax orders: 0870 600 5533 Web: www.tso.co.uk	The Building Regulations 2010 Approved Document B, Volume 1
BSi Shop Customer Services 389 Chiswick High Road London W4 4AL https://www.bsigroup.com/en-GB	**BS 9991:2015** *Fire safety in the design, management and use of residential buildings – Code of practice*
Smoke Control Association C/O Federation of Environmental Trade Associations 2 Waltham Court Milley Lane Hare Hatch Reading Berkshire RG10 9TH https://www.smokecontrol.org.uk	*Guidance on Smoke Control to Common Escape Routes in Apartment Buildings (Flats and Maisonettes)*

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

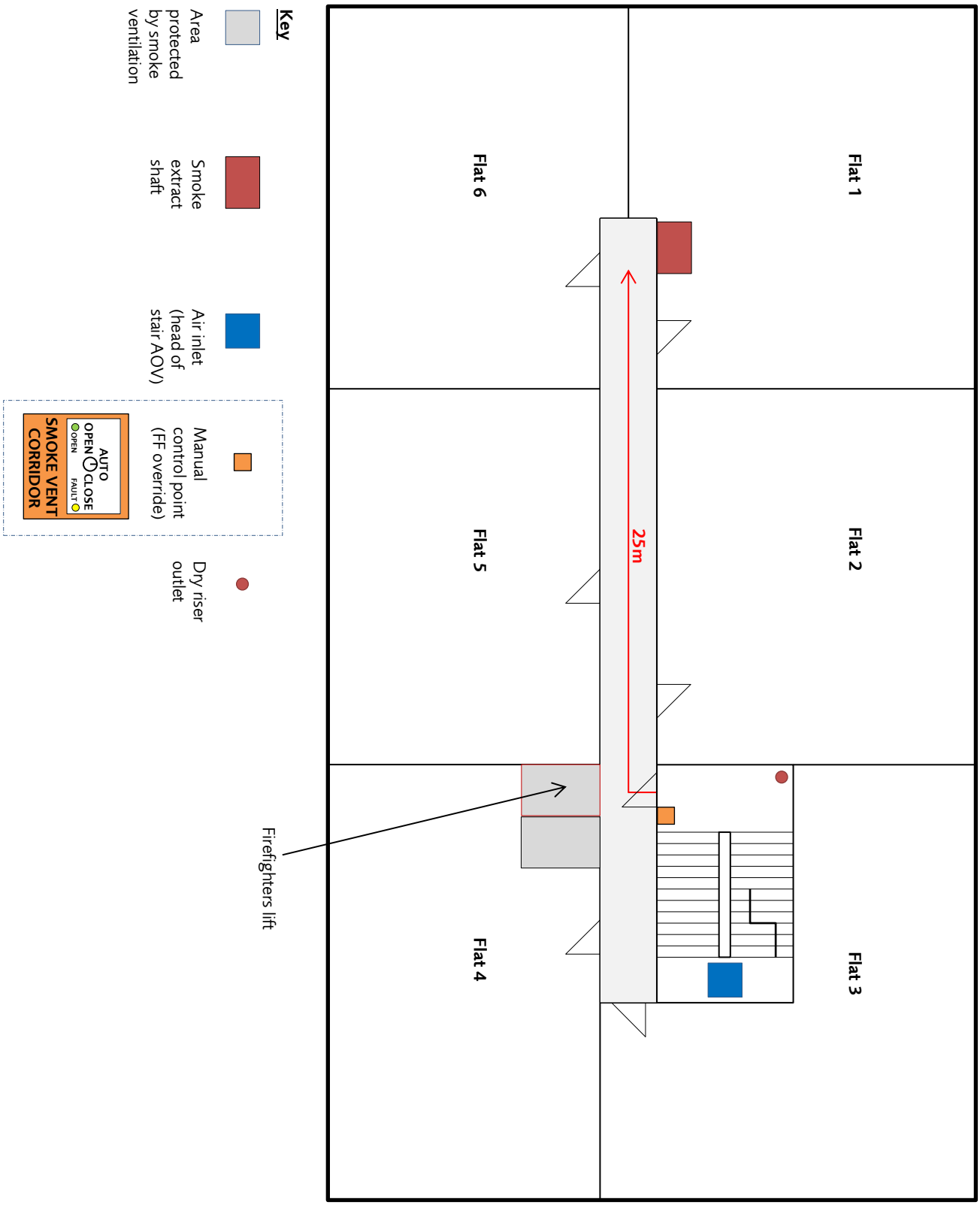
Appendix 1 – Exemplar premises information

Exemplar premises information plans showing smoke ventilation coverage

To be read alongside exemplar smoke ventilation summary sheet, below.



