



Ministry of Housing,  
Communities &  
Local Government

# The Housing Health and Safety Rating System (HHSRS): Operating Guidance

Part 3: A supplementary guide to the hazard of fire and explosions

Presented to Parliament pursuant to section 9 of the Housing Act 2004

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Ministry of Housing, Communities and Local Government



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# The Housing Health and Safety Rating System Operating Guidance (Part 3): A Supplementary Guide to the Hazard of Fire and Explosions

*This guidance (Part 3) provides additional technical information to support the Housing Health and Safety Rating System (HHSRS), specifically in relation to the hazard of Fire and Explosions. Part 3 must be read in conjunction with the accompanying guidance listed below.*

- *“The Housing Health and Safety Rating System Operating Guidance (Part 1): An Introductory Guide” which provides introductory information and guidance on the HHSRS inspection and assessment process.*
- *“The Housing Health and Safety Rating System Operating Guidance (Part 2): A Technical Guide for Assessors” which provides technical information to support the HHSRS inspection and assessment process.*

Housing Act 2004 - Guidance about inspections and assessment of hazards given under Section 9

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## Introduction

A structured approach is required when assessing the potential fire risk to occupants of any dwelling, regardless of the type of dwelling or the characteristics of the occupiers.

The areas to be considered will always include all matters relevant to fire safety, from the curtilage of the property to the most distant point of the dwelling(s) being inspected.

Initially, the type of building should be considered; the statistical basis for the HHSRS assessment has demonstrated that average likelihood and the associated spread of health outcomes can be expected to be different, dependent upon the type and age of dwelling.

The environmental health practitioner or other local authority officer undertaking inspections (“the assessor”) should then give careful consideration to the actual likelihood of a fire affecting the building being inspected. It is important to recognise that published data in this guidance is based on the average likelihood of a fire in a 12-month period. Consideration of the nature of occupancy and fire hazards present in a dwelling may justify a judgement that the likelihood of a fire is either higher, or lower, than this average.

The common fire hazards that may be present in buildings containing one or more dwellings are discussed in more detail in later sections of this operating guidance.

In order to assess the potential for harm, an estimate of the likely consequences of a fire is published in the operating guidance; this provides a percentage probability of the likely health outcomes expressed as four different magnitudes of severity. It is important to recognise that the published percentages are based on the historical average health outcomes for all persons aged 60 years or over.

High consequence/low likelihood events make statistical assessment very problematic, whereas there is a strong evidence basis for the averages used by the HHSRS across the housing stock. Insufficient data exists for a similar statistical basis when considering the likelihood of fire spread or harm beyond the dwelling of origin. The likelihood scores given in the HHSRS Operating Guidance are based on the probability of a fire that causes harm, and the spread of harm outcomes for single dwellings (see Major Accident Scenarios).

It should be appreciated that an HHSRS assessment of fire hazard, whilst based on average historical likelihoods, may contain a subjective element where specific aspects are identified as being removed from the norm and are used to justify an assessment that the hazard is higher, or lower, than the standard calculation; it is important that these are clearly documented. The differences between actual likelihood and average likelihood can only be justified reference to specific fire hazards that have been identified. Such hazards are the result of the building design and layout, maintenance and structural elements, and its fixtures, fittings and fixed appliances that belong to the building owner, and which are below the baseline indicator or optimum condition, and which may increase any risk to the health and safety of occupiers and visitors (see Section 7 - HHSRS Assessment, which provides details of baseline indicators and other relevant matters).

The level of harm suffered is influenced by the presence, or absence, of fire protection provisions, and the maintenance of these provisions. As the spread of harm scores are based on historical averages, it must be recognised that extreme deficiencies may, therefore, present a greater potential for harm.

Some important considerations fall outside the scope of the HHSRS assessment such as the specific vulnerabilities of individual occupiers, or specific occupier behaviours. Where these are identified as a particular concern, it may be appropriate to consider alternative interventions or other enforcement options.

As the size of a building increases, generally, the fire protection requirements become more onerous. A number of different approaches may achieve acceptable levels of safety, with some provisions being enhanced to compensate for deficiencies in certain areas, for example enhanced early warning and increased ventilation may be used to compensate for sub-optimal means of escape provisions, such as extended travel distances. Therefore, protection arrangements in larger buildings, and particularly common parts of multi-occupied buildings, do not generally readily lend themselves to binary baseline indicators, and there will be the need to consider additional specific fire safety guidance (see page 46 onwards).

However, there are some simple, universally recognised standards which generally apply within individual dwellings, whether these are stand-alone or part of larger multi-occupied buildings. These have been identified and are adopted as baseline indicators for the purpose of the HHSRS assessment.

Other provisions which have a greater degree of interdependency or are not required in certain circumstances can be considered as 'relevant matters' in the context of an HHSRS assessment. For example, Fire Risk Appraisals of External Walls (FRAEWs), which provide a structured approach to evaluating external wall fire risk under PAS 9980 and may influence decisions on remediation or enforcement.

**Note:**

The terminology used in the Housing Health and Safety Rating System (HHSRS) differs from standard fire safety vocabulary; of particular note, BS 4422:2024 defines a fire hazard as 'a source, situation or act with potential to result in a fire'.

For the purpose of this guidance, the fire hazard is considered solely in terms of consequent risk of harm to the health or safety of an actual, or potential, occupier, or a visitor to the property. No consideration is given to the potential for property damage.

## Background

Generally, people are safer from fire in their homes than at any time in modern history. In 1981-1982, in England, 586 people died from fires in dwellings. In 2024-25 that number had fallen to 211, one of the lowest annual death rates since official records began in 1960<sup>1</sup>.

Fires and fire related injuries have been reducing reasonably consistently since the millennium. Total fires attended by the fire and rescue services have fallen from approximately 474,000 in 1999-2000 to 154,000 in 2019-20. In 2019-20, there were 6,910 non-fatal casualties from all types of fire and 82% of deaths from fire occurred in dwelling fires. There were 4.3 fire related fatalities for every million people in England. The likelihood of suffering some form of harm, or a death, as a result of a dwelling fire in England is relatively low.

The significant reduction in domestic fire deaths is almost certainly the result of a number of factors, one of the most important of which is the great increase in the provision of smoke alarms in homes. Government data for England shows that people are 11 times more likely to die in a fire in their home if they do not have a working smoke alarm. Another important factor is legislation to control the flammability of domestic furniture.

Behavioural factors, such as a reduction in the use of chip pans, and a reduction in the numbers of adults smoking, will have been significant.

In addition, undoubtedly, many lives have been saved by the government and individual fire and rescue services' community fire safety initiatives, which involve proactive efforts to reduce the incidence and impact of fire through education, information and publicity. Significant initiatives include the provision of smoke alarms to householders, education in schools and home fire safety visits.

Certain individual characteristics and factors can increase fire risk: person factors (such as age or level of mobility), behavioural factors (such as smoking), the physical home environment and a person's social environment (how they interact with others in the property)

Tragically, experience shows that, when a death occurs as a result of an accidental fire in a dwelling, the person involved is often a vulnerable person who would have been considered a priority for a home fire safety visit had they been known to the fire and rescue service.

This highlights the importance of any agencies who engage with vulnerable persons (e.g. housing officers, social services, carers, police, etc), and any other persons (such as family or neighbours) being alert to the potential need for a home fire safety visit by the fire and rescue service and/or for a person-centred risk assessment to be carried out. The National Fire Chiefs Council (NFCC) have developed a fire risk checklist for care providers which can be found at <https://nfcc.org.uk/our-services/prevention/fire-risk-checklist-for-domiciliary-care-providers/>.

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<sup>1</sup> <https://www.gov.uk/government/statistical-data-sets/fire-statistics-data-tables#fatalities-and-casualties>

The majority of dwelling fires occurred in houses, followed by flats and in bungalows. The risk of dwelling fires, however, is higher in flats than in houses, as is risk of fatality or casualty.

To keep fire risk to a minimum, it is just as important to prevent fires as to provide measures to protect people when fire occurs.

## Relative Risk Building/Occupancy Types

In 2023-24 the English Housing Survey found that similar proportions of private renters (9%), social renters (10%), and owner occupiers (11%) living in flats said they felt unsafe in their home due to fear of a fire breaking out.

Within the social rented sector, local authority renters living in flats (16%) were more likely to (strongly or tend to) agree that they felt unsafe in their homes than housing association renters in the same dwelling types (5%).

Fire statistics for 2019-2020 show that fire deaths in blocks of flats of 10 storeys or more are very uncommon, amounting to five fatal fires in that year. In the same year, few, if any, of the over 7,500 fires in blocks of flats resulted in any deaths beyond the flat of fire origin.

This underlines the fact that the risk of death from a fire in a block of flats is not related to the height of the block. Fires are normally contained within the flat of fire origin. The primary additional risk with taller buildings is the increased consequences (fire development) due to potential delays to firefighting if the fire is on a higher floor. Smoke will generally not be contained within the flat when door is opened for firefighting. There is no reason why the characteristics of fire in a flat, or the probability of a death in that flat, would vary according to the height of the flat above ground. On the other hand, the characteristics of those living in social housing tower blocks tend to differ from those living in many houses.

The English Housing Survey found in 2020-21 that those who live in low and high rise flats were more likely than those who live in other dwelling types (e.g., houses) to feel unsafe in their homes because of fire.

**Table 1**

### Fatal and Non-fatal Casualties per Thousand Fires for Different Domestic Building Types\*

<u>Building type</u>	<u>Number of deaths per thousand fires</u>	<u>Number of Non-fatal Casualties per thousand fires</u>
Single-family house	6.1	175.3
Single-family bungalow	16.2	217.0
Purpose-built block of flats (1-3 storeys)	5.9	193.0
Purpose-built block of flats (4-9 storeys)	3.2	148.1

Purpose-built block of flats (1-9 storeys)	5.1	180.3
Purpose-built block of flats (10 storeys and above)	5.1	190.3

In fact, after a fire occurs in a block of flats, the likelihood of a death is actually less than the likelihood of a death when fire occurs in bungalows and houses, while the likelihood of injury is very similar. One possible reason for this is that greater protection is afforded to escape routes in flats than in bungalows and two-storey houses. Also, many older people live in bungalows; advanced age is a major factor in the risk of death from fire.

The frequency of events, such as the Grenfell Tower fire, make statistical assessment very problematic, whereas there is a strong evidence basis for the averages used by the HHSRS across the housing stock. Insufficient data exists for a similar statistical basis when considering the likelihood of a fire escalating to the catastrophic proportions as occurred in the case of Grenfell Tower. Additional consideration is given to the assessment of major accident scenarios in Major Accident Scenarios.

Rightly, there has been a great deal of focus on the potential for multiple fire fatalities in high rise buildings. However, it is important that the risks to residents in other types of residential premises are not overlooked.

Government fire statistics currently do not specifically identify Houses in Multiple Occupation (HMOs). Those living in HMOs and other shared accommodation, however, share many of the characteristics that indicate a disproportional vulnerability to fire and such persons may be at greatest risk due to differing fire safety provisions in these types of building.

Additionally, as many fires are caused by human factors, it must, to some degree, follow that, as the number of occupiers increases within a dwelling, there will be some increase in the probability of a fire occurring.

## Other Factors that Influence the Likelihood of Fire

All reasonably foreseeable and significant fire hazards should be considered, including the measures in place for their elimination or control.

By definition, this means considering potential ignition sources, as well as situations and unsafe acts that have the potential to result in a fire. However, it is recognised that some hazards are relevant to HHSRS calculations and others will be outside this assessment process, for example, being the result of tenant behaviour.

For ease of reference, the factors that are likely to be relevant to the HHSRS scoring process are detailed in the HHSRS assessment section.

Whilst many of the causes that are discussed further below may not form part of the HHSRS assessment, these should not be ignored and may require alternative action. This might be referral to the fire and rescue service for either enforcement, using their powers under the 'Regulatory Reform (Fire Safety) Order 2005 (Fire Safety Order), or community fire safety intervention, such as a 'home fire safety visit.'

Individual residents' characteristics/vulnerabilities are an important consideration when considering the fire risk in a holistic way; they do not provide grounds to act under the Housing Act. However, an understanding of any effect that resident characteristics might have on the likelihood of fire, and the nature of fires that might occur, will be important when considering the requirement for referral to other agencies for complementary interventions. Likewise, there is also a need for the assessor to understand the policies and procedures that contribute to prevention of fire.

Potential causes of fire include the following, namely:

### Malicious ignition

- In 2019-2020, in England, deliberate ignition was the cause of some 10% of fires in dwellings, the fifth largest cause of fires in dwellings. These fires resulted in 32 deaths and nearly 602 non-fatal casualties.
- Therefore, consideration should be given to security in all types of dwellings. Inadequate security of access to a residential building, particularly in an area of known crime and antisocial behaviour, may be a significant factor.

### Electrical faults

- In England, fires of electrical origin account for some 24% of all accidental fires in the home, the second largest cause. In 2019-2020, these fires resulted in 17 deaths and around 750 injuries.
- It can be appreciated that defects in the electrical supply, and in meters, fuses, wiring, sockets or switches may increase the likelihood of fire. It should also be recognised that the number/siting of sockets may increase the likelihood that occupiers may undertake unsafe practices, e.g. insufficient and/or inappropriately sited electrical socket outlets may encourage an excessive, or

inappropriate, use of extension leads such as 'daisy chaining', joining one lead to another (see Baseline indicators in appendix A).

### Smoking

- Despite the overall number of cigarette smokers falling, smoking remains one of the top causes of fires. Smoking has a disproportionate impact in terms of deaths from fire due to the nature of smoking-related fires in people's homes, which often occur in confined spaces where people sleep and may have health or mobility issues. Smokers' materials were the source of ignition for 7.2% of accidental dwelling fires in England over the last decade (2015–25), but they accounted for 29.2% of fire fatalities during this time (526 fatalities).
- Smoking is controlled under legislation, and should be assisted by suitable signage, other than within residents' own dwellings.

### Cooking

- Cooking is the most common accidental cause of fire in dwellings (some 48% of accidental fires in 2019-2020).
- Build ups of cooking residues, cooker position, inappropriate siting and/or close proximity of flammable materials are important factors.

### Heating installations/maintenance of heating installations

- Inadequate fixed heating installations in dwellings; encourage the use of supplemental heaters.
- Defects to heating, including defects or disrepair to appliances and/or the system.
- Clothes drying facilities – lack of indoor facilities can all contribute to the likelihood of fire, e.g. placing clothes too close to heaters or open fires.
- In the case of gas and Liquid Petroleum Gas (LPG) installations, see Baseline indicators later in this document.

### Inadequate control over the use of portable heaters

- The type of portable heater and inappropriate siting and/or close proximity of flammable materials should be considered.

### Contractors' activities and 'hot work'

As well as introducing sources of ignition, construction work has the potential to:

- cause holes in compartment walls and floors;
- result in inappropriate removal of stairway doors required to protect escape routes in order to allow free access for delivering materials;

- cause parking of vehicles by contractors over fire hydrants;
- place site huts too close to the building;
- leave gas cylinders inside the building overnight to avoid having to store them properly away from the building at the end of each day;
- block access to fire main inlets;
- leave combustible building materials in common parts;
- open up parts of the structure without providing suitable fire-resisting hoarding to separate work areas from occupied parts.

### Lightning

- Compared with the other fire hazards described above, lightning is not a significant cause of fire. For example, in 2019–2020, lightning is known to have caused only nine fires in dwellings (0.03% of all fires in dwellings in England). None of these fires occurred in blocks of flats, and none resulted in a fatality.
- The risk of a lightning strike is dependent on factors such as:
  - the location of the building;
  - size and construction of the building;
  - proximity of the building to other structures;
  - the local topography.

### Combustible furnishings

- Including furniture and furnishings; legislation makes specific requirements regarding foam filled furniture<sup>2</sup> (see Baseline indicators in appendix A).

The wider consideration of fire hazards should not be limited to those comprising specific sources of ignition. Situations that could lead to a fire (and development of a fire), such as poor housekeeping, the presence of mobility scooters and electric vehicles in common parts, and unsafe acts, should also be taken into account, when considering the full range of interventions available, including interagency referrals etc.

Examples of behaviours that, whilst not actionable under the Housing Act 2004, may require urgent intervention include hoarding.

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<sup>2</sup> <https://www.gov.uk/government/publications/furniture-and-furnishings-fire-safety-regulations/furniture-and-furnishings-fire-safety-amendment-regulations-2025-uk>

Hoarding can be described as collecting and being unable to discard excessive quantities of goods or objects. Hoarding will become a concern for others when health and safety are threatened by the nature or amounts of 'clutter' accumulating within, and sometimes overflowing from, the dwelling involved. Hoarding is a recognised fire hazard, presenting issues such as combustible materials that might be stored close to, or in contact with, heat sources, such as cookers and heaters, which could give rise to injuries or potentially death.

Access and egress to, and from, the dwelling can also be restricted, which means a person's escape may be slowed down, or prevented in the event of a fire. Fire loading in hoarding properties presents risks to neighbours as it increases the likelihood of fire travelling to their properties. If there is a fire, the structural integrity of the building may be compromised during, and after, firefighting operations, due to the absorption of water by the hoarded materials.

Many local authorities will have developed multi-agency procedures that set out the procedure and guidance for organisations which identify hoarding issues.

Whilst the Housing Act 2004 is unlikely to form an appropriate route to resolve the hoarding behaviours and the issue may be progressed as a safeguarding issue, it is also important to consider if there are consequential hazards that are present, which may be appropriate for intervention using the Housing Act. Due to hoarding, there may be a lack of repair/maintenance of a property, e.g. the fixed heating system may not be working; it would be anticipated that this may lead to the use of portable heating, potentially increasing the risk of ignition of combustible hoarding.

## Means of Escape

### General principles

The fundamental objective in escape route design is that it should be possible for persons to escape unaided while it is still safe to do so. A person's ability to escape will be affected by both the smoke and the heat from a fire. Smoke not only reduces visibility, but can, because of the toxic gases and irritants in the smoke, cause incapacitation. High temperatures and radiant heat from the flames will also impact on people's ability to escape. Recognising these hazards, and meeting the requirement that persons should be able to escape unaided prior to the conditions becoming untenable underlies fire safety design in all buildings. It applies equally to dwellings.

While some dwellings, including those within blocks of flats, are within reach of ladders or high-reach appliances, many are not. In addition, modern traffic conditions, including congestion and restricted access due to parking, can significantly impact on the ability of the fire and rescue services to carry out such rescues. It is, therefore, a fundamental principle that escape route design should not rely on external rescue by the fire and rescue service.

To enable persons to leave in time, most houses are designed with an alternative means of escape in case the occupants cannot use the normal way out of the dwelling. In bungalows and two storey houses, windows are recognised as an alternative means of escape. However, escape from a window is not, of course, a feasible option in the case of the upper floors of dwellings or blocks of flats above two storeys in height. Alternatively, to ensure that it can be used safely, the main exit route is 'protected,' i.e. enclosed in fire-resisting construction.

The generic principles that apply to means of escape from larger dwellings and multi-occupied residential buildings are outlined in the following paragraphs. There is a variety of extant fire safety guidance that provides more detailed information; this is signposted in the additional guidance section of this document.

### Houses

In the case of houses with upper floors above 4.5m from ground level, some level of protection is likely to be necessary to ensure occupants can use the often-single staircase, to make their escape. This may include a requirement for the staircase, and the escape route from the staircase to outside, to be protected from any fire occurring in an adjacent room.

Generally, the structure protecting the staircase should be constructed of fire- and smoke-resisting materials. In the case of dwellings occupied by single families, it has been accepted that doors that open onto the staircase and escape route do not require to be fitted with self-closing devices.

Houses converted into flats or bedsits, and HMOs, are generally considered to be of higher risk, which is why they require increased fire safety provisions; for example, a requirement for self-closing devices to be fitted on internal doors to risk rooms, such as bedrooms, bed-sitting rooms and other habitable rooms. Further restrictions are also placed on the surface finishes in escape routes.

### Flats

Alternative means of escape in flats usually involve access to a stairway, even if via a corridor or linking balcony. Using a linking balcony to gain access to a neighbour's flat has been an approach used in the past, but this is now considered unsuitable.

Most blocks of flats only include a single staircase meaning there is no alternative means of escape provision. Even in blocks with two or more stairways, it is often necessary to escape from the flat into a single common corridor to reach both stairways.

In these cases, limitations on the size and layout of the flats normally apply, with restrictions on the overall distance from the front door to the furthest part of the flat. Alternatively, a protected entrance hall is sometimes provided to safeguard the internal route of escape from each habitable room to the front door. Again, limits are applied to the length of such corridors, typically 7.5m.

While it is clear from the above that the internal escape from flats is designed on similar principles to that of houses and bungalows, the key difference in fire safety design in a block of flats relates to the fact that, once out of the flat, there is further to go to reach ultimate safety. Escape for residents therefore depends on the common parts being suitably designed and maintained for use in an emergency.

Design of communal means of escape in purpose-built blocks of flats is based on certain assumptions. These include:

- that the most likely place of origin of a fire will be in a flat itself;
- that there is a high degree of fire separation between flats and the common parts and, therefore, the likelihood of fire and smoke spread beyond the flat of origin is low;
- that the materials used in the construction of the building, or the protection afforded to them, are such that fire is unlikely to spread through the fabric of the building;
- that the uses of the common parts, and the nature of any combustible items present, are such that any fire originating in the common parts is unlikely to spread beyond the immediate vicinity;
- that there will be no means of external rescue available, and residents should be able to escape by themselves.

These assumptions dictate the appropriate protection for the communal means of escape. As will be appreciated, if these assumptions are not met, there will be the potential for harm to, possibly, many occupiers in the event of fire.

Accordingly, the following principles would normally be incorporated in the design of escape routes in a block of flats, namely:

- front doors to flats should be fire resisting and self-closing;
- corridors leading to stairways should be enclosed in fire-resisting construction;

- where there is means of escape in only one direction along a corridor (i.e. a dead-end corridor), the extent of travel in such corridors needs to be limited;
- open decks and balconies should be limited in extent if escape is only possible in one direction, and, in cases where the escape route requires persons to pass other flats to reach a stairway, the route should be of fire-resisting construction in order to provide appropriate protection to those persons;
- stairways should be enclosed in fire-resisting construction, and any doors forming part of the construction should be fire-resisting and self-closing;
- generally, any external stairways need to be suitably separated from the building by fire-resisting construction and fire-resisting, self-closing doors;
- any areas, rooms or risers opening onto communal escape corridors and stairways should be fitted with fire-resisting doors that are either self-closing or are kept locked shut;
- arrangements for maintaining stairways clear of smoke should be provided (through means such as openable windows and vents);
- additional protection is needed where there is only a single stairway for normal access and for egress in an emergency, normally comprising a lobby approach and permanent openings or automatically opening vents for clearing smoke.

### Mixed use buildings

Mixed use buildings require special consideration regarding the sharing of staircases as means of escape or as access and egress from areas of the building that have different uses. Further advice is provided in current benchmark design guidance for new dwellings. In this connection, it should not be implied that existing premises that pre-date this guidance must be brought up to current day standards retrospectively. It is of course very good practice to do so, however. In principle, potential risks to the occupants of flats increase with the height and size of the building and the number of flats present. It may, therefore, be reasonable to accept shared staircases in smaller, low-rise buildings. However, this would depend on other inter-related factors, most importantly the provision of adequate means of escape and, potentially, enhanced means of warning in case of fire, for example. It might be expected that a smaller mixed use building containing flats may require a simultaneous evacuation procedure.

## **Measures to Limit Fire Spread and Development**

### Houses

With the exception of measures to protect escape routes, there are generally no requirements for fire separation of rooms/ storeys within individual dwellings, with the exception of integral or attached garages.

If a garage is attached to, or forms an integral part of, a house, the garage should be separated from the rest of the house by fire-resisting construction.

Where a door is provided between a house and a garage, the door should be a fire-resisting, self-closing door and should meet other specific criteria intended to prevent any fuel spills from entering the dwelling.

Houses that are semi-detached, or in terraces, should be considered as separate buildings. It would generally be expected that every wall separating the houses should be constructed as a fire-resisting compartment wall.

In the case of houses in multiple occupation, fire separation between the individual occupied parts of the building, such as bedrooms and bed-sitting rooms, would generally be expected.

### Flats

Adequate compartmentation is a basic requirement in all purpose-built blocks of flats. The standard of fire separation, whether between individual flats, between flats and the common parts, or between the common parts and ancillary accommodation, such as refuse chutes and plant rooms, should be a key consideration when undertaking a fire risk assessment<sup>3</sup>.

The standard of compartmentation and fire separation recommended in design guides for blocks of flats has changed over the years, particularly in comparison to those published prior to the 1960s. This has, inevitably, led to variations, both in the nature of the construction and in the periods of fire resistance that can be found in existing blocks of flats.

Current benchmark design guidance for new purpose-built blocks of flats recommends that all of the following should be provided as compartment walls and compartment floors, namely:

- a) any floor and wall separating a flat from another part of the building;
- b) any wall enclosing a refuse storage area;
- c) any wall common to two or more buildings.

Stairs and service shafts connecting compartments should also be protected to restrict the spread of fire between the compartments.

The current minimum level of fire resistance is 60 minutes (higher in the case of high-rise blocks, but normally 30 minutes in small, two-storey blocks of flats). Previous design standards for older, traditionally built blocks of flats, with timber floors, permitted a lower level of fire resistance, typically 30 minutes.

In practice, in older blocks of flats, the materials that were used, and the method of construction adopted, might not achieve these periods of fire resistance. Traditionally, the combination of a lath and plaster ceiling below a timber floor was only considered to provide a notional 30 minutes' fire

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<sup>3</sup> <https://nfcc.org.uk/our-services/position-statements/fire-safety-risk-assessment-guidance/>

resistance. In reality, the performance of lath and plaster is highly variable, given that the thickness of the plaster is not uniform.

It may be reasonable to accept reduced levels of fire resistance for compartment floors and walls in existing small, low-rise blocks. However, this would depend on other inter-related factors, most importantly, the provision of adequate means of escape and potentially enhanced means of warning in case of fire.

#### Mixed use buildings

In the case of mixed-use buildings, the various parts of such buildings that are likely to be occupied by different tenants, mainly for different purposes, should be separated from one another by fire-resisting construction. Doors between such areas are generally permitted only for the purpose of means of escape.

## General Fire Safety Matters

### Emergency Escape Lighting

Emergency escape lighting is not generally provided within individual dwellings, either houses or flats.

Furthermore, it is not generally necessary to provide emergency escape lighting in small HMOs and small blocks of flats of no more than two storeys, provided that there are adequate levels of natural or street lighting (borrowed lighting). However, emergency escape lighting should be provided within all common escape routes, including, where necessary, external stairways, balconies and roof level escape routes. Where borrowed lighting is not reliable, e.g. street lighting switched off during part of the night, emergency escape lighting may be desirable, even in a small HMO or two storey block of flats, in these circumstances.

Emergency escape lighting should conform to the recommendations and requirements of the relevant parts of BS 5266. It should provide illumination for three hours in the event of power failure.

One or more test switches should be provided, so that the emergency escape lighting can be tested every month by simulating failure of the normal power supply to the luminaires without the need to isolate normal lighting circuits.

### Fire Safety Signs and Notices

Fire safety signs and notices are not required within individual dwellings. However, they may be necessary in the common areas of HMOs and purpose-built blocks of flats.

The normal access and egress routes within an HMO or block of flats do not usually require 'fire exit' signs to assist residents and visitors to make their way out of the building in the event of fire. For example, buildings with only one staircase would not usually require any fire exit signage regardless of the number of floors.

In other circumstances, fire exit signage may be required in circumstances where there are:

- alternative exit routes;
- secondary exits by way of an external stair;
- across a flat roof;
- where there is any potential for confusion.

In general, 'fire door keep locked shut' signs should be provided on:

- the external face of doors to storerooms;
- electrical equipment cupboards;
- any ancillary rooms located within the common parts.

In general, 'fire door keep shut' signs should be provided on both faces of fire-resisting doors forming part of the protection to the common escape routes and on cross-corridor fire doors. However, this does not apply to bedrooms and flat entrance doors. (In the case of fire doors that are held open, but release on operation of smoke detectors, the signs should read 'automatic fire door keep clear').

Fire action notices are generally required in the common areas of HMOs and purpose-built blocks of flats.

Where fire action notices are displayed, they must be relevant. Standard fire action notices often refer to using fire extinguishers, raising the alarm by breaking a fire alarm call point and, once outside the building, gathering at an assembly point. Most blocks of flats have neither a fire alarm system nor fire extinguishers and, given the 'stay put' policy that should be adopted in most blocks of flats, assembly at a designated place serves little purpose.

### **Means of Giving Warning in Case of Fire**

If there is at least one working smoke alarm in a dwelling, the likelihood of a death is reduced by a factor of eight when a fire occurs.

It is generally considered that the level of fire risk in individual domestic premises is unlikely ever to be sufficiently low to remove the need for some form of fire detection and fire alarm system. As a result, fire detection and fire warning within individual dwellings have been identified as Baseline indicators (see the Baseline indicators in appendix A).

### **Manual Fire Extinguishing Appliances**

It is not normally considered necessary, or appropriate, to provide fire extinguishers in individual dwellings or in the common parts of HMOs and blocks of flats. Such equipment should only be used by those trained in its use. It is not considered appropriate or practicable for residents to receive such training.

In addition, if a fire occurs in a flat, the provision of fire extinguishing appliances in the common parts might encourage the occupants of the flat to enter the common parts to obtain an appliance and return to their flat to fight the fire. Such a procedure is inappropriate.

Notwithstanding the above, it is appropriate to provide portable fire extinguishers in:

- plant rooms and similar ancillary accommodation;
- common community facilities;
- any staff rooms;
- places where people are employed to work, etc.

### **Automatic Fire Suppression Systems**

Approved Document B: Fire Safety Volume 1: Dwellings. 2019 edition (as amended), which provides practical guidance about how to meet the requirements of the Building Regulations 2010 (as amended) / Approved Document B: Fire Safety Volume 1: Dwellings now calls for blocks of flats over 11m in height to be fitted with sprinklers in the flats.

In older buildings, other height limits were applied; until 2020, 30m was used as the trigger height.

The use of automatic fire suppression systems can also provide design freedoms, for example in open plan layouts.

## Management of Fire Safety

Generally, it is more likely that the use of the Housing Act will be in relation to fire safety systems that require repair.

It should also be noted that some of the issues highlighted below are under the control of the tenants. However, deficiencies may be apparent regarding the maintenance of fire safety systems and the information provided to tenants that warrant action, using a complementary approach, for example:

- a) a referral to the fire and rescue service for consideration under the Fire Safety Order, or for a community safety intervention.
- b) use of alternative powers, such as licensing in the case of a house in multiple occupation.

All residents need to be made aware of the importance of maintaining in place the prescribed fire safety measures.

In HMOs and flats, these measures will include maintenance of the self-closing, fire-resisting doors that separate individual dwellings from the common parts and any fire detection that has been extended into individual dwellings for the benefit of others in the building.

Dependent upon the original design of the building, this may occasionally include the doors and structure that protect the hallway and or staircase within the individual dwellings.

Alterations by residents within their own home may not only put those residents at risk, but also other residents in the block. It is important that residents understand the need to avoid inadvertently undermining the building's fire protection measures when making changes to their individual dwelling.

It is also important that residents are provided with fire safety information in relation to their home, namely:

- how they can prevent fires in their own home and, in the case of a purpose-built flat, in the common parts of the building;
- the evacuation strategy for the building whether:
  - simultaneous; or
  - "stay put" (including, if necessary, what 'stay put' means if there is a fire elsewhere in the building);
- preparing an escape plan for their family, so that everyone in their household is aware of the action to take if fire occurs in their home;
- what is involved in testing their smoke alarms and how often testing should be carried out;
- that they should never store or use petrol, bottled gas, paraffin heaters or other flammable materials in their own home, or on their balcony in the case of some flats, or in shared areas;

- policies in respect of particular known hazards, such as barbecues on balconies, storage or charging of mobility scooters, storage of pushchairs in the common parts, etc;
- what the policy on the use of common parts requires of them (i.e. zero tolerance or managed use);
- what they must do to safeguard communal escape routes, especially taking care to make sure fire doors self-close properly and are not wedged, tied or otherwise held open;
- the importance of maintaining the security of their building (making sure that main entrance doors close behind them when they enter or leave) and being vigilant for deliberate fire setting;
- ways they can assist the fire and rescue service by not blocking access to the building when parking, and by keeping fire main inlets and outlets, where provided, clear;
- how they can report any defects in fire safety measures within their home and elsewhere in the building;
- the availability of Safe and Well Checks, Home Safety Checks and Home Fire Safety Visits by the fire and rescue service for vulnerable residents.

All fire safety systems and equipment need to be maintained in effective working order. It is, therefore, necessary to have in place management arrangements which ensure routine inspection, testing, servicing and maintenance.

Some of the inspection and testing can be carried out by in-house staff, provided they are suitably competent. However, it is anticipated that most landlords and other Responsible Persons<sup>4</sup> under the Fire Safety Order will need to employ suitable contractors to carry this out. Again, it is essential that these contractors are competent. Various third-party certification and approval schemes are available that provide landlords and other Responsible Persons with confidence that listed companies have been assessed initially in relation to their capability against a recognised standard, and that this is continually monitored through surveillance visits.

Where elements of the testing are carried out by in-house staff or other non-specialists, it is important that there is access to a suitable contractor to follow up and address deficiencies identified through the testing. In particular, it is important to attend site at short notice to carry out emergency repairs resulting from the tests, e.g. in the event that a smoke vent will not close, or a fire alarm system will not reset.

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<sup>4</sup> Fire Safety Order 2005: "In this Order " responsible person" means-

(a) in relation to a workplace, the employer, if the workplace is to any extent under his control;

(b) in relation to any premises not falling within paragraph (a)-

(i) the person who has control of the premises (as occupier or otherwise) in connection with the carrying on by him of a trade, business or other undertaking (for profit or not); or

(ii) the owner, where the person in control of the premises does not have control in connection with the carrying on by that person of a trade, business or other undertaking.

## Major Accident Scenarios (Fire and Explosion)

A simple definition of a major accident hazard is an occurrence that has the potential to adversely impact the health or safety of many people. A major accident risk is then the likelihood that a number of people are harmed from that hazard occurring. However, as they usually require a series of failures, major accidents tend to be low likelihood events.

Assessing and managing the risks from these high consequence, low likelihood type of events therefore needs to differ from the consideration given to 'day-to-day' risks to which people are exposed.

A major accident hazard for fire in a multi-occupied residential building might be considered to be any event that could escalate to affect the health and safety of a multiple of people outside the immediate area that was originally affected; these events would include:

- a fire that affects the occupants of multiple compartments (flats, common parts, stairways) on a single floor;
- a fire that escalates from a single floor to another floor;
- a fire that escalates to affect more than two floors and, potentially, the whole building.

Understandably, one of the most widely recognised, potential whole building / multiple floor scenarios is fire spread as a result of combustible cladding systems. The Grenfell Tower fire has brought back into sharp focus the serious consequences of an uncontrolled fire spreading over the walls of a building. 72 deaths occurred as a result of a fire in a single flat. The speed and extent of fire spread in that tragic fire resulted from by-passing of compartmentation as a result of the very hazardous external cladding.

Whilst the potential for high consequence events as a result of fire spread as result of combustible cladding systems is the initial focus of this section, other potential high consequence scenarios can be identified, which could fall into one of the three categories discussed in Major Accident Scenarios; illustrative examples are given later in this section.

### Fire spread as a result of combustible cladding systems

For a building to be considered acceptably safe, the time required for fire to spread externally from one compartment to another, or from one storey to another, needs to be sufficiently long so as to allow for safe escape and the intervention of the fire and rescue service; measures needed to support safe escape and intervention from the fire and rescue service vary, depending upon the particular building, and its size, use and location.

Buildings may have been previously surveyed, and information may be available which indicates that the cladding system does not pose any undue risk, or not all buildings will require a detailed review of their external walls. In many cases, it will be manifestly obvious to a competent HHSRS assessor that the risk to life from external fire spread is not such as to warrant a fire risk assessment of the external walls by a specialist. This is particularly true in older buildings with brick or masonry external walls,

which do not present any significant risk of fire spread. However, caution should be exercised when assessing the wall structure based on external appearance, particularly regarding newer buildings, as some wall facings may give a false impression that traditional construction methods have been employed, for instance:

- the use of Brick slip or other similar facing panels may have been used; some such panels may be supported by thermoplastic materials.
- Render may not be applied directly on to masonry but instead could be applied as part of an external thermal insulation composite system, possibly including thermoplastic foam materials.

In buildings where the above criteria are not met, consideration must be given to the likelihood, and consequences, of a fire spreading to the external cladding system.

### Likelihood of Fire

The presence of combustible cladding systems does not affect the likelihood of a fire starting. That remains the same as for any other multi-storey block and there is no evidence that the chance of a fire starting in a flat or apartment in a high-rise block is different from that in a flat in any other block of flats. Common causes of fire have been discussed in earlier sections.

A fire is most likely to start within a dwelling, although it could start within common parts of a block of flats or directly outside the building.

It should be recognised that the average likelihood scores given in part 1 of the HHSRS Operating Guidance are based on probability of a fire that causes harm, and probability of the spread of harm outcomes for single dwellings; these averages do not reflect the likelihood of fire spread or harm beyond the dwelling of origin.

The presence of cladding may alter the probability of a harmful outcome, as persons in parts of the building which are distant from the dwelling of origin could, potentially, be affected as a result of uncontrolled fire spread if the cladding becomes involved in the fire.

When assessing the likelihood of a fire spreading to the cladding system from a fire in an individual flat, it should be recognised that this could be as the result of a fire in any of the flats in the building that are in close proximity to areas that have combustible cladding.

However, it is not as simple as multiplying the average likelihood scores given in the part 1 of the HHSRS Operating Guidance by the number of such located flats. As many dwelling fires which have the potential to cause harm will remain confined to the dwelling of origin, conversely fires that do not cause harm to the occupants of the dwelling initially involved may escalate to affect the cladding system.

In order to create a scenario where the fire spreads from the flat to the cladding system on the outside of the building, it is necessary to consider the circumstances which may lead to flames emitting from a window or other opening in the dwelling which are proximate to the cladding; this could occur for a number of reasons but, principally, this will be due to:

- the proximity of the item first ignited, or the items that become involved in the development of the fire, to the opening/window;
- the fire growing to the point where flashover occurs.

A statistical basis for the likelihood of either of these scenarios is very difficult to define. However, it would be appropriate to consider that the likelihood and potential for harm from an uncontrolled spread of fire across cladding systems must, intuitively, increase proportionate to the number of flats and extent of the cladding.

There are additional relevant matters that have the potential to increase the likelihood of a fire escalating to involve the cladding system and the scale and speed of the fire spread within the cladding system, such as:

- Absence of automatic fire suppression systems in flat/s;
- internal layout of flats, e.g. the proximity of the kitchen windows, and the ducting from cooker hoods to the external cladding system;
- accidental or intentional ignition of inappropriate fire loads in the common parts, e.g. rubbish has been allowed to accumulate or, in other forms of imposed fire loading, such as timber used to box in services passing through common areas. However, whilst hazardous in their own right, it will be the proximity to the cladding which may present the greater risk in this scenario;
- There is also the potential for fire to start outside the building where adjacent fire loads are present, such as motor vehicles, electric vehicle charge points and rubbish/refuse bins.
- The location of such items may be increasing the hazard considerably, e.g. whilst vehicles parked next to the cladding will create a risk, vehicle parking under an overhanging section of the building, or the presence of an open sided car park directly underneath would be far more concerning.
- When considering the potential for accidental ignition, either inside or outside the building, sources of potential inception should form part of the consideration, e.g. the charging of mobility scooters and electric vehicles; the facility to do this may be provided or controlled by the building owner/manager.
- When considering the potential for deliberate ignition, the physical security of the perimeter of the site and the building will influence the likelihood of fire.

In addition to the number of flats adjacent to the cladding and the nature of the cladding materials, there are a number of other relevant factors that require consideration when assessing the potential for a high consequence event; some have already been discussed in earlier sections but, dependent on the circumstances, the following factors may also be important:

- Means of escape.

For example, access to more than one staircase is likely to have a positive influence on reducing the risk (see note below); access to only one staircase would be likely to be less advantageous, particularly if the protection to this staircase did not include a lobbied approach.

- Measures to limit fire spread and development.

Some factors are likely to have a greater influence on the development of a fire involving a cladding system, e.g. the absence of cavity barriers in the external cladding system. Conversely, minor defects affecting internal service risers distant from the external envelope of the building may have little or no effect.

- Adequate emergency escape lighting.
- Fire evacuation procedures and resident safety information and how these have been communicated, including safety signs and notices.

Careful consideration will need to be given to the effectiveness of any existing or proposed changes to the evacuation strategy, e.g. if a simultaneous evacuation strategy has been, or is, proposed in order to try to mitigate identified fire safety deficiencies. Whilst this approach may give sufficient early warning for able-bodied occupants of flats to enable them to use the means of escape safely, this approach fails to provide an equivalent level of mitigation for any disabled persons who are unable to use the means of escape without assistance.

- Means of giving warning in case of fire.

In the case of common fire detection and alarm systems, if fitted to support simultaneous evacuation, consideration should be given to factors which may compromise their intended purpose, e.g. the audibility within the flats, the adequacy of the provision of automatic fire detection and the incidence of false alarms<sup>5</sup>.

- Automatic fire suppression systems.
- Smoke ventilation systems.
- Proximity and nature of nearby buildings.
- Other constraints of the site.

Other factors which affect the ability of the fire and rescue service to intervene are also relevant matters when considering the potential for a fire to involve the external cladding system and to escalate to a high consequence event, such as:

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<sup>5</sup> The Fire Safety (Residential Evacuation Plans) (England) Regulations 2025 aim to improve the fire safety and evacuation of residents in specified residential buildings in England who would have difficulties evacuating a building by themselves in the event of a fire. This may be due to a physical mobility issue, some other disability such as having a sight or hearing impairment, or a cognitive condition.

- presence/maintenance of dry/wet rising mains;
- presence/maintenance of lifts intended to be used by firefighters;
- access arrangements to the site and the building for the fire and rescue service.

[Working with relevant agencies to mitigate/quantify the hazards present](#), as set out later in the 'Other Relevant Fire Safety Legislation' section.

A dual enforcement regime exists in buildings comprising purpose-built flats. Dependent upon the actions that are identified, it is likely that consideration of the differing powers that are conferred by the Housing Act 2004 and the Fire Safety Order may be important in determining the most appropriate lead agency and/or further refining the enforcement options.

The Housing Act 2004 can be utilised to request information about the materials in the external wall system but does not impose a requirement on building owners to assess the risks. Local housing authorities do have the power to assess the risk in order to determine the hazard rating and may also take samples to assist in determining the materials used. Alternatively, the fire and rescue authority could impose a requirement on the Responsible Person to undertake a suitable and sufficient assessment of the fire risk posed by an external wall system.

Note: The presence of balconies of combustible construct may create similar potential for fire spread to those which have been previously mentioned regarding external wall systems and will require similar consideration.

## **Gas Explosions**

It will be readily appreciated that a gas explosion is likely to meet the definition of a major accident hazard.

In addition to the damage and injury caused by the initial explosion, there will be a subsequent potential for fire spread due to fire safety measures being compromised by the initial explosion.

Whilst gas explosions are statistically very rare occurrences, it is not just the possibility of an explosion which is relevant, but also the consequences if one occurs. If there is any indication that there may be an above average risk, e.g. a smell of gas (the stenching agent mercaptan), further investigation and action must be taken as a priority.

A single critical defect may provide the circumstances required to cause a gas explosion.

In addition to the mains gas supply, it is also important to recognise the potential hazard of gas explosion or ignition from portable liquified petroleum gas (LPG) appliances such as barbeques and patio heaters. The use of such appliances and associated storage of LPG cylinders may increase the likelihood of a fire occurring and the consequences, including the potential for fire spread beyond the dwelling.

The presence of LPG cylinders may accentuate other identified hazards, for example, the storage/use of LPG barbeques on flat balconies is never acceptable. However, the risk will be higher if the balconies or adjacent cladding are combustible.

### **Failure of Fixed Fire Safety Systems and Equipment**

In both new construction and when upgrading existing buildings, the various aspects of fire precautions are interrelated and weaknesses in some areas can be compensated for by strengths in others. A higher standard under one of the areas might be of benefit in respect of one or more of the other areas.

If it is identified that a fixed fire safety system is not operational, the potential consequences will require careful consideration.

The failure of a fixed fire safety system will not increase the likelihood of a fire occurring. However, it may significantly increase the consequences.

Identification of the original design intent of the system/equipment is important and will provide an indication of the potential for increased harm.

Fixed fire safety systems and equipment, e.g. smoke control systems and automatic fire suppression systems, may be provided to compensate for elements of the design of a building, e.g. extended single directional travel distances in corridors providing egress from flats, reduced levels of fire separation between different types of occupancy.

Conversely, it may be noted that, as a result of changes to legislation that occurred between the relative dates of construction, an automatic sprinkler system has been provided in a new build, which is, in all other respects, similar to a slightly older building which has not been provided with such a system.

Dependent upon the reason for the original installation of the fire safety system, its non-availability could pose a significant risk to multiple occupiers, e.g. the design of some purpose-built flats places a high reliance on the mechanical smoke control system and the integrity of flat entrance doors, using these to justify increased single directional travel distances (from flat entrance doors to protected staircases).

The Smoke Control Association 'Guidance on Smoke Control to Common Escape Routes in Apartment Buildings (Flats and Maisonettes)' (referred to as the SCA guide) categorises normal single direction travel as 7.5m, extended single direction travel at up to 15m and significantly extended single direction travel as over 15m, with a recommendation that 30m is a limit. For clarity, the SCA guide is an industry guide and is not issued by the government or British Standards Institution, albeit the guide has been used, historically, by a number of Approving Authorities. Designs may be encountered that predate this industry guidance and which have even longer travel distances. In the case of the more extended travel distances, it can be appreciated that a malfunction of the smoke control system could present a serious risk to the occupiers who rely on the corridor for their means of escape.

### **Other Major Accident Scenarios**

The examples given above are not exhaustive and other potential scenarios may be identified. For instance, the effects of construction or other maintenance work has the potential to compromise multiple fire safety provisions simultaneously if not properly managed.

## HHSRS Assessment

The HHSRS assessment process for fire hazard requires specific consideration of a number of factors. These can be summarised, broadly, as anything to do with the immediate location of the building, its design and layout, its structural elements, its fixtures, fittings and fixed appliances and its maintenance that are below the baseline indicator or optimum condition to reduce any risk to the health and safety of occupiers and visitors.

### Baseline Indicators

There are some simple, universally recognised standards which generally apply within HMOs and individual dwellings, whether these are stand-alone or part of larger multi-occupied buildings. These have been identified and are adopted as baseline indicators.

#### Measures to reduce the likelihood of fire

Baseline Indicator 19.4 requires that the electrical installation should be inspected and tested within the last five years in accordance with the recommendations of BS 7671 and IET Guidance Note 3. This also applies to any electrical installations in the common parts of multi-occupied buildings.

Baseline Indicator 19.2 requires that all electrical equipment supplied by landlords in rented residential premises should be safe and compliant with current UK requirements for safety of domestic electrical products. All electrical appliances supplied by the landlord should be subject to testing in line with the IET Code of Practice for In-service Inspection and Testing of Electrical Equipment (Fifth Edition) (unless they are under one year old and display a UKCA/CE marking).

Baseline Indicator 19.3 requires that an annual gas safety check should have been undertaken within the last 12 months (where natural gas or LPG installations are present).

#### Means of giving warning in case of fire

Baseline Indicator 19.5 requires that there should be sufficient properly designed and appropriately sited smoke and/or heat detectors with alarms in every dwelling. These should be properly maintained and regularly tested (see Appendix A, which provides information for types and tenures of dwellings).

#### Means of escape

Baseline Indicator 19.6 requires that the escape from bedrooms through habitable rooms should either be avoided or mitigated by other provisions (the continued use of escape windows will create issues for residents and should not be a preferred solution).

Baseline Indicator 19.7 requires that egress through doors/windows that are required for means of escape should not require the use of a key or a code. It should be noted that there may be a conflict with the need to provide security and/or insurance requirements. For instance, it may be appropriate to accept the presence of a mortise lock on a dwelling entrance door, provided that there is also a night latch type of lock which gives the occupier the option to secure the door but also to have key free egress whilst the dwelling is occupied.

### Complementary Baseline indicators

The baseline indicators above were developed to inform the assessment of all HHSRS hazard profiles where these have the potential to affect the likelihood or severity of consequences of a fire. Not all of the baseline indicators that have a relevance to fire will fall into section 19 of the baseline indicators (fire safety). All relevant baseline indicators should be used to inform the assessment under the fire hazard profile. For ease of reference, the more relevant of these baseline indicators are listed below:

BI 11.1: Adequate external lighting shall be provided to all means of access including entrances and external refuse stores, providing good visibility when there is no daylight.

BI 11.2: Access doors to dwellings should have adequate locks. Doors must be solid external grade and fitted with a minimum of a mortice deadlock to BS 3621, openable from the inside without a key. There must be a means for occupiers to view visitors without opening the door, either by means of a viewer within the door or by a glazed pane adjacent or close to the entrance door. All rear doors should be fitted with a mortice dead lock to BS-3621 or 2 security bolts.

BI 12.1: Every interior and exterior stairway, ramp, deck, porch, balcony walkway, terrace, landing and hall shall be maintained structurally sound, in good repair, properly anchored and capable of supporting the imposed loads.

BI 12.2: Internal and external stairs must be safe, secure, in sound condition, free from defects and projections and well maintained. External stairs must be designed to allow water to drain away from the steps.

BI 13.2: All windows with an opening section greater than 100 mm, through which a person may fall a single storey or more, shall have a fall-prevention device that restricts opening to less than 100 mm. It must be possible to overcome this restriction easily when the windows in question are required to be escape windows, under the building regulations.

BI 14.2: Every hall, stairs and landing within the house, and every room used, or intended for use, by the occupant of the house shall have a suitable and adequate means of artificial lighting that is controllable and accessible which can allow lighting to be turned on and off and bulbs/fixtures to be changed and maintained safely. Two-way or PIR-activated lighting shall be provided to any internal staircase.

BI 14.3: Light switches that control ceiling- or wall-type electric light fixtures shall be located conveniently in each room for safe use.

BI 14.4: All electrical installations, including fixtures and fittings, must be maintained in good repair.

BI 14.5: Gas appliances and flues provided for occupants are safe for continued use.

BI 14.6: Every habitable room shall have at least 2 separate and remote double electric sockets that are suitably located for use. Kitchens shall have at least 4 suitably located double sockets.

BI 15.4: Every dwelling shall have a properly installed heating system in good and safe working condition that is capable of safely and adequately heating all habitable rooms, bathrooms and toilet rooms. The system must be capable of heating the main living area to 21°C and the remaining

habitable rooms to a temperature of 18°C when the external temperature is minus 1°C, and the system should not allow the temperature to exceed 25°C in any room during the heating season.

## **Relevant Matters**

Baseline indicators provide a prescriptive but non-exhaustive list of proportionate building measures designed to protect the health, safety, and wellbeing of occupiers. While they cannot eliminate risk, they are designed to address common health-related housing deficiencies found across the housing stock.

The inclusion of baseline indicators provides a hybrid system where standards can be used, alongside other relevant matters, to provide an indicative summary of aggravating and mitigating factors related to the hazard being assessed. Baseline indicators are included earlier in this section of the guidance.

Many other aspects of the building design and layout, its structural elements, its fixtures, fittings and fixed appliances and its maintenance that do not readily transfer into a simple baseline indicator are likely to be relevant to the assessment of the fire and explosion hazard using HHSRS, either in individual dwellings or within the common parts of multi-occupied buildings. A simple list of these factors, given to aid a structured consideration of the relevant matters, is provided below. However, it will often be necessary to consider the guidance in earlier sections of this document, and more specific guidance for specific building types, which is described later.

Deficiencies may be due to the design or construction of the building, its age, modification, or lack of maintenance over time.

Assessors should consider any constituent parts, facilities, and amenities relevant to the dwelling being assessed (e.g. windows, staircases, electrical installations, and space heating).

Assessors should also consider typical and foreseeable occupier behaviour at the dwelling (e.g. lack of storage space in a flat is likely to increase the likelihood of inappropriate storage in the common parts and/or on balconies). They should not consider exceptional or unreasonable behaviour by occupiers which would put them at undue risk from a hazard (e.g. hoarding). Occupiers should be expected to use safety measures provided in the dwelling where they are convenient and accessible.

## **Other relevant matters affecting the likelihood of a harmful occurrence**

### Inadequate Control/Elimination of Sources of Ignition

Inadequate control of electrical sources of ignition, in addition to the requirements set out in baseline indicators and any apparent defect, should be considered.

When considering potential electrical sources of ignition, either inside or outside the building, the charging of mobility scooters and electrical vehicles, etc should also be considered.

### Smoking

Smoking should be prohibited in common areas; consideration should be given to the provision of 'no smoking' signage and the arrangements for disposing of smoking materials near the entrance/s to the building.

#### [Arson](#)

Physical security measures and presence and proximity of fire loads to the building, e.g. entrances to buildings should be provided with appropriate locks to prevent unauthorised entry.

#### [Accidental Fire Spread](#)

Consideration should be given to the potential for accidental fire spread from the outside of the building, the proximity of external fire loads and sources of inception, e.g. car parking adjacent to, or underneath, buildings, charging facilities (e.g. for cars, cycles and mobility scooters), location of refuse stores, etc.

#### [Cooking](#)

The design of the kitchen should be considered and whether this is likely to lead to combustible materials being in close proximity to cooking appliances.

#### [Fixed heating](#)

In addition to the provisions detailed in baseline indicators, any apparent defect should be considered.

#### [Lightning](#)

The need for lightning protection is dependent on the height of the building and its location.

#### [Laundry drying facilities](#)

The lack of provision for adequate facilities for the drying of laundry.

#### [Overcrowding and multiple occupation](#)

Overcrowding can create situations where facilities within a dwelling are overused, leading to disrepair and faults, increasing the likelihood of a fire happening and also in extreme cases affecting escape from a fire where a building accommodates more people than originally intended or the associated storage blocks escape routes.

Overcrowding can also lead to increase fire loading including inappropriate storage in common escape routes and on balconies.

Inadequate waste storage facilities can result in accumulations of rubbish in appropriate areas and excess fire loading. This is particularly relevant to larger HMOs where the domestic provision is often inadequate

#### [Note:](#)

Dependent upon the cause of the of the potential source of ignition, other routes to resolve the issue may be more appropriate, for example, close proximity of combustible material to a cooker may be as a result of poor kitchen design and should be addressed using HHSRS. However, other causes, such as hoarding, are likely to require an alternative approach.

### **Other relevant matters affecting the severity/likelihood of harm outcomes**

#### Note:

In the case of smaller standalone dwellings, the fire safety measures required to achieve an adequate level may be very few and simple whereas, in a larger multi-occupied building, the requirements are likely to be extensive and will include separation between dwellings and the common parts.

#### Means of escape

##### Poor room layouts:

- In open plan layouts such as bed sitting rooms, the kitchen should be remote from the exit route from the room.

##### Excessive travel distances to:

- Relative safety, e.g. a protected staircase; and/or ultimate safety (outside the building).

##### Arrangements provided for securing exits unsatisfactory:

- Exit doors and doors on escape routes cannot be easily opened in the direction of escape without the need to use a key or a code;
- There may be circumstances when electronically operated locks are encountered; it is important that such locks fail safe open in the event of power failure and are provided with suitable mechanical override devices.

##### Obstructed escape routes:

- The escape routes should be clear from obstructions.

##### Restricted egress outside buildings:

- Once outside the building it is necessary to be able to disperse to a safe distance.

#### Fire protection to escape routes

Dependent on design and the height of the highest floor above ground, fire protection to escape routes within individual dwellings may be required (generally required above 4.5m, except in the case of very small flats). In the case of multi-occupied buildings, fire protection to escape routes is generally required.

##### Fire-resisting construction (including any glazing) protecting escape routes:

For example, in the case of purpose-built flats, the requirements are likely to be quite comprehensive, e.g. in purpose-built flats:

- corridors leading to stairways need to be enclosed in fire-resisting construction;
- stairways need to be enclosed in fire-resisting construction;
- any external stairways need to be suitably separated from the building by fire-resisting construction and fire-resisting doors;
- any areas, rooms or risers opening onto communal escape corridors and stairways will normally be required to be separated by fire-resisting structure;
- if escape is only possible in one direction via open decks and balconies, fire-resisting construction should be provided to protect people passing other flats to reach a stairway (protection should extend at least 1.1m above deck height).

#### Fire resistance of doors to common escape routes:

Where doors are provided in fire-resisting structures, it follows that these should also be fire resisting. These doors should be maintained in sound condition and be of an appropriate type, dependent on the nature of the building and their location within the building. Locations where fire-resisting doors are likely to be necessary include:

- Doors to risk rooms and bedrooms in bedsit type HMOs and larger shared house type HMOs (\*e.g. three storeys and above);
- flat entrance doors;
- cross-corridor doors;
- staircase lobby doors/storey exits;
- doors to meter cupboards, storage areas plant rooms, etc.

Under current benchmark design guidance (Approved Document B: Fire Safety Volume 1: Dwellings. 2019 edition (as amended), Table C1, page 138.), doors forming part of the protected entrance halls and stairways within individual dwellings are normally specified as 20-minute fire-resisting doors (designated FD20<sup>6</sup>). Similarly, doors forming part of a protected common escape route, e.g. from the flat entrance door to the final exit, including the flat entrance door itself, are normally specified as 30-minute fire-resisting doors with smoke seals (designated FD30S).

However, this should not be taken to imply that existing doors that predate these requirements should be upgraded or replaced as a matter of course.

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<sup>6</sup> Although ADB still refers to FD20 doors, it is standard practice to use FD30 doors, as FD20 doors are no longer produced by manufacturers.

Original fire-resisting doors may lack intumescent strips and cold smoke seals and in the case of flat entrance doors may not have protected letterboxes. There would have been reliance on 25mm doorstops to achieve 'smoke control'. However, these doors may be acceptable, dependent on the type/size/height of building and the location of the door within the building, e.g.: a flat entrance door which opens directly onto a staircase enclosure is likely to be more critical than a flat entrance door that opens onto a protected lobby that leads to a protected staircase enclosure.

Other existing guidance relevant to smaller houses which are occupied as single-family units or as shared houses currently states that 'Doors onto the escape route may be acceptable if they are of sound, solid construction, and are close fitting. However, hollow core doors, and doors fitted with thin panels, are unlikely to provide adequate fire resistance.

Further specific advice regarding fire-resisting doors is contained in Appendix B.

#### Measures to ensure that fire-resisting doors are maintained in the closed position:

Suitable self-closing devices should be fitted on doors between individual dwellings and the common parts and on doors in normal use within the common parts (it should be noted that doors within individual dwellings are not usually required to be fitted with self-closing devices).

Doors which are generally expected to be kept locked shut when not in immediate use are locked, such as doors to plant and store areas. However, there may be circumstances where a self-closing device has been fitted and is a suitable alternative.

#### Smoke Control

In more complex buildings, smoke control provisions may be required to protect the means of escape, whereas in houses and very small blocks of flats, there is likely to be no, or very limited, need to provide smoke ventilation.

It would normally be expected that there should be a suitable means of venting smoke from the common parts in buildings containing flats.

In modern blocks of flats, this will commonly comprise an automatically opening vent(s) (AOVs), operation of which is triggered by smoke detectors. These smoke detectors will not normally trigger any form of fire alarm warning signal.

Where (as is common in older blocks) there are no AOVs, it is acceptable (subject to the height of the building) for means of venting smoke to comprise windows or vents that can be opened by the fire and rescue service.

- In buildings where openable windows or vents are provided, these should be easy to open.

#### Artificial lighting

In all buildings, artificial lighting should be provided to enable people to leave the block safely in the event of fire.

Emergency escape lighting (lighting that will operate when the electricity supply to the normal lighting fails) should be provided in all common escape routes in most flats and larger/more complex HMOs.

### Measures to Limit Fire Spread and Development

#### Levels of compartmentation:

The level of required compartmentation will vary, dependent upon the type of premises, from no compartmentation in detached houses occupied as a single family to extensive requirements in purpose-built flats, e.g. between floors and between flats and the common escape routes.

- Reasonable limitation of linings to escape routes that might promote fire spread.
- Reasonable fire separation within any roof space, e.g.:
  - between terraced houses;
  - through roof voids; the lines of compartmentation between flats located on the top floors of premises which have a “stay put” policy should extend through the roof voids in a continuous vertical plane to the underside of the roof.
- Fire protected service risers and/or ducts in common areas, if applicable.
- Fire protected refuse chutes:
  - Some purpose-built blocks of flats are provided with refuse chutes. Refuse chutes usually have a hopper on each floor and lead to a common bin store. As refuse is a potential source of fire in terms of ignition and fire loading, it is essential that the doors and shaft of the hopper/chute are adequately fire resisting. Due to their repeated use, hoppers often fall into disrepair.
  - The location of the hoppers will also be relevant. The consequences of any defect present will depend on whether they are contained within fire-resisting service rooms on each level or accessed directly from the corridors.

### Provision of Fire Safety Signs

#### Fire exit signage:

- There will normally be a requirement for ‘fire exit’ signs only where there are alternative escape routes, one of which is not in normal use.
- However, a requirement for ‘fire exit’ signs in smaller single staircase buildings is unlikely.

#### Mandatory Signage:

- Fire-resisting door signage will generally be required only in premises which are not occupied as single-family units, e.g. blocks of flats. With the exception of flat entrance doors, any self-closing fire doors within the common parts should be fitted on both sides with ‘fire door keep shut’ signs.

Other doors to areas such as stores, plant rooms and risers, should be signed 'fire door keep locked shut' on the outside.

Provision of fire action notices:

- In the case of flats, a fire action notice, providing information on the action to take in the event of a fire, should be prominently sited in the ground floor entrance area.
- The notice should provide information on the fire evacuation strategy (normally, a "stay put" strategy, unless a common fire alarm system has been installed to initiate a simultaneous evacuation of all flats). Specific information should be provided on the following:
  - action that a resident should take if fire breaks out in their flat;
  - action to take on seeing, or becoming aware of, a fire in another flat or another part of the block;
  - how to call the fire and rescue service.

#### [Fire Detection and Alarm Systems](#)

Further information regarding fire alarm requirements within individual dwellings and houses in multiple occupation is provided in Appendix A.

Fire detection and alarm systems are not required in the common parts of blocks of flats that have adequate compartmentation to support a "stay put" strategy. To install such a system would contradict the principles of the "stay put" strategy and could, in some instances, actually place residents at risk.

However, automatic fire detection is often provided/required, not to raise the alarm, but, instead, to operate smoke control provisions

There will be occasions where fire detection and alarm systems have been provided to initiate a simultaneous evacuation to compensate for identified deficiencies in other fire protection measures. In this case, there are a number of important considerations, including:

- audibility in flats;
- the type of automatic fire detection provided and the likely incidence of false alarms.

#### [Provision of Fire Extinguishers](#)

Fire extinguishers are generally required only in certain ancillary rooms within purpose-built blocks of flats, such as electrical distribution rooms (not small meter cupboards), boiler rooms and lift motor rooms.

Current fire safety guidance relevant to purpose-built blocks of flats does not suggest that fire extinguishers are generally required in the common parts serving dwellings in multi-occupied

buildings. Their presence can create problems as a result of individuals who have successfully escaped a fire being encouraged to re-enter the affected area to attempt fire-fighting actions.

Fire extinguishers which are present in the common parts may also be used inappropriately, for instance to hold fire resisting doors open.

In most domestic situations, a 'fire blanket' is sufficient as it can enable people to quickly deal with a small cooking fire such as a chip or frying pan that has over heated.

### Fixed Fire Safety Systems and Equipment

Other fixed fire safety systems may have been originally fitted in the building and may have fallen into disrepair

Identification of the original design intent of the fire safety systems/equipment is important and will provide an indication of the potential for increased harm presented by any deficiencies that are identified

### Additional responsibilities under the Fire Safety (England) Regulations 2022

The Fire Safety (England) Regulations 2022 (the '2022 Regulations'), which commenced on 23 January 2023, apply to all buildings in England that comprise two or more domestic premises (including the residential parts of mixed-use buildings). They impose duties on the Responsible Person for any building which contains two or more sets of domestic premises and contains common parts through which people would need to escape in the event of an emergency e.g. a fire. They also introduce additional requirements dependent on the height of the buildings.

The 2022 Regulations, which are enforced by the local fire and rescue service, make the following requirements:

- Residents must be provided with information by the Responsible Person on what to do in the event of a fire<sup>7</sup> to new residents as soon as reasonably practicable after they move into their accommodation, and subsequently if there are any material changes (e.g. as a result of alterations to the building). In addition, the information should be reissued to all existing residents within each period of 12 months beginning with the date the 2022 Regulations came into force i.e. 23 January.
- Additionally, new residents should be provided with the required information regarding fire-resisting doors, particularly flat entrance doors, as soon as reasonably practicable after they move into their flat. Additionally, this required information should be provided to all residents within each period of 12 months beginning with the date the 2022 Regulations come into force i.e. 23 January. The required information includes that:

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<sup>7</sup> Regulation 9(2)(b) also specifies that the fire safety instructions should include: (ii) instructions as regards how to report a fire to the fire and rescue authority, and (iii) any other instructions that tells residents what they must do when a fire has occurred.

- fire-resisting doors should be shut when not in use;
- residents or their guests should not tamper with self-closing devices on fire-resisting doors;
- residents should report any fault with, or damage to, fire-resisting doors immediately to the Responsible Person.
- Additional requirements in buildings over 11m in height:
  - The Responsible Person must undertake checks of any fire-resisting doors in the common areas at least every three months;
  - The Responsible Person must use their best endeavours to undertake checks of all fire doors at the entrances of individual domestic premises in the building at least every 12 months.
  - The Responsible Person must keep a record of the steps taken to comply, including any cases where access to the domestic premises was not granted during any 12-month period and the steps taken by the Responsible Person to try and gain access.
- Additional requirements in buildings over 18m in height; or which has at least seven storeys (a 'high-rise' residential building):
  - wayfinding signage should be provided to assist the fire and rescue service to identify each floor and the flat numbers on each floor;
  - provision of Secure Information Boxes which should contain all necessary information, including plans and contact details i.e. name, address and telephone number for the Responsible Person, and the name / contact information of such other persons within the UK who are provided with the facilities to and are permitted to access the building as the Responsible Person considered appropriate;
  - provision of information regarding the design and material of external wall construction for the local fire and rescue service;
  - Provision of building and floor plans to the local fire and rescue service;
  - records of monthly checks of lifts that are intended for use by firefighters or for evacuation;
  - records of monthly checks of other fire safety systems that are provided which may include:
    - rising mains;
    - smoke control systems;
    - fire suppression systems;
    - fire detection and fire alarm systems, including any systems linked to other fire safety equipment, such as smoke control systems;

- evacuation alert systems (a visual check of the control and indicating equipment, but not testing of the system);
- automatic door opening or closing systems linked to fire detection and fire alarm systems.
- If any of these checks reveal a fault in one or more of the above systems or equipment, immediate steps should be taken to rectify the fault. If the fault cannot be rectified within 24 hours of its discovery, steps should be taken to notify the local fire and rescue service by electronic means.
- From 6 April 2026, in England, the Fire Safety (Residential Evacuation Plans) (England) Regulations 2025 will apply to all high rise residential buildings, and to medium rise residential buildings where a simultaneous evacuation strategy is in place.

More information about the Fire Safety (England) Regulations 2022 can be found at [14.310 - HO - Check your fire safety responsibilities under the Fire Safety \(England\) Regulations 2022](#)

#### Control/Elimination of Explosion Hazards

When considering other matters affecting the likelihood of an explosion, it should be recognised that a single critical defect may provide the circumstances required to cause an explosion; a non-exhaustive list of such defects is listed below:

- unauthorised gas supply – the supply of gas from a non-authorised supplier;
- unsafe siting of gas tanks – inappropriate siting of LPG containers or tanks;
- inadequate ventilation – lack of appropriate means of ventilation, taking account of the type of gas used;
- incorrectly plumbed hot water storage tank – tank of greater than 3 gallons (15 litres) connected directly to the mains water supply;
- Inadequately vented hot water system – inadequately sized and/or blocked vent to system;
- Unvented hot water system – lack of/or defective non-self resetting thermal cut-out and/or temperature relief valve to unvented system.

#### Consideration of the Risk of Fire Spread Over External Walls and Balconies in Blocks of Flats

A fire is most likely to start within a dwelling, although ignition could occur within common parts of a block of flats or in external areas immediately adjacent to the building.

When assessing the likelihood of a fire spreading to the external wall systems from a fire in an individual flat, it should be recognised that this could be as the result of a fire in any of the flats in the building that are in close proximity to areas that have combustible cladding. The following factors may influence the likelihood that a fire in an individual flat will affect the external cladding system, namely:

- absence of automatic fire suppression systems in flat/s;
- internal layout of flats, e.g. the proximity of the kitchen windows, and the ducting from cooker hoods to the external cladding system;
- inadequate fire detection and alarm systems within the flat/s
- poor detailing, damage, or absence of effective cavity barriers

The following factors may influence the likelihood of a fire spreading to the external cladding system from a fire in the common parts, namely:

- accidental or intentional ignition of inappropriate fire loads in the common parts, e.g. rubbish allowed to accumulate or, in other forms of imposed fire loading, such as timber used to box in services passing through common areas. However, whilst hazardous in their own right, it will be the proximity to the cladding that may present the greater risk in this scenario; where adjacent fire loads are present, such as motor vehicles and rubbish/refuse bins;
- in addition, there is also a separate risk associated with fire ignition external to the building, including areas that may be accessible to third parties and not controlled in the same way as internal common parts. These areas may be subject to fly-tipping, inappropriate storage of combustible materials or subject to other similar hazards.
- the location of such items may increase the hazard considerably, e.g. whilst vehicles parked next to the cladding will create a risk, vehicle parking under an overhanging section of the building, or the presence of an open sided car park directly underneath would be far more concerning.
- in this connection, the condition of the cladding, e.g. disrepair, can contribute to fire spread. For example, warped, untreated timber can increase the surface area to which a fire can be exposed, and missing panels or damaged panels can provide routes of entry for fire.

The development of a fire that has breached the cladding system will be dependent on a number of factors including:

- the combustibility and fire performance of external wall system and cladding;
- the location and adequacy of cavity barriers.

The consequences of a fire involving buildings with combustible cladding systems will be determined by a number of factors, for example:

- it should be recognised that the consequences of a rapidly developing fire in a cladding system may be exacerbated by the deficiencies that have already been discussed in the relevant matters section;
- where access is to a single staircase, the design of the means of escape and the distribution of the external cladding could increase the potential for harm;

- the ability of the fire and rescue service to intervene may also be relevant when considering the potential for a fire to involve the external cladding system and to escalate to a high consequence event; inadequacies in the provisions for the fire and rescue service should be identified, e.g.:
  - presence/maintenance of dry/wet rising mains;
  - presence/maintenance of Firemen's/Firefighting/Firefighters lifts;
  - access arrangements to the site and the building for the fire and rescue service.

The presence of balconies made up of combustible construction may create similar potential for fire spread to those which have been previously mentioned regarding external wall systems and will require similar consideration.

The relative significance of these factors will vary between buildings and consideration should be given to how the factors present in the specific case contribute to the overall judgement of potential consequences.

## Role of FRAEWs and PAS 9980

A Fire Risk Appraisal of External Walls (FRAEW) is a structured assessment of the fire performance of a building's external wall system. It focuses on whether materials and design features could allow fire to spread beyond what is reasonably anticipated, potentially compromising compartmentation and escape routes. Under the Fire Safety Order, all multi-occupied residential buildings with two or more sets of domestic premises must have their external walls assessed as part of the FRA; a FRAEW is only undertaken where there are concerns about the external wall construction and a more detailed review is needed.

Government endorses PAS 9980, Fire risk appraisal of external wall construction and cladding of existing blocks of flats. Code of practice developed by the British Standards Institution (BSI), as the standard methodology for conducting FRAEWs. PAS 9980 provides a proportionate, risk-based approach for evaluating external wall systems in existing multi-occupied residential buildings.

FRAEWs typically consider:

- Combustibility and fire performance of external wall construction, including any insulation.
- Presence and condition of cavity barriers and fire-stopping.
- External attachments such as balconies.
- Openings or penetrations within the External Wall System.

FRAEWs must be carried out by competent specialists with appropriate fire engineering expertise, in line with the competency principles set out in PAS 9980. Where applicable, they should be subject to independent audit.

FRAEWs focus solely on the external wall systems. It does not assess internal firefighting provisions such as dry or wet rising mains, firefighting lifts, or fire and rescue access arrangements. These remain outside the scope of PAS 9980 and should be considered separately.

Importantly, a FRAEW is not a standalone assessment. Its findings are intended to inform and support a Fire Risk Assessment, particularly in understanding the contribution of the external wall construction to the buildings overall fire risk.

### The Use of FRAEWs

HHSRS assessors should not decide whether a FRAEW is required. Instead, they should:

- Look at the Fire Risk Assessment for the building and check whether a FRAEW has been commissioned and is available.
- Record its presence or absence in inspection notes.
- Use its findings to inform scoring for the External Walls hazard.

Where available, FRAEW outcomes from buildings within the Cladding Safety Scheme (CSS) can be accessed via the National Remediation System (NRS). Local authorities should update NRS with details of inspections or visits.

A FRAEW is usually commissioned following a Fire Risk Assessment (FRA) where concerns about external wall systems are identified. It is not a routine requirement for all buildings but is triggered by factors such as:

- Presence of combustible cladding or insulation.
- Complex façade configurations that may affect fire spread.
- Previous fire safety concerns raised during an FRA.

An audited FRAEW is one that has been independently reviewed by another competent specialist to confirm compliance with PAS 9980.

- For buildings funded through the Cladding Safety Scheme (CSS) and Building Safety Fund (BSF), all FRAEWs are audited by Homes England.
- For buildings remediated under the Developer Remediation Contract, MHCLG audits a sample of FRAEWs.

Audited FRAEWs provide assurance and can be treated as primary evidence when assessing external wall fire risk under HHSRS.

Assessors must apply professional judgment, considering:

- The building's overall fire safety context.
- Internal layout and means of escape.
- Presence of vulnerable occupants.
- Residential Personal Emergency Evacuation Plans (rPEEPs).

Where a FRAEW is absent, but risk indicators exist, assessors should reflect this uncertainty in their hazard scoring. A FRAEW addresses external wall fire risk only. HHSRS assessors must consider the building holistically. Landlords must act on both FRAEW and HHSRS outcomes. For example:

If a FRAEW finds external wall risk tolerable but HHSRS identifies other fire hazards, those hazards must still be addressed.

### [Regulatory Context and Engagement](#)

Under the Fire Safety Order 2005 and as amended by the Fire Safety Act 2021 to clarify that the Fire Risk Assessment must include the external walls, the Responsible Person must ensure that the

assessment is “suitable and sufficient” and takes account of risks to which relevant persons are exposed. Although legislation does not require a Fire Risk Appraisal of External Walls (FRAEW), current guidance advises that, where a FRAEW is not included, the Fire Risk Assessment should explain why it is not considered necessary.

Local authorities are not responsible for checking the adequacy of the FRA, this is the role of the Fire and Rescue Service. Where concerns arise, engagement with the Fire and Rescue Service is recommended.

## Other Relevant Fire Safety Legislation

### Relationship with the Regulatory Reform (Fire Safety) Order 2005

Alongside the Housing Act 2004, the Regulatory Reform (Fire Safety) Order 2005 (“the Fire Safety Order”) introduced duties in relation to fire safety in the common areas of some HMOs, flats, maisonettes and sheltered accommodation in which personal care is not provided i.e. non domestic premises. The duty is placed on the Responsible Person to ensure that, amongst other things, a fire risk assessment is carried out and that specific action is taken to minimise the risk of fire in the common parts. The requirements of the Fire Safety Order are enforced by fire and rescue authorities.

There is, therefore, a dual enforcement regime in place in some multi-occupancy premises. In order to avoid duplication, and the potential for conflict, the Fire Safety Protocol established a framework for joint working arrangements between Local Housing Authorities and the Fire and Rescue Authorities and has been adopted locally around the country. A generic version of this Protocol can be found at <https://www.gov.uk/government/collections/fire-safety-legislation-guidance-for-those-with-legal-duties>.

However, the Protocol may not have been adopted or amended so it is important to establish the current situation in the location of the relevant property.

In premises occupied by single households, only the HHSRS will apply.

### Building Regulations

It is important to understand the relevance of the current Building Regulations to alterations. Inappropriate and unauthorised alterations can undermine the measures provided to ensure safety of occupants from fire. ‘Material alterations’ must be approved by a building control body (local authority building control or a private sector Approved Inspector).

### Fire Safety Act 2021

The Fire Safety Order applies to all non-domestic premises in England and Wales as well as to the common parts of multi-occupied residential buildings, such as blocks of flats (although individual flats are excluded). The Fire Safety Act 2021 clarifies the parts of such buildings to which the Fire Safety Order applies.

Specifically, it is clarified that, where a building contains two or more sets of domestic premises, the Fire Safety Order applies to:

- the building’s structure and external walls (including windows, balconies, cladding, insulation and fixings) and any common parts; and
- all doors between domestic premises and common parts such as flat entrance doors (or any other relevant door).

## Fire Safety (England) Regulations 2022

Introduces new duties under the Fire Safety Order for building owners or managers (responsible persons): <https://www.gov.uk/government/publications/fire-safety-england-regulations-2022>.

## Building Safety Act 2022

The Building Safety Act 2022 received royal assent on 28 April 2022. The higher-risk regime for building safety is now in force for both design and construction stage and occupation stage. The higher-risk regime for building safety applies to all multi-occupied residential buildings with a height of 18m or more, or more than seven storeys, whichever is reached first. The scope of the regime will be kept under review.

The BSA is part of a suite of measures and reforms that the government has introduced following the recommendations of the 'Independent Review of Building Regulations and Fire Safety: Final Report,' by Dame Judith Hackitt ("the Hackitt Review"), published in May 2018.

The Building Safety Act established the new Building Safety Regulator (BSR). The BSR has a range of duties, including facilitating building safety in higher-risk buildings, keeping the safety and standards of all buildings under review and facilitating improvement in competence across industry. The BSR role will also include the handling of unresolved resident complaints and safety concerns, the establishment of a national register of buildings in scope and a research and advisory role in relation to regulatory and building safety requirements, based on emerging and identified building safety risks.

The new regulatory framework will supplement the existing requirements that are already in place in multi-occupied residential buildings under the Fire Safety Order and work alongside the enforcement powers that Local Housing Authorities have under the Housing Act 2004. The government has already highlighted that the requirements of both existing regimes (the HHSRS and the Fire Safety Order) will continue to play a role in managing the overall safety in multi-occupied residential buildings and responding to resident complaints.

Under the design construction 'gateway' process, there are three gateway points that will apply. These are:

- the 'planning' gateway;
- the 'pre-construction' gateway; and
- the 'before occupation' gateway.

The gateways each incorporate a system of evidencing competency in design, construction and management. A key requirement is that those responsible for designing and constructing a higher-risk building will need to put in place a golden thread of information to support and evidence compliance with building regulations. Those responsible for the design and construction of a higher-risk building are called duty holders. On completion of construction of a higher-risk building, the

golden thread of information will be handed over to those responsible for the management of the building when it is occupied. These are known as the accountable persons.

For new higher-risk buildings, they will have to be registered with the BSR before they are occupied by residents. For existing higher-risk building, they had to be registered with the BSR by 1 October 2023. The BSR will direct accountable persons to apply t for a 'Building assessment Certificate' for occupied buildings which should be made available to residents. As part of the building assessment certificate requirements, the accountable person must submit:

- a resident engagement strategy, which outlines how the accountable person, and building safety manager, will engage residents, handle resident complaints, provide residents with information on building and fire safety and the role of residents
- a safety case report which explains how the risk of the spread fire and structural failure in the building are being managed.

There is ongoing duty imposed on the accountable person to meet their statutory duties in relation to an occupied building under Part 4 of the Building Safety Act 2022. This includes identifying assessing and managing the building safety risks relating to their building. Building safety risks are defined as the spread of fire and structural failure. New guidance/protocols regarding how the new regime will operate and fit alongside the existing regimes will be produced.

The reforms introduced by the Building Safety Act impact all sectors involved in building safety and management, including fire safety, building control, environmental health, planning, housing suppliers, the construction industry, and building managers.

## Fire Safety Guidance

It should be noted that, since the introduction of the [Housing Act 2004](#) and the [Fire Safety Order](#) (as amended), in 2004 and 2006 respectively, fire safety guidance in respect of residential buildings has evolved considerably, with more specialist guidance being developed for sub-categories of residential buildings.

The extant fire safety guidance is listed below with a brief description of the types of building to which the guidance may provide appropriate reference. It should be noted that the published scope in the individual guides may be misleading as these will not have been updated to take account of more specific guidance produced after the original publication of each guide.

### **Fire Risk Appraisal of External Walls and Cladding of Flats - PAS 9980**

Where a detailed assessment of external walls of an existing multi-storey, multi-occupied residential building is deemed necessary, it should now be carried out in accordance with the more comprehensive and holistic guidance included in the BSI publication, PAS 9980.

[Approved Document B: Fire Safety Volume 1: Dwellings. 2019 edition \(as amended\)](#). Ministry of Housing, Communities and Local Government (MHCLG)

Approved Document B (“ADB”) is relevant to new, and newly converted, buildings.

[Fire Safety in Specialised Housing](#) (National Fire Chiefs Council 2017).

Specialised housing is a broad term and encompasses:

- sheltered housing (sometimes known by alternative names, such as retirement housing);
- extra care (also known as very/shelter/assisted living schemes, and may also include close care schemes in close proximity to a care home where residents still live independently).
- supported housing.

This guide provides useful additional information regarding person-centred risk assessment, which includes advice on hoarding.

**BS 9991: 2015. (Incorporating corrigendum No. 1.)** Fire safety in the design, management and use of residential buildings. Code of practice.

BS 9991 includes new, or newly converted, buildings which have used the design guidance included in the standard.

[Fire safety in purpose-built blocks of flats](#) (MHCLG)

Originally produced in 2011 and in the process of being updated, this guidance is continued to be made available to fire safety professionals as it contains relevant and useful information for purpose-built blocks of flats.

MHCLG continues to revise this guidance with a new version expected in the next year.

[Fire safety risk assessment: Sleeping accommodation](#) - MHCLG (new version in development)

Other guidance has been produced for many of the premises listed in the scope of this guidance as well as for other premises that fall outside the scope of the Housing Act. However, this guide does cover some existing residential buildings for which no other guidance currently exists, namely:

- student halls of residence; and
- seminaries.

[Making your small blocks of flats safe from fire](#) (MHCLG)

Simple and practical advice to assist persons with responsibilities for fire safety in the common parts of small blocks of flats (limited to 3 storeys), as well as the building's structure, external walls and the doors between the flats and common parts. The guide takes the form of guidance and recommendations to support the application of fire safety legislation, including advice about completing a fire safety risk assessment.

### **Additional Guidance**

#### **Protocol between local housing authorities and fire and rescue authorities to improve fire safety.**

The introduction of the Housing Act 2004 and the Fire Safety Order in 2006 imposed an analogous duty on two statutory authorities to enforce fire safety measures within the common parts of buildings containing 2 or more domestic premises.

This Protocol was first introduced by the LACoRS guide (see Appendix 2 of this guidance). However, a different, or amended, Protocol may exist, dependent upon the area in which the building is located.

#### **[Principles for effective regulation of fire safety in purpose-built blocks of flats.](#) Chartered Institute of Environmental Health.**

Published in January 2022.

Advice intended to reflect the position once the Fire Safety Act 2021 had commenced.

This guidance was developed jointly by the Local Government Association, National Fire Chiefs Council and the Chartered Institute of Environmental Health.

The principles have been developed to support local authorities (LAs) and fire and rescue authorities to effectively regulate fire safety in purpose-built blocks of flats.

These principles are intended for buildings over 11 metres but may be utilised for other building types.

These principles are not intended for houses in multiple occupation and do not replace the Memorandum of Understanding which accompanies the LACORS Guidance, nor are they intended to apply to local authority owned and managed blocks of flats.

[Simultaneous Evacuation Guidance \(Fourth Edition\) NFCC. Updated 2022.](#)

Guidance to support a temporary change to a simultaneous evacuation strategy in purpose-built blocks of flats. National Fire Chiefs Council (NFCC).

[Mobility Scooter Guidance for Residential Buildings. NFCC Council.](#)

This guide was produced in response to the increasing use of mobility scooters and provides advice regarding the safe use, storage and charging of mobility scooters.

[Fire Safety in Construction. HSG168 \(2nd edition\) HSE. 2010.](#)

Fire prevention on construction sites: The joint code of practice on the protection from fire of construction sites and buildings undergoing renovation (ninth edition). Fire Protection Association Publications. October 2015.

[Secured by Design - Homes 2019. Version 2.](#)

This guide was published by Secured by Design in March 2019.

Secured by Design is a police initiative to guide and encourage those engaged within the specification, design and build of new homes, and those undertaking major or minor property refurbishment, to adopt crime prevention measures.

The requirements of both Part B and Part Q of the Building Regulations (England), create a dilemma as the performance requirements for the two Building Regulations can be diametrically opposed to one another, this guide provides some advice which may assist in identifying mutually acceptable solutions.

[Housing Fire Safety - Guidance on fire safety provisions for certain types of existing housing.](#) Local Authority Coordinators of Regulatory Services (LACoRS)

LACoRS was published in 2008 and some of its content is out of date, particularly regarding the provision of domestic fire detection and the provision of firefighting equipment.

This fire safety guide was originally intended for buildings that had been constructed, or adapted for use as, domestic dwellings and is likely to remain the most appropriate guidance for a range of existing residential premises including:

- single household properties;
- shared houses;
- bedsit HMOs;

- buildings converted into self-contained flats, to a standard not in compliance with the Building Regulations 1991;
- small hostels to which the government Sleeping Accommodation Guide is inappropriate.

LACoRS recognises the issues presented by the dual enforcement regime in place in multi-occupancy premises and describes the 'Fire Safety Protocol', which established a framework for joint working arrangements between local housing authorities and fire and rescue authorities (see additional guidance section for further information regarding the protocol).

### **Withdrawn guidance**

#### **Advice for Building Owners of Multi-storey, Multi-occupied Residential Buildings. Consolidated Advice Note, dated January 2020 (MHCLG)**

Following the Grenfell Tower fire, on the advice of the Independent Expert Advisory Panel, the government published advice notes for building owners on the measures they should take to ensure their buildings were safe.

The document (also known as the Consolidated Advice Note (CAN)) brought these notes together. The CAN provided guidance on how to assess a building's external walls and smoke control systems and it identified the types of short-term interim measures that could be put in place if significant risks to life safety were identified.

Due to concerns that the CAN had been wrongly interpreted and had driven a cautious approach to building safety that went beyond what government considered necessary, the CAN was withdrawn so as to ensure that it could not be used to justify disproportionate assessments.

#### **Housing Health and Safety Rating System Operating Guidance: [Addendum for the profile for the hazard of fire and in relation to cladding systems on high rise residential building.](#)**

The addendum was presented and laid in Parliament on 29 November in 2018 and then published to give advice regarding buildings with ACM cladding.

Also provided advice regarding inspection of common parts and additional context regarding the local protocol between the local housing authority and the fire and rescue authority.

## Appendix A: HHSRS Baseline Indicators Fire Detection and Alarm Systems

19	Fire Safety	
	Baseline Indicators	Guidance Notes
19.1	Any furniture or soft furnishings that are provided by the landlord should comply with the Furniture and Furnishings (Fire) (Safety) Regulations 1988, inclusive of being correctly labelled for fire resistance.	Legislation available at available at <a href="http://www.legislation.gov.uk">www.legislation.gov.uk</a> <b>Relevant hazard:</b> Fire and Explosions.
19.2	All electrical equipment supplied by landlords in rented residential premises is safe and compliant with current UK requirements for safety of domestic electrical products; all electrical appliances supplied by the landlord are subject to testing in line with the IET Code of Practice for In-service Inspection and Testing of Electrical Equipment (Fifth Edition) unless they are under one year old and display a UKCA/CE marking.	Code of practice available at <a href="https://shop.theiet.org">https://shop.theiet.org</a> <b>Relevant hazards:</b> Fire and Explosions; Electricity.
19.3	An annual gas safety check should have been undertaken within the last 12 months with a satisfactory result. Any heating provided by LPG shall be inspected annually by a suitably qualified engineer.	<b>Relevant hazards:</b> Fire and Explosions; Chemical and Combustion Related Air Pollutants.
19.4	The electrical installation should have been inspected and tested within the last 5 years.	<b>Relevant hazards:</b> Fire and Explosions; Electricity.
19.5	There should be sufficient, properly designed and appropriately sited smoke and heat detectors with alarms in every dwelling. These should be properly maintained and regularly tested.	See fire detection systems guidance below <b>Relevant hazards:</b> Fire and Explosions; Chemical and Combustion Related Air Pollutants.
19.6	The escape route from bedrooms through habitable rooms should either be avoided, or mitigated, by other provisions.	The continued use of escape windows will create inclusivity issues and should not be a preferred solution. <b>Relevant hazard:</b> Fire and Explosions.
19.7	Egress through doors/windows that are required for means of escape should not require the use of a key or a code.	<b>Relevant hazard:</b> Fire and Explosions.

### Minimum grade and category of fire detection and fire alarm systems

#### System Grades

#### [Grade A mains + standby battery](#)

Grade A systems incorporate equipment for the reception, indication, control and relaying of signals originating from fire detectors and any manual call points connected to the equipment, and for the activation of fire alarm devices. The CIE is of an identical nature to that used in systems designed in accordance with BS 5839-1 for protection of non-domestic premises, such as offices, shops and other commercial premises. The system will also incorporate a battery that will operate a Grade A system for 72 hours in the event of mains failure. This normally necessitates relatively large batteries, which might need to be housed in a separate supply unit.

#### [Grade D mains + standby battery](#)

D1: Tamper-proof battery

D2: User-replaceable battery

#### [Grade F battery only](#)

F1: Tamper-proof primary battery

F2: User replaceable battery

### **System Categories**

#### [Category LD1 System](#)

A system installed throughout the premises, incorporating detectors in all circulation areas that form part of the escape routes from the premises, and in all rooms and areas, other than those with negligible sources of ignition, such as toilets, bathrooms and shower rooms.

#### [Category LD2 System](#)

A system incorporating detectors in all circulation areas that form part of the escape routes from the premises, and in all specified rooms or areas that present a high fire risk to occupants, including any kitchen and the principal habitable room.

#### [Category LD3 System](#)

A system incorporating detectors in all circulation areas that form part of the escape routes from the dwelling.

### **Rented single-family dwellings and shared houses with no floor greater than 200m<sup>2</sup> in area**

#### [New or materially altered premises](#)

- Bungalow
- Flat
- Two-storey house

- Maisonette, other than as below
- Three-storey house

**Grade D1      Category LD2**

Maisonette with any floor above 4.5m from ground level and no alternative means of escape

**Grade D1      Category LD1**

Four or more storey house

**Grade A      Category LD1**

Existing premises

- Bungalow
- Flat
- Two-storey house
- Maisonette (other than as below)
- Three-storey house

**Grade D1      Category LD2**

Maisonette with any floor above 4.5m from ground level and no alternative means of escape

**Grade D1      Category LD1**

Four or more storey house

**Grade D1      Category LD1**

**Rented single-family dwellings and shared houses with one or more floors greater than 200m<sup>2</sup> in area**

New or materially altered premises

- Bungalow
- Flat

**Grade D1      Category LD2**

- Two-storey house
- Maisonette (other than as below)

- Three-storey house

**Grade A      Category LD2**

- Four-or-more storey house
- Maisonette with any floor above 4.5m from ground level and no alternative means of escape

**Grade A      Category LD1**

Existing premises

- Bungalow
- Flat
- Two-storey house
- Maisonette, other than as below
- Three-storey house

**Grade D1      Category LD2**

Four-or-more storey house

**Grade A      Category LD1**

Maisonette with any floor above 4.5m from ground level and no alternative means of escape

**Grade D1      Category LD1**

**Houses in multiple occupation**

New or materially altered premises or existing premises

HMOs of one or two storeys with no floor greater than 200m<sup>2</sup> in area

**Grade D1      Category LD1 (LD 2 for existing)**

- Other HMOs
- Individual dwelling units, within the HMO, comprising a single room, which include cooking facilities (bedsits)
- Individual dwelling units, within the HMO, comprising a single room, which do not include cooking facilities (bedsits)

**Grade D1      Category LD1**

- Individual dwelling units, within the HMO, comprising two or more rooms
- Communal areas of the HMO

**Grade A      Category LD2, with detectors sited in accordance with the recommendations of BS 5839-1:2017 for a Category L2 system**

### **Specialised Housing**

#### Sheltered housing

- Individual dwelling units

**Grade D2      Category LD1 (LD2 for existing)**

- Communal areas

**Grade A in accordance with the recommendations of BS 5839-1:2017 for a Category L4 or L5 system**

#### Supported housing

- Single-storey
- Two-or-more storeys and not more than four bedrooms

**Grade D1      Category LD1**

Two-or-more storeys and more than four bedrooms

**Grade A      Category LD1**

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## Appendix B: Guidance on Assessment of Fire-Resisting Doors

This Appendix provides further guidance on the assessment of fire-resisting doors.

Checking the adequacy of the fire performance of fire-resisting doors that are required is an important part of any HHSRS assessment.

### Note:

In the case of smaller standalone dwellings, there may be little, or no, requirement for fire-resisting doors other than, perhaps, the kitchen door and/or an internal door to an integral garage, whereas in a larger multi-occupied building, the requirements are likely to be extensive.

Examples of locations which may require fire-resisting doors in multi-occupied buildings are listed below:

- flat entrance doors;
- cross-corridor doors;
- storey exits to staircases;
- ancillary rooms;
- service riser cupboards.

Doors that are in common use, such as storey exits and cross-corridor doors, will be expected to have been provided with self-closing devices. Additionally, flat entrance doors will be expected to be fitted with self-closing devices.

In checking each door, the most important thing to check is that the door self-closes effectively from any angle, overcoming the resistance of any latch. This is essential so as to ensure that, if, for example, residents leave a flat that is on fire without closing the door themselves, the door closes automatically behind them, thereby containing smoke and fire within the flat.

Self-closing devices may be omitted from some doors, such as to ancillary rooms and riser cupboards that will always be kept locked and are not accessible to residents. It is equally important to check that these doors are actually locked shut.

To check the self-closing action, open the door to a small angle (say, 15 degrees approximately), then let it go; it should fully close and latch without any assistance.

The action of the self-closing device should also be checked from the fully open position as the self-closing device, if incorrectly fitted, may not close the door from this position or, in the case of an uneven floor, the door may bind on the floor for only one part of its travel.

Occasionally, older blocks of flats (typically constructed before the mid-1980s) relied on rising butt hinges to close the door. These are no longer acceptable as self-closing devices; rarely will they be fully effective, and they should be replaced with overhead self-closing devices.

A common problem is that leaseholders replace an original fire-resisting door with a new, non-fire resisting door. Doors that are of a different style or pattern to the other doors in the block should indicate a need for further investigation as, often, such new doors are not fire resisting. It is also common for self-closing devices to be omitted from the new doors.

It is also important to check that any glazing within, or surrounding, the door is fire resisting. Although there are quite expensive clear forms of fire-resisting glass, the most common fire-resisting glazing is Georgian wired glass, which is easily identifiable from the wires within the glass.

Non-wired fire-resisting glass is always marked in a corner to show the manufacturer's name and the fire performance (by reference to the standard to which it was tested). It can be assumed that any non-wired glass that is not marked in this way is not fire resisting and needs to be replaced or protected by a supplementary layer of fire-resisting glass.

Gaps between a door and frame permit smoke to spread. Gap size should never be more than 4mm, except at the bottom of the door, where the gap should, ideally, be no more than 6mm and never more than 10mm.

Fire resistance is expressed in units of minutes. Modern fire doors have a fire resistance of at least 30 minutes when subjected to the relevant fire test (but often hold back a real fire for a longer period of time). To prevent the passage of smoke through the gaps between the door and frame, they are also fitted with smoke seals; these look like draught seals. These doors are known as FD30S doors, the number representing the period of fire resistance in minutes and the 'S' suffix indicating the presence of a smoke seal.

Any new fire-resisting doors such as flat entrance doors, stairway doors and doors to ancillary rooms, riser, and meter cupboards, etc. that open into common parts should be FD30S doors.

To achieve 30 minutes' fire resistance, modern fire doors are fitted in the edges and top of the doors or frames with intumescent strips, which swell when subjected to fire and seal the gaps around the doors. These are normally combined with the smoke seals.

In older premises, such as blocks of flats (constructed before the 1980s), the original doors were not fitted with intumescent strips and so would not achieve 30 minutes' fire resistance (under current fire resistance test standards), nor were they fitted with smoke seals. However, if they were built after the mid-1960s, it is likely that the original doors (and any glazing) will provide adequate fire resistance to satisfy fire safety legislation, provided there are no other significant defects in the design of the building.

Letterboxes in flat entrance doors should be such that they do not impair the fire resistance of the door, for example, in modern doors, should ideally provide 30 minutes' fire resistance, which is achieved by fitting the opening with intumescent liners; the intumescent material then seals the

opening when exposed to fire. This form of protection should be provided in the case of all new flat entrance doors fitted with letterboxes.

The effect of a letterbox on the fire resistance of the door depends on the location of the letterbox. A letterbox in the middle or lower half of the door will have a less detrimental effect than one fitted in the top half of the door, where the pressure of smoke and fire gases on the letterbox is greater.

The majority of older blocks of flats do not have fire-resisting letterboxes in flat entrance doors. This is normally acceptable, provided that the existing letterboxes (if any) are:

- constructed of non-combustible, high melting point materials such as steel or brass;
- fitted with letterplates both internally and externally, and that at least one of the letterplates is spring loaded.

Flat entrance doors and doors to ancillary rooms will normally be either timber doors or composite doors. Matters that need consideration in relation to any door differ, depending upon the type of the door.

### **Timber doors and frames**

As discussed above, it is accepted that, in many older blocks, fire-resisting doors, particularly flat entrance doors, do not meet current test standards for FD30S doors. However, these doors may still be acceptable if the doors remain in good condition and if they met the relevant standards at the time of construction of the block.

It will not be practicable to test existing doors to confirm their actual fire resistance. For the purpose of the HHSRS assessment, original fire doors will normally be acceptable if the following is taken into account:

- The doors should comprise solid material throughout the depth of the door (e.g. 44mm thick solid timber or timber doors with a chipboard or flaxboard core);
- Doors should close onto substantial doorstops (typically, 25mm). In the case of older doors, the presence of a 25mm stop is usually an indication that the original door and frame were designed to be fire resisting;
- Hollow core doors, and doors fitted with thin panels, are unlikely to provide adequate fire resistance;
- Doors should be in sound condition with no damage, splits or gaps.

Existing timber fire doors can be upgraded to improve their fire resistance by, for example, fitting intumescent strips and smoke seals and reducing the gaps around the door leaf. However, if it is deemed necessary to take this approach, it is likely that the RP may need to seek additional advice from a competent person, such as a third-party certificated fire risk assessor, building surveyor or

similar professional person to ensure that the proposed upgrade work is not inconsequential and adequately addresses the risk.

Note:

The [Fire Safety Order](#) can be used to require a suitable and sufficient assessment of the risk to be made but this is not possible under the Housing Act.

### **Composite flat entrance doors**

Composite flat entrance doors are a relatively modern innovation (dating from the 1980s onwards) and have become popular in the social housing sector, because of their attractive appearance and low maintenance. A typical composite door comprises a thin layer of glass reinforced plastic (GRP), or thermoplastic material, with a core (which can comprise various materials, such as phenolic foam) to provide the fire resistance. In older blocks of flats, they

However, composite fire doors should not be confused with non-fire resisting uPVC doors, which have no fire-resisting core, but are sometimes installed by leaseholders. These doors need to be replaced with fire-resisting doors and frames.

It is reasonable to assume that composite flat entrance doors manufactured after late 2018 have adequate fire resistance. However, after the Grenfell Tower fire, a composite flat entrance door installed at Grenfell Tower achieved only 15 minutes' fire resistance when tested. The door was manufactured by Manse Masterdor (a company that no longer exists), and a number of the company's composite flat entrance doors, although designed to provide 30 minutes' fire resistance, failed to do so when tested.

This led to tests of a range of manufacturers' composite fire doors by government. It was found that, depending on the manufacturer and the model of door, the fire resistance of these doors ranged from eight minutes to over 30 minutes. Common points of failure were letterboxes and glazing (e.g., as a result of manufacturing defects, such as in the means of securing the glazing). Where the point of failure is the letterbox, remedial work can often be carried out by the manufacturer or a specialist contractor on site. This might also be possible in the case of the glazing.

A further issue is that the fire resistance of many composite doors was found to be different according to whether the door was tested from what would be the "common parts side" or the "flat side"; this was because, when originally tested, the doors were only tested from the "flat side".

If the doors were supplied after late 2018, there should not be an issue, as the composite door industry has addressed the problems and their doors are now tested from both sides. In the case of doors manufactured before 2018, further information should be sought regarding their likely fire resistance. The government have previously [published the results](#) of their tests on specific manufacturers' products, and information can be sought from the manufacturer or supplier of the doors. In the case of these "legacy" doors, it is normally acceptable for adequate fire resistance to be provided from the "flat side", as it is not expected that there will be a serious fire, of the severity used in fire resistance testing, within the common parts.

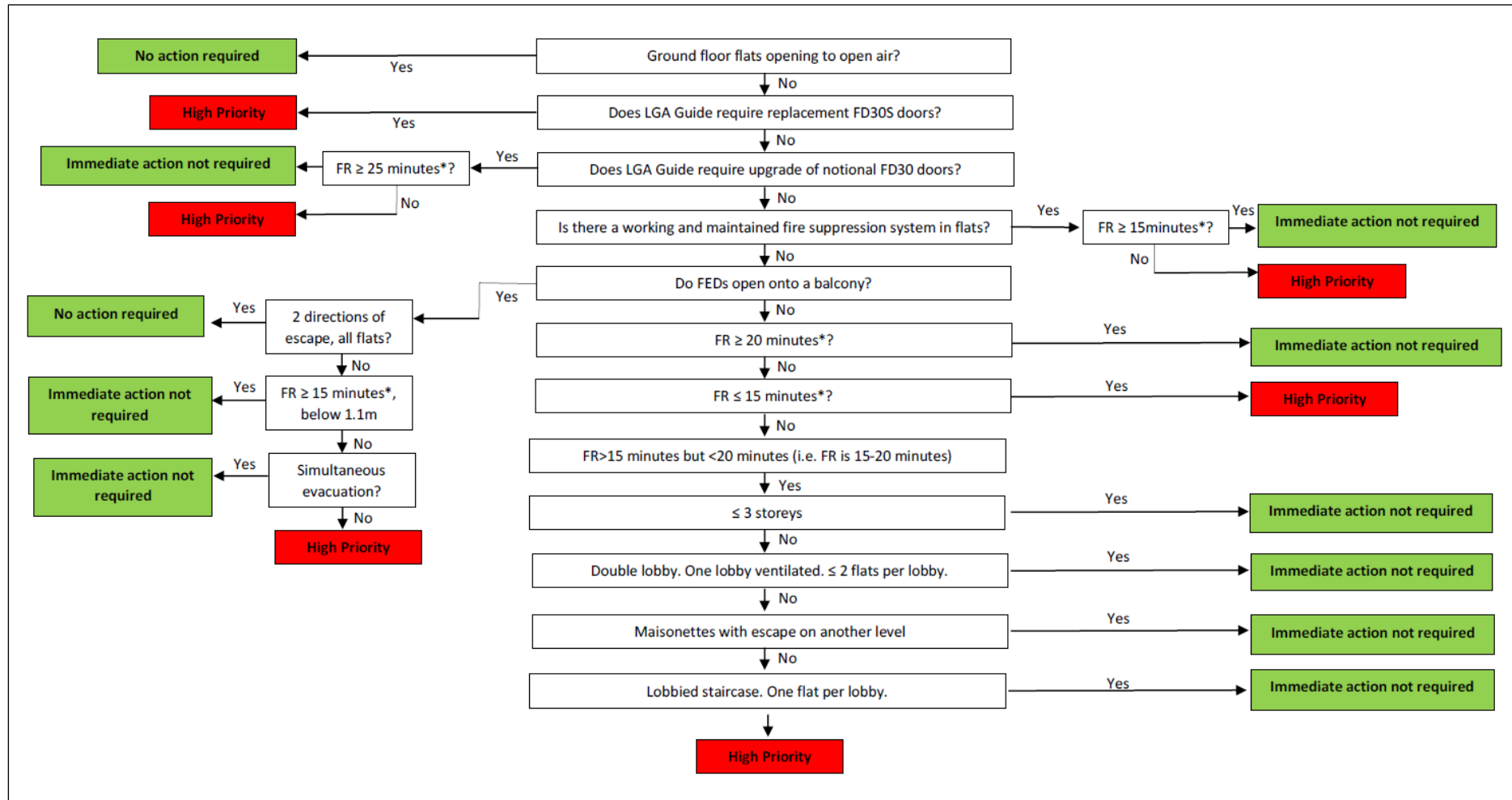
Albeit that the doors would have been purchased as 30-minute fire-resisting doors, from the perspective of risk and compliance with fire safety legislation, no immediate action is normally necessary, provided that the fire resistance of the doors is, at least, around 15-20 minutes; the doors should be replaced over time as part of routine maintenance.

The government has previously published a flowchart relating to the acceptable locations for such doors. This is reproduced as Figure 1.

Note:

The government previously published the results of its tests on specific manufacturers' products and further detail regarding the continued acceptability of these doors was delivered in '[Advice for Building Owners of Multi-storey, Multi-occupied Residential Buildings. Consolidated Advice \(now withdrawn\)](#)'. Additional guidance with regard to fire-resisting doors is expected to be published soon by the Home Office.

Figure 1



Note: LGA Guide see [Fire safety in purpose-built blocks of flats](#) (Ministry of Housing, Communities and Local Government / Home Office)