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Introduction

Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international and European standards, comments will be reviewed by the relevant UK national committee before submitting the consensus UK vote and comments. If the draft standard is approved, it is usual for the resulting published standard to be adopted as a British Standard.

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Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

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Fire risk assessment – Housing – Code of practice

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on **XX Month 202X**. It was prepared by Technical Committee FSH/14, *Fire precautions in buildings*. A list of organizations represented on this committee can be obtained on request to the committee manager.

Supersession

This British Standard supersedes PAS 79-2:2020, which was withdrawn on 6 August 2021.

Relationship with other publications

BS 9792 gives recommendations for fire risk assessments (FRAs) in housing. FRAs in premises other than housing are covered in PAS 79-1.

Recommendations for fire risk appraisals of external wall construction and cladding of existing blocks of flats (FRAEWs) are given in PAS 9980.

Information about this document

This is a full revision of the document, and introduces the following principal changes:

- a) some restructuring of the document, introducing subdivisions into Clause 15 and bringing types of FRA under principles and scope;
- b) removal of all third-party copyrighted material;
- c) introduction of a new pro forma;
- d) streamlining of the commentary throughout;
- e) updating of guidance relating to people with specific evacuation requirements, including a new informative annex;
- f) general updates to take into account other British Standards and industry guidance published or in development since December 2020; and
- g) general updates to take into account changes in legislation since December 2020.

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Users may substitute any of the recommendations in this British Standard with practices of equivalent or better outcome. Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

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Presentational conventions

The provisions of this document are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is “should”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Where words have alternative spellings, the preferred spelling of the *Shorter Oxford English Dictionary* is used (e.g. “organization” rather than “organisation”).

The word “should” is used to express recommendations of this document. The word “may” is used in the text to express permissibility, e.g. as an alternative to the primary recommendation of the clause. The word “can” is used to express possibility, e.g. a consequence of an action or an event.

Notes and commentaries are provided throughout the text of this document. Notes give references and additional information that are important but do not form part of the recommendations. Commentaries give background information.

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Compliance with a British Standard cannot confer immunity from legal obligations.

¹⁾ It is anticipated that an electronic version of the pro formas will be made available with the published standard.

Introduction

This British Standard provides a methodology and a structured approach to undertaking a fire risk assessment (FRA), for use by competent persons with knowledge of the principles of fire safety. The methodology can be applied to all housing premises falling within the scope of the standard, regardless of whether or not an FRA is required by legislation.

For some of the housing premises to which this British Standard applies, the persons having control of those premises are required by legislation to carry out an assessment of the fire risks (other than fire risks within private dwellings). This is so that relevant persons (as defined within the legislation) can be protected from fire and its effects (other than in the case of blocks of flats, sheltered housing and extra care housing in Scotland and Northern Ireland).

The person on whom a duty is imposed to carry out the FRA is described in different ways in different legislation across the UK. For example, in England and Wales, the Fire Safety Order describes the person as the “responsible person”, whereas this term is not used elsewhere in the UK. Moreover, this duty can be imposed on more than one person within the same premises (e.g. freeholders and managing agents). In this British Standard, the term “dutyholder” is used to describe any person on whom the relevant fire safety legislation imposes a requirement to carry out an FRA in housing premises.

This British Standard is only concerned with housing premises. PAS 79-1 provides recommendations for FRAs in non-domestic premises. Therefore, in the case of mixed use premises (e.g. commercial and residential), it is necessary to refer to the recommendations of both PAS 79-1 and BS 9792.

The objectives of this British Standard are:

- a) to present to housing providers and their advisers a methodology that can assist them in meeting their legislative responsibilities to undertake FRAs;
- b) to provide a framework for the assessment of fire risk;
- c) to promote better understanding of fire risks and fire safety in housing by housing providers and non-fire specialists;
- d) to enable common relevant terminology to be adopted by those who carry out FRAs;
- e) to provide an understanding of the principles and scope of FRAs;
- f) to establish a pragmatic, holistic and risk-proportionate approach towards assessment of fire prevention measures, fire protection measures and management of fire safety, for the purpose of conducting FRAs in housing, based upon a fundamental understanding of fire safety principles;
- g) to establish a satisfactory basis for documentation of FRAs;
- h) to provide a benchmark for a suitable and sufficient FRA;
- i) to promote a consistent approach to carrying out and documenting an FRA;
- j) to dispel misconceptions as to the nature and scope of an FRA (see Clause 5); and
- k) to promote building safety for all occupants.