Fire and rescue service access level: Ground floor



Typical floor arrangement (levels 1 to 6)

Exemplar Smoke Ventilation summary sheet

Smoke ventilation system serving residential common corridors

Block A, Core 1, 123 Example Avenue

This information is intended to support firefighters during an emergency incident and also to assist fire and rescue service personnel when undertaking familiarisation (7(2)(d)) visits or fire safety audits. Further details of the system can be obtained using the contact details below.

Part(s) of premises protected

Core 1 stair and residential common corridors on levels 1 to 6.

Other systems

The enclosed basement car park has a smoke control system that has separate override controls. See separate summary sheet in premises information box.

Type of system

Mechanical (fan powered) extract system with a single extract shaft.

The system extracts smoke away from the stair.

Locations of override controls

Control and status indication panel: adjacent to premises information box in entrance lobby.

Head of stair override: within Core 1 stair at Ground floor level.

Corridor smoke extract override: within Core 1 stair at each level, adjacent to door to common corridor on the left hand side.

Function of override controls

Control and status indication panel: emergency mode will be activated if system is activated:

- by smoke detection in the common corridors *or*
- if override controls are switched to 'EXTRACT' position on any floor.

The system can be placed in AUTOMATIC, EXTRACT or OFF modes using the panel.

The floor which is in extract is shown on the LED display as well as the status of the extract damper (OPEN/CLOSED/FAULT), the status of the head of stair smoke vent (OPEN/CLOSED/FAULT) as well as the status of the fans (PRIMARY FAN RUNNING, SECONDARY FAN RUNNING, PRIMARY FAN FAULT, SECONDARY FAN FAULT) and power supplies (PRIMARY SUPPLY LIVE/SECONDARY SUPPLY LIVE).

The control panel allows the floor in extract mode to be manually selected.

If a different floor is selected than the floor where smoke has been detected then the fan will stop running, the extract damper on the floor of initial activation will be closed and the selected floor damper will open, before the damper on the floor selected is opened and the fan re-starts.

This process takes approximately 60 seconds.

Description of system operation

Each floor has an extract damper leading into a shaft at the end of the corridor, remote from the door between the stair and the corridor.

Replacement air is provided via the head of stair automatically opening vent and the stair door. This creates a flow of air from the stair into the corridor, which is intended to maintain the stair free of smoke at all times.

The primary and secondary smoke extract fans are located on the roof.

The system will only operate upon detection of smoke within the common corridor on the floor of initial fire detection, or if instructed to do so using local firefighter override controls or the control and indication panel. Further dampers on other floors will not open if smoke is detected on subsequent floors.

Emergency contact for Responsible Person and Competent Person

Responsible Person

Mr A Smith
(Building owner)
07123 456 789

Competent Person

ABC Smoke Control
(System maintainer)
07987 654 321

Making London the Safest Global City

LONDON FIRE BRIGADE

Fire Safety Guidance Note: GN103

Guidance and principles for the charging and storage for electric powered personal vehicles

Commercial and Residential premises covered by the Regulatory Reform (Fire Safety) Order 2005

Version: 01, 25th August 2023

Contents

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005, as amended by the Fire Safety Act 2021, (The Order) in London.

This Guidance Note provides general fire safety advice in respect of the charging and storage of electric powered personal vehicles (EPPVs) including e-bikes, e-scooters, and other similar modes of transport. EPPV is a term utilised for the purposes of this guidance note. While this guidance has been developed with consideration of the Regulatory Reform (Fire Safety) Order 2005, as amended by the Fire Safety Act 2021 (the Order) it is not building regulations guidance and does not create new legal obligations on responsible persons. Other legislation not referred to in this guidance may be applicable and should be determined by the responsible person.

This Guidance Note is produced considering our current knowledge of the risks associated with current EPPV products. The growth of EPPVs has outpaced the regulatory framework and guidance, and therefore this document will be reviewed periodically as new research on the risks associated with lithium battery products becomes available.

This Guidance Note is one of a series produced by London Fire Brigade (LFB) to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic, please visit the LFB website at http://www.london-fire.gov.uk or you can telephone or visit your local Fire Safety Office (telephone 020 8555 1200 and ask for your nearest Fire Safety Office).

1 Introduction

1.1 This document has been prepared by LFB's Prevention and Protection department (Fire Safety).

1.2 The purpose of this Guidance Note is to provide information to those storing and/or charging EPPVs (e.g., e-bikes, e-scooters, and e-unicycles) within office and residential buildings that are covered by the Order. The use of EPPVs is increasing and so too are the number of fires they are involved in. In 2018 LFB recorded five fire related incidents involving EPPVs. This has rapidly increased over a six year period. In 2022, the LFB attended 87 e-bike and 29 e-scooter fires, attributed to lithium batteries. In the first six months of 2023 LFB have attended 73 e-bike and 18 e-scooter fires, totalling 91 fire related incidents.

1.3 The lithium batteries in EPPVs hold a significant amount of energy and can expel this in the form of a very hot localised fire, or in some rare cases an explosion, known as 'thermal runaway', which can be difficult to control and/or extinguish. These fires or explosions can occur when the battery is damaged or charged incorrectly, or when involved in a fire which has started elsewhere. When involved in a fire, lithium batteries generate toxic gases, such as carbon monoxide and hydrogen cyanide. These are similar in appearance to steam which can mean that people are unaware of the dangers of being in close proximity.

1.4 This document is intended to assist the responsible person and landlords, or others responsible for fire safety in buildings. However, responsible persons should engage a competent person and/or a fire risk assessor with technical fire safety knowledge of the subject area to consider the risks and suitable mitigation and support any review of their fire risk assessment with respect to EPPVs.

1.5 Where fire safety deficiencies in buildings have been identified under the Order, this document is no longer applicable and further advice should be sought from a competent fire risk assessor.

1.6 This guidance is not intended to be exhaustive. However, it covers some of the areas of consideration that the responsible person, landlord and fire risk assessor should be addressing.

1.7 It is important that where consideration is being given to the storage and/or charging of EPPVs, any additional risks that might be present due to the building layout, the construction, and the occupancy of the building are all considered.

1.8 LFB recommends liaising with the relevant insurance provider as they may have their own requirements above that of the Order.

2 Guidance for Offices under 18m

2.1 It is important that where any consideration is being given to the storage and/or charging of EPPVs that any additional risks posed are fully assessed, with consideration given to the building layout. This should include consideration of how any solutions will support both the means of escape for occupants and support firefighters in both their duties to undertake search and rescue and undertake firefighting within and around the building.

2.2 Not all offices will be suitable to charge and/or store EPPVs, and this will need to be determined on a case-by-case basis. Consideration should be given to passive and active fire safety systems within the building, and the building layout (e.g. height, size, and complexity). A holistic approach is needed to consider the potential risks, appropriate control measures and consequences should a fire occur.

2.3 Where possible, EPPVs should be stored and charged in a dedicated external location. However, where this is not achievable, due consideration should be given to the provision of a separated space enclosed by suitable fire resistance to ensure that the means of escape routes are suitably protected.

When a fire occurs, it is important for people to be able to escape quickly. LFB has often seen EPPVs stored in places that block escape routes. To minimise this risk the LFB recommends:

2.4 Where there is only one means of escape for the building, consideration should be given to not linking any storage and/or charging facility directly into the means of escape.

It is important that firefighters attending an incident can locate and access the fire quickly and under challenging circumstances. To support this the LFB recommends:

2.5 Any storage and/or charging space should be located on the access level with direct external access. Consideration should always be given to access and egress routes for firefighters from the appliance (fire engine) parking position.

2.6 Any proposed rooms located within a basement (or lower ground or within an enclosed area of a floorplate) may require additional provisions which should be considered by the fire risk assessor, such as how attending firefighters may be supported to access and fight a fire. Existing smoke control systems conforming to the minimum recommendations of regulatory guidance may not be sufficient if they are not designed to cope with a fire on the scale of a significant lithium battery fire. This should be considered as part of the fire risk assessment.

2.7 Suitable directional wayfinding should be provided in accordance with *Approved Document B Volume 2 clause 5.28* and the HSE publication *Safety Signs and Signals: Guidance on Regulations*. External signage should also be provided indicating the use of the room i.e. 'EPPVs on charge'. Consideration should be given to the provision of suitable premises information and signage for firefighters to indicate positions of electric vehicle charging points, power supply

isolation controls, water supplies etc. Additional instructional signage should also be placed within the room and immediate vicinity explaining to the responsible person action to be taken in the event of a fire involving EPPVs.

When EPPVs are involved in a fire many chemicals are generated (often mistaken for steam), including many toxic gases, such as carbon monoxide and hydrogen cyanide. To mitigate the risk of this the LFB recommends:

2.8 If the proposed room does not contain any form of smoke ventilation, consideration should be given to the installation of a suitably sized Automatically Openable Vent (AOV) linked to the local fire detector within the room to vent any resulting fire gases.

Fires involving lithium batteries burn quickly and at extremely high temperatures. To mitigate this risk the LFB recommends:

2.9 Consideration of the size of the proposed room should include whether there is any automatic fire suppression system within the space. Where one is not fitted it is recommended that a localised water-based fire suppression system is installed to a recognised industry standard and is determined suitable for the specific fire risk.

2.10 Suitable means of raising the alarm should be provided within the proposed room which initiates early warning for occupants within the building. This should include smoke detection. Any systems should be in accordance with BS5839.

2.11 Enhanced structural fire protection may need to be considered to prevent structural failures due to the possibility of a prolonged lithium battery fire with a concentrated heat release rate. By their nature, fires involving lithium battery technology may involve a concentrated release of energy. Advice should be sought from the relevant insurance body.

2.12 Consideration should be given to water run-off and contaminated water from firefighting as fires involving lithium batteries can require a considerable amount of water.

The LFB has identified through investigations that lithium battery fires start when batteries are being charged. To mitigate this risk the LFB recommends:

2.13 Where multiple charging points are provided, a means for isolating the electrical supply should be sited on an external wall adjacent to the proposed storage room with clear signage as to its purpose. This should enable firefighters to isolate all electrical supply to the room of origin.

Fires involving lithium batteries often start because they have been damaged, modified or do not meet safety standards. To mitigate this risk on premises the LFB recommend that:

2.14 EPPVs stored on site should be well maintained by the owner. Any EPPVs that have suffered damage should not be allowed on the premises and should be assessed by a competent person before being allowed on site.

2.15 EPPVs should be charged in accordance with the manufacturer's instructions and only the correct chargers for battery packs should be used. The practice of removing batteries from the EPPV for charging in general circulation spaces should be avoided.

3 Principles for Residential Buildings and Offices over 18m (including offices with residential elements).

3.1 'Guidance Note 84 Fires in Communal Areas' published by LFB provides further information regarding a range of incidents where stored items in communal areas have been involved in a fire.

3.2 The Home Office guidance on fire safety in purpose built blocks of flats guide (Part E) expands on these issues. It recommends either a managed or zero tolerance approach to storage of any potential fire hazards in common areas because of the risk to persons being able to escape and the subsequent risk of death or injury from fire.

3.3 This approach is also appropriate for any shared accommodation, including flats, sheltered accommodation, houses of multiple occupation (HMOs), bedsits etc., including those which have previously been converted from a house or other use type.

4 What am I required to do as a responsible person, fire risk assessor, or resident?

Responsible person (including landlords or others responsible for fire safety in buildings).

4.1 The management of common parts and escape routes is essential to ensure occupants can escape safely from the premises in the event of a fire. The Order places a responsibility on the person in control of a premises, known as the "responsible person" to:

- Carry out a fire risk assessment which must focus on the safety in case of fire of relevant persons on the premises.
- Consider persons at special risk, such as individuals with particular protected characteristics and children.

4.2 The fire risk assessment must consider the means of escape in the event of fire. This will generally result in escape routes which must be:

- Kept clear of combustibles and obstructions, including e-scooters, e-bicycles, e-unicycles, and other EPPVs.
- Be checked on a regular basis.

4.3 These actions will reduce the potential for accidental fires to start and significantly reduces the risk of deliberate fires. Where necessary it may be required to enforce covenants or tenants' agreements.

4.4 LFB recommends that responsible persons in buildings that require remediation of the external wall construction instruct their residents that it is currently inappropriate to store EPPVs anywhere in the building until such time that the external walls have been remediated.

Fire risk assessor

4.5 Fire risk assessors should ensure any of the following areas are identified and recorded within the fire risk assessment, and appropriate action is taken:

- That EPPVs are not stored/charged in common areas or escape routes, and any storage or charging within the common areas including corridors, stair enclosures, riser cupboards,

communal store cupboards, electrical intake rooms, under stair cupboards and refuse chutes, is immediately brought to the attention of the responsible person for rectification.
- Any bike storage areas and their location in relation to the means of escape, and whether charging facilities are provided or not.
- Any additional areas where gas intake pipes or cylinders may be in relation to EPPVs.
- Any designated smoking areas to be located away from bike or bin storage areas, to minimise the risk of careless disposal of smoking materials.
- Any extension leads from windows, doors or others that may indicate the possibility of charging EPPVs.
- No storage and/or charging of EPPVs on external balconies.

Resident

4.6 Residents can help ensure their own safety and that of others in the building by supporting your landlord in fulfilling the requirements under the Order. This includes maintaining and managing the escape routes in your building and keeping common areas free from combustibles and obstructions.

4.7 It is essential that escape routes and, riser cupboards in communal areas are kept completely clear of EPPVs. Nothing should be allowed to accumulate in the escape route that would hinder the safe evacuation of the building in the event of a fire.

4.8 There may be terms covering this in your lease and/or tenancy agreements which could lead to a responsible person taking action.

4.9 Further fire safety advice in relation to e-scooters and e-bikes can be found here.

Heading 2

4.10 Text.

5 Bibliography

Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting the London Fire Brigade's website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:

AVAILABLE FROM	TITLE
http://www.london-fire.gov.uk/	Guidance Note 84 – Fires in communal areas
https://www.gov.uk/government/publications/fire-safety-in-purpose-built-blocks-of-flats	Fire Safety in purpose built flats (Section E)

The above publications are current at the time of preparation of this Guidance Note (see date in footer).