1 Scope

This British Standard gives recommendations and corresponding examples of documentation for undertaking, and recording the findings of, fire risk assessments (FRAs) in housing premises and parts of housing premises.

This British Standard is applicable to:

- a) houses in multiple occupation;
- b) blocks of flats or maisonettes (both purpose-built blocks and houses converted to flats);
and
- c) specialized housing.

This British Standard is not applicable to a private dwelling. Neither is it applicable to premises during the construction phase²⁾, before the building is used as housing, but it is applicable to vacant premises.

This British Standard is not applicable to premises used solely for short-term letting (e.g. of flats) (see **3.1.71**) or peer-to-peer rented accommodation (see **3.1.59**), nor to non-domestic premises or residential care homes.

NOTE These types of premises are covered in PAS 79-1.

The methodology in this British Standard is intended to determine the risk-proportionate fire precautions required to protect occupants of housing premises and people in the immediate vicinity of the premises. It is not necessarily sufficient to address the safety of firefighters in the event of a fire on the premises. It is not intended to address protection of property (the premises and their contents) or the environment, or protection of a business against interruption.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes provisions, or limits the application, of this document³⁾. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 4422, *Fire – Vocabulary*⁴⁾

BS 5839-1, *Fire detection and fire alarm systems for buildings – Part 1: Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises*

BS 5839-6, *Fire detection and fire alarm systems for buildings – Part 6: Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises*

BS EN ISO 13943, *Fire safety – Vocabulary*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in BS 4422, BS EN ISO 13943 and the following apply.

²⁾ Fire risk assessments are required for construction sites. Nevertheless, fire risk assessments for housing premises, during the construction phase, are outside the scope of this British Standard.

³⁾ Documents that are referred to solely in an informative manner are listed in the Bibliography.

⁴⁾ This British Standard also gives informative references to BS 4422:2005.

3.1.1 access room

room that forms the only escape route from an inner room (see **3.1.50**)

3.1.2 action plan

measures, including management procedures, identified in the course of a fire risk assessment that need to be implemented to enable the required level of fire safety to be achieved or maintained

3.1.3 alarm receiving centre

continuously staffed premises, remote from those in which a fire alarm system is fitted, where the information concerning the state of the fire alarm system is displayed and/or recorded, so that the fire and rescue service can be summoned

3.1.4 alternative escape routes

escape routes sufficiently separated either by direction and space, or by fire-resisting construction, intended to ensure that if one is affected by fire the other will still be available

3.1.5 ancillary area

part of a building that is ancillary to the dwelling(s)

NOTE Examples of ancillary areas include rooms associated with engineering services, common amenity areas (3.1.8), refuse rooms and covered car parks.

3.1.6 automatic door release mechanism

device that can be used for holding a door in the open position, against the action of a door self-closing device, and automatically releasing under specified conditions

NOTE An automatic door release mechanism could be, for example, electro-mechanical or electro-magnetic.

3.1.7 available safe escape time (ASET)

calculated time available between ignition of a fire and the estimated time at which tenability criteria are exceeded in a specified space in a building

3.1.8 common amenity area

area containing residents' communal facilities that are external to the individual dwellings

NOTE Examples of common amenity areas include residents' communal kitchens, laundries, drying areas, occupiers' stores, private gyms, dining areas and residents' lounges.

3.1.9 common part

part of a building serving more than one flat or occupancy

NOTE This typically includes stairways, corridors, lobbies and other areas to which all occupants have access. It also includes plant rooms and service areas.

3.1.10 compartmentation

division of a building into fire compartments for the purpose of containing a fire within the compartment of fire origin

3.1.11 competent person

person with the skills, knowledge, experience and appropriate behaviours to achieve a defined outcome

NOTE The relevant fire safety legislation requires nomination of various competent persons to carry out a number of different defined tasks.

3.1.12 dampers

3.1.12.1 fire damper

device affording fire resistance in respect of integrity, intended to seal automatically a penetration in fire-resisting construction in the event of fire

NOTE These are typically used within heating, ventilation and air-conditioning (HVAC) systems to maintain the compartmentation afforded by a compartment wall or floor.

3.1.12.2 fire damper, reduced leakage

fire damper (**3.1.12.1**) designed to restrict the passage of smoke

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NOTE These are typically used within heating, ventilation and air-conditioning (HVAC) systems to maintain the fire resistance, and protect against passage of smoke, in construction that separates a means of escape from adjacent accommodation.

3.1.12.3 smoke control damper

component of a smoke control system that can be opened or closed to control the flow of smoke and hot gases into, from or within a shaft or duct, whilst maintaining compartmentation where necessary

3.1.13 dead end

area from which escape is possible in one direction only

NOTE A dead end is not created solely by structural enclosure. It can, for example, be created by barriers such as steps, narrow escape routes, convoluted escape routes or heavy doors.

3.1.14 dry fire main

water supply pipe installed in a building for firefighting purposes, fitted with inlet connections at the fire and rescue service access level and outlet connections at specified points, which is normally dry but is capable of being charged with water, usually by pumping from fire and rescue service appliances

NOTE Also known as dry riser and dry rising main.

3.1.15 dutyholder

person on whom legislation imposes a requirement to carry out a fire risk assessment

NOTE 1 The term “dutyholder” is used as a general term within this document and is not used in this context within fire safety legislation.

NOTE 2 The dutyholder is normally an organization, such as an employer, rather than a specific named person. There might be more than one dutyholder within any premises.

3.1.16 escape route

route forming part of the means of escape from any point in a building to a final exit

3.1.17 evacuation alert system for use by the fire and rescue service

system intended for installation in a building containing flats or maisonettes to enable the fire and rescue service to initiate an evacuation alert signal by means of evacuation devices within the flats or maisonettes, using manual controls incorporated within control equipment

3.1.18 extra care housing

type of specialized housing that:

- a) is designed as self-contained residential accommodation;
- b) is predominantly available to and occupied by people with greater care/support needs;
- c) has some form of care or assistance, including in an emergency, available 24/7 from staff on the premises; and
- d) sometimes has communal facilities available

NOTE Extra care housing typically comprises blocks of flats, but can also include schemes with individual houses or houses converted to flats.

3.1.19 false alarm

fire signal resulting from a cause(s) other than fire

3.1.20 final exit

end of an escape route from a building, giving direct access to a street, passageway, walkway or open space, and sited to enable the rapid dispersal of persons from the vicinity of a building so that they are no longer in danger from fire and/or smoke

3.1.21 fire drill

periodic test of the evacuation procedure and any other relevant actions

3.1.22 fire equipment sign

safety sign that indicates the location or identification of fire equipment or how it is to be used

3.1.23 fire exposure

extent to which people, animals or items are subjected to the conditions created by fire

3.1.24 fire hazard

source, situation or act with potential to result in a fire

NOTE Examples of fire hazards include ignition sources, accumulation of waste that could be subject to ignition, and disposal of a lit cigarette close to combustible materials.

3.1.25 fire hazard identification

process of recognizing that a fire hazard exists and defining its characteristics

3.1.26 fire load

quantity of heat that could be released by the complete combustion of all the combustible materials in a volume, including the facings of all bounding surfaces

3.1.27 fire policy

intentions and direction of an organization, in respect of fire safety, as formally expressed by its top management

3.1.28 fire precautions

physical, procedural and managerial measures taken to reduce the likelihood of ignition occurring and/or to mitigate the consequences if ignition does occur

3.1.29 fire prevention measure

measure to prevent the outbreak of fire

3.1.30 fire procedure

predetermined actions to be taken in the event of fire

3.1.31 fire protection measure

design feature, system, equipment, structural measure or management activity to reduce danger to people and property if fire occurs

NOTE Examples of such measures include means of preventing, detecting, extinguishing or containing fires.

3.1.32 fire resistance

ability of a component or construction of a building to meet for a stated period of time some or all of the appropriate criteria specified in a standard fire resistance test

NOTE 1 These criteria include one or more of the following: load-bearing capacity (R); integrity (E); and insulation (I).

NOTE 2 The fire resistance classification periods are not a measure of the actual time for which an element will function in a real fire.

3.1.33 fire-resisting door

door which, together with its frame and furniture as installed in a building, is intended (when closed) to resist the passage of fire and/or gaseous products of combustion, and is capable of meeting specified performance criteria to those ends

3.1.34 fire risk

combination of the likelihood of the occurrence of fire and consequence(s) likely to be caused by a fire

NOTE In the context of this document, the relevant consequences of a fire are those involving injury to people (number and severity of injuries), as opposed to damage to property.

3.1.35 fire risk assessment (FRA)

process of identification and evaluation of fire risk to people, property or the environment

3.1.36 fire risk assessor

person who carries out, and documents the findings of, a fire risk assessment

3.1.37 fire safety engineer

person competent in fire safety engineering

3.1.38 fire safety engineering

application of scientific and engineering principles to the protection of people, property and the environment from fire

3.1.39 fire safety induction training

formal training, normally given verbally to new employees as soon as practicable after their employment, with the objective of imparting sufficient information on the relevant fire risks, fire prevention measures, fire protection measures and fire procedures in the building to ensure the safety of employees from fire

NOTE Fire safety induction training also assists in preventing employees from inadvertently putting other occupants of the premises at risk from fire.

3.1.40 fire safety management

task(s) carried out by a defined individual or individuals, with appropriate powers and resources to facilitate the correct operation, at all times, of all passive, active and procedural fire safety systems within a building

3.1.41 fire safety manager

person nominated to monitor and control fire safety management

3.1.42 fire safety manual

record of all design, procedural and management issues and events that relate to the fire safety of a building

3.1.43 fire safety objective

specified (or specifiable) goal intended to be achieved by a fire protection measure(s)

3.1.44 fire safety refresher training

training given to employees periodically to ensure that they remain aware of the fire risks, fire prevention measures, fire protection measures and fire procedures in the building

3.1.45 fire safety strategy

set of fire safety objectives and the measures to be taken to meet those objectives

3.1.46 fire scenario

set of circumstances (taking account of the building, its contents and occupants), chosen as an example, that defines the development of fire and the spread of combustion products throughout a building or part of a building

3.1.47 fire stopping

seal provided to close an imperfection of fit or design tolerance between elements or components to restrict the spread of fire and smoke

3.1.48 ignition

initiation of combustion

3.1.49 ignition source

source of energy that initiates combustion

3.1.50 inner room

room from which escape is possible only by passing through another room

3.1.51 integrity

ability of a separating element, when exposed to fire on one side, to prevent the passage of flames and hot gases or the occurrence of flames on the unexposed side, for a stated period of time in a standard fire resistance test

3.1.52 lifts

3.1.52.1 evacuation lift

lift designed to be used for the evacuation of disabled people which has appropriate structural, electrical and fire protection

3.1.52.2 fire-fighting lift

lift which has protection, controls and signals which enable it to be used under the exclusive control of the firefighters, but that are less stringent than those of a firefighters lift

NOTE Where the term “fire-fighting lift” is used in this document, it refers to a lift installed in accordance with BS 5588-5, which was first published in 1986. “Fire-fighting lifts” were superseded by “firefighters lifts” with the publication of BS EN 81-72.

[SOURCE: BS 8899:2016, **3.6**]

3.1.52.3 firefighters lift

lift which has protection, controls and signals which enable it to be used under the exclusive control of the firefighters

NOTE Where the term “firefighters lift” is used in this document, it refers to a lift installed in accordance with BS EN 81-72, which was first published in 2003.

[SOURCE: BS EN 81-72:2020, **3.5**, modified – note added]

3.1.52.4 firemen’s lift

lift installed before fire-fighting lift standards were made available, incorporating only simple means to recall the lift to a designated floor, with no complex lift controls or protection measures for fire and rescue service use

NOTE 1 This is also known as a fire service lift.

NOTE 2 Where the term “firemen’s lift” is used in this document, it refers to a lift installed in accordance with BS 2655 or BS 5655 for use by the fire and rescue service. “Firemen’s lifts” were superseded by “fire-fighting lifts” with the publication of BS 5588-5.

[SOURCE: BS 8899:2016, **3.8**]

3.1.53 mandatory sign

safety sign that indicates a specific course of action is to be taken

3.1.54 manual call point

component of a fire detection and fire alarm system that is used for the manual initiation of a fire alarm signal

3.1.55 means of escape

means whereby a safe route or routes in the event of fire is or are provided for persons to travel from any point in a building to a place of ultimate safety

3.1.56 occupant

resident, worker, visitor or other person in and around a building

3.1.57 panic bolt

mechanism, consisting of a minimum of two sliding bolt heads that engage with keepers in the surrounding door frame or floor for securing a door when closed, which can be released by hand or body pressure on a bar positioned horizontally across the inside face of the door

3.1.58 panic latch

mechanism for securing a door when closed, with a latch bolt that can be released by hand or body pressure on a bar positioned horizontally across the inside face of the door

3.1.59 peer-to-peer rented accommodation

accommodation rented by means of a decentralized platform whereby two individuals interact directly with each other, without intermediation by a third party

NOTE For the purposes of this document, the term “peer-to-peer rented accommodation” includes letting arranged through an agent.

3.1.60 people with specific evacuation requirements

people with characteristics that might require specific arrangements to support them to respond to a fire or to a fire alarm, and to evacuate when necessary

3.1.61 person-centred emergency plan

plan that captures the actions to be taken in the event of a fire, tailored to the specific requirements and characteristics of an individual resident

NOTE This could be, for example, a personal emergency evacuation plan (PEEP) or a personal emergency action plan.

3.1.62 person-centred fire risk assessment (PCFRA)

assessment of the risk from fire focused on a specific resident, carried out with the involvement of the resident, taking into account the physical and cognitive characteristics of the resident, their lifestyle, preferences and a contextualized consideration of relevant behavioural history

3.1.63 place of relative safety

place in which there is no immediate danger, but in which there could be future danger, from fire or the effects of fire

3.1.64 place of ultimate safety

place in which there is no immediate or future danger from fire or the effects of fire

3.1.65 products of combustion

solid, liquid and gaseous materials resulting from combustion

3.1.66 protected

<active fire protection> provided with an active fire protection system

<passive fire protection> separated by fire-resisting construction from adjacent internal spaces

3.1.67 relevant fire safety legislation

legislation that sets out obligations relating to fire risk assessment

NOTE The relevant legislation is:

- in England and Wales, the Regulatory Reform (Fire Safety) Order 2005 (as amended) (Fire Safety Order) [1];
- in Scotland, a combination of the Fire (Scotland) Act 2005 (as amended) [2] and the Fire Safety (Scotland) Regulations 2006 [3];
- in Northern Ireland, the Fire and Rescue Services (Northern Ireland) Order 2006 [4], together with the Fire Safety Regulations (Northern Ireland) 2010 [5].

3.1.68 required safe escape time (RSET)

calculated time available between ignition of a fire and the estimated time at which occupants in a specified space in a building are able to reach a place of relative safety

3.1.69 safe condition sign

safety sign that indicates an evacuation route, the location of safety equipment or a safety facility, or a safety action

NOTE A fire exit sign is an example of a safe condition sign.

3.1.70 sheltered housing

type of specialized housing (that:

- a) is designed as self-contained residential accommodation;
- b) is predominantly available to and occupied by independent older people;
- c) has some form of assistance available at certain times, although not necessarily from persons on the premises; and
- d) sometimes has communal facilities available

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NOTE Sheltered housing typically comprises blocks of flats, but can also include schemes with individual houses or houses converted to flats.

3.1.71 short-term letting

residential tenancy, of less than six months, of a fully furnished property, where utilities and, normally, television and internet are included in the rent

NOTE For the purposes of this British Standard, the term “short-term letting” includes peer-to-peer rented accommodation (3.1.59). The term of rental might be as short as one night.

3.1.72 simultaneous evacuation

system of evacuation in which all parts of a building are evacuated following a common alarm of fire

3.1.73 smoke alarm

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

NOTE 1 Smoke alarms can also give a visual alarm.

NOTE 2 The term “smoke alarm” is normally reserved for devices intended for domestic use.

3.1.74 specialized housing

housing designed for occupants who live independently, or with an element of support, and with characteristics that might require specific additional arrangements to support them to prevent or suppress fire, to respond to a fire or fire alarm operating, and/or to evacuate when necessary

NOTE The primary typologies for specialized housing are sheltered housing (3.1.71), extra care housing (3.1.18) and supported housing (3.1.78). They are also sometimes referred to by different terms such as retirement villages, close care, very sheltered, independent living, and assisted living. However, a range of housing types can be present on the same site or in the same building.

3.1.75 sprinkler system

entire means of providing sprinkler protection in the premises, comprising one or more sprinkler installations, the pipework to the installations and the water supply/supplies, intended to control, suppress or extinguish fire

3.1.76 stay put strategy

strategy normally adopted in blocks of flats and maisonettes whereby, when a fire occurs in a flat or maisonette, the occupants of that dwelling evacuate, but occupants of all other dwellings can safely remain in their dwellings unless directly affected by heat and smoke or otherwise directed to leave by the fire and rescue service

NOTE 1 In a building with a stay put strategy, residents are not prohibited from leaving their flats or common areas at any time if they wish.

NOTE 2 “Stay put” is sometimes referred to as “defend in place”, “safe to stay” or “stay safe”.

3.1.77 structural fire protection

features in layout and/or construction that are intended to reduce the effects of a fire

3.1.78 supported housing

type of specialized housing that:

- a) is designed for people to live either independently or as part of a small community with shared facilities such as kitchens and lounges; and
- b) has some form of support available either occasionally or on a 24 h basis

NOTE Supported housing is typically similar to an HMO with bedsits or suites, but can comprise purpose-built flatlets. It can also include “hostel”-type accommodation where this is a primary residence.

3.1.79 temporary waiting space

area that is both separated from a fire by fire-resisting construction and provided with a safe route to a storey exit, thus constituting a temporarily safe space

NOTE Also known as a refuge.

3.1.80 third-party fire risk assessor

independent fire risk assessor, who is not an employee of the dutyholder, but who is contracted to carry out a fire risk assessment on behalf of a dutyholder on whom legislation imposes a requirement for a fire risk assessment

NOTE A fire safety consultant is an example of a third-party fire risk assessor.

3.1.81 tolerable level

<of fire risk> level at, or close to, that acceptable to a dutyholder, taking into account the requirements of fire safety legislation, the type and use of the premises, the fire hazards (see **3.1.24**) in the premises, the cost of additional fire precautions and any other relevant factors

3.1.82 travel distance

distance a person needs to travel between two points within a building, having regard to the layout of walls, partitions and fixings

3.1.83 water mist system

distribution system connected to a water supply, fitted with one or more water mist nozzles and intended to control, suppress or extinguish fire

NOTE Water mist systems can discharge water or a mixture of water and some other agent or agents, e.g. inert gases or additives.

3.1.84 wet fire main

water supply pipe installed in a building for firefighting purposes, permanently charged with water from a pressurized supply and fitted with outlet connections at specific points

NOTE Also known as wet riser and wet rising main.

3.2 Abbreviated terms

For the purposes of this document, the following abbreviated terms apply.

ASET	available safe escape time
FRA	fire risk assessment
FRAEW	fire risk appraisal of external walls
HMO	house in multiple occupation
PCFRA	person-centred fire risk assessment
RSET	required safe escape time

4 The concepts of fire hazard and fire risk

COMMENTARY ON CLAUSE 4

There is a clear distinction between fire hazard and fire risk that is of great value in any analytical approach to fire safety, but particularly in an FRA. It is therefore essential that the terms be used appropriately.

A fire hazard is defined as a source, situation or act with potential to result in a fire. Thus, the presence of uncontrolled fire hazards affects the likelihood of fire, rather than the consequences of fire.

Fire risk, by contrast, is the product of multiplying the probability of fire by a measure of the consequences of fire if it does occur. Thus, for example, even though the likelihood of fire occurring might be low, the fire risk could still be high as a result of potential for serious injury to occupants in the event of fire. For example, the potential for serious injury could result from inadequate provision of fire exits and/or inadequate means of giving warning to people in the event of fire. Such circumstances would be likely to be regarded intuitively, even by a lay person, as high risk, and accordingly this definition of fire risk is likely to be relatively intuitive even to non-fire specialists.

4.1 In the FRA, there should be a clear distinction between the concepts of fire hazard and fire risk. The terms “fire hazard” and “fire risk” should be used only in a context consistent with definitions **3.1.24** and **3.1.34**.

4.2 In documenting the findings of the FRA (see Clause **10**), there should be distinct, and separate, consideration of fire hazards, situations and measures that affect the consequences of fire, such as fire protection measures (see **3.1.31**), and the overall fire risk.

5 Principles and scope of fire risk assessments

COMMENTARY ON CLAUSE 5

The FRA is a systematic and structured assessment of the fire risk (see Clause 4) in premises for the purpose of expressing its current level, determining the adequacy of existing fire precautions (see 3.1.28) and determining the need for, and nature of, any additional fire precautions. Any such additional fire precautions required are set out in the action plan (see 3.1.2), which forms part of the documented FRA (see Clause 10). The objective of the action plan is to set out measures that will reduce the fire risk to, or maintain it at, a tolerable level (see 3.1.81).

This clause describes the general principles of FRAs, and sets out some specific matters for consideration when determining the scope of an FRA.

a) General principles

The FRA does not provide any of the following:

- 1) *a full audit of areas of the building that are not readily accessible or visually obvious (e.g. roof voids and service risers), though a sample inspection of such areas is normally appropriate;*

NOTE 1 A degree of sampling is particularly important if the evacuation strategy is predicated on a high standard of compartmentation (e.g. in the case of a stay put strategy in a block of flats).

- 2) *a means for verifying compliance with current regulations;*
- 3) *an access audit relating to access for disabled people;*
- 4) *a means for identifying latent defects in construction or compartmentation (see 3.1.10);*
- 5) *a means for verifying that the fire resistance of structural elements of the building is adequate;*
- 6) *an examination of the potential for structural collapse of the building in the event of fire;*
- 7) *a fire safety strategy report;*
- 8) *a means for snagging of new construction;*
- 9) *a guide to fire safety;*
- 10) *a guide to legislation for the responsible person; or*
- 11) *a fire risk appraisal of external wall construction and cladding (FRAEW).*

NOTE 2 PAS 9980 gives recommendations for undertaking an FRAEW on existing blocks of flats.

NOTE 3 A standard scope of services is published by the Fire Industry Association [6].

It is not appropriate for an FRA to justify a decision regarding fire precautions that has already been made without due consideration of risk, or to justify significant departures from universally recognized industry good practice (e.g. the frequency of testing and maintenance of fire protection systems recommended in relevant British Standards).

It follows from the definition of fire risk that the FRA involves consideration of relevant fire hazards and the means for their elimination or control, i.e. fire prevention measures. This approach to fire risk assessment tends to parallel that adopted in health and safety risk assessments, whereby the objective of the risk assessment is not limited to merely preventing harm to people as a result of a hazard, but begins with endeavours to eliminate or reduce the hazard itself. Thus, the FRA begins with endeavours to reduce the likelihood of fire.

The likelihood of fire is rarely reduced to zero. Accordingly, there is normally need for fire protection measures, such as means of escape (see 3.1.55), measures that assist in the use of escape routes (see 3.1.16), means of giving warning of fire, means for fighting fire and structural fire precautions. However, these fire protection measures, by definition, only have a bearing on fire safety after fire has occurred and, therefore, fire prevention has failed.

Where, originally, the premises have been designed by a competent fire engineer on the basis of fire safety engineering, and have been approved under relevant building regulations, it is not generally necessary to check this design from first principles in the course of the FRA. It is, however, necessary to verify that features and facilities that form part of the design are being properly maintained and managed.

It is not expected that, in all FRAs to which this British Standard applies [see item c) below], intrusive investigations of structural fire precautions (e.g. involving opening up of the structure or removal of a section

of ceiling) are carried out, nor is it expected that any FRA will involve testing of active fire protection measures (see 3.1.31) (see also Clause 15). However, where doubt exists as to the adequacy of structural fire precautions, either through material changes to the building over time, or due to its age and historical nature, it might be necessary to make a recommendation for an in-depth assessment of compartmentation, which might be by other specialists.

Every FRA needs to give thorough attention to fire safety management, including the fire safety strategy for the premises, fire procedures (including their dissemination to residents), training of any staff in the premises, testing and maintenance of fire protection equipment, inspection of means of escape, control over alterations and control of work by contractors. Good fire safety management can also contribute to the prevention of fire by incorporating policies and measures that reduce the likelihood of fire.

It follows, therefore, that for an FRA to be fully effective, it needs to be carried out on premises that are in use, so that the actual working conditions, practices and procedures can be taken into account. However, there might also be circumstances when an FRA needs to be carried out at other times, e.g. when premises become vacant for any period during the life of the building.

The fire prevention measures, fire protection measures and components of fire safety management can be treated as variables, according to the fire risk, in order to provide an integrated package of measures that limits fire risk to a tolerable level.

b) Factors impacting on fire risk

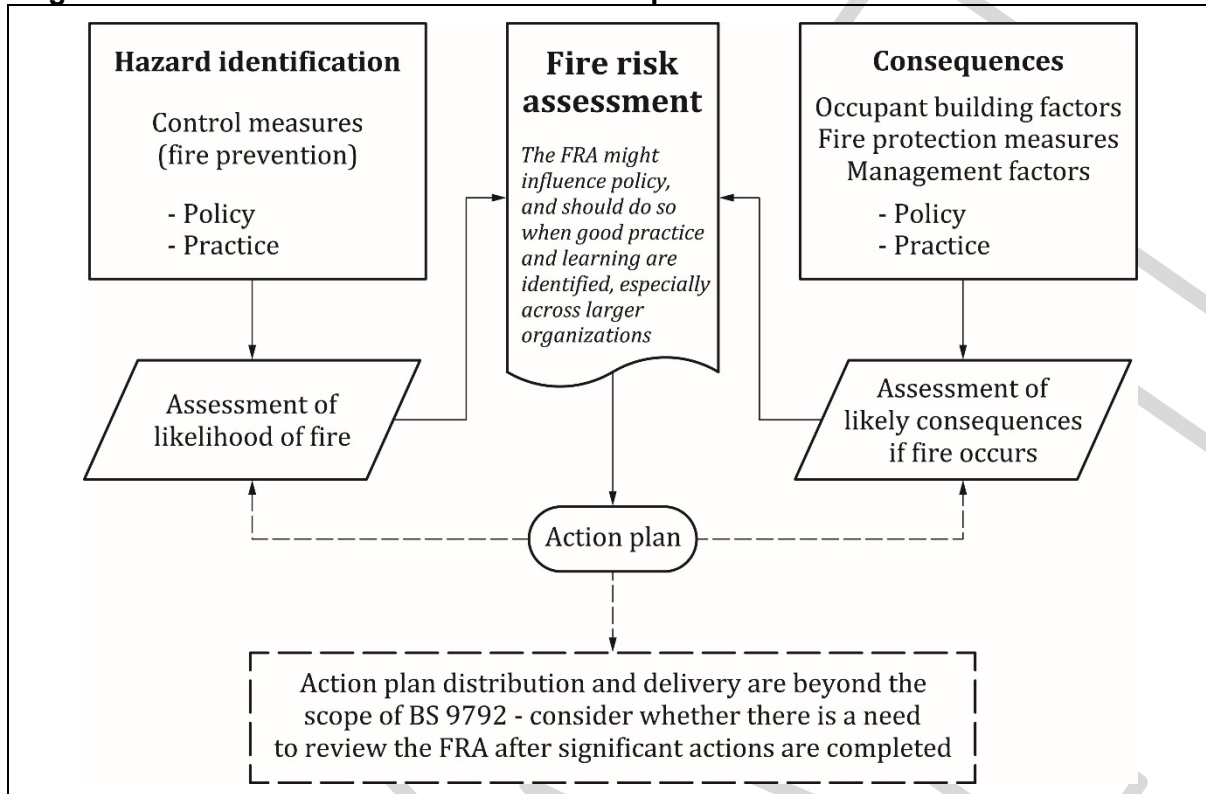
Factors that impact on fire risk, but which are not variable and are “given” factors for the premises in question, include, but are not limited to:

- 1) the height of the premises (e.g. single storey or multi-storey, low-rise or high-rise, the presence of basements);
- 2) the construction of the premises (e.g. traditional masonry construction, timber-framed or modern methods of construction);
- 3) the complexity of the premises (e.g. simple, straightforward escape routes, with a single stairway for means of escape from upper floors, or complex, convoluted internal layout with multiple stairways);
- 4) the approximate floor area of the premises;
- 5) the maximum number of occupants of the premises;
- 6) the type and use of the premises (including mixed-use buildings);
- 7) the demographic of occupants if the premises have been designed for a particular characteristic group e.g. older people, or disabled people, particularly where this might impact on evacuation strategies and any staffing levels;
- 8) the familiarity of the occupants with the premises (e.g. assumption would be fully familiar, unless the premises are designed specifically for short-term residents);
- 9) the fire safety management arrangements, such as fire safety strategy, fire procedures, staffing levels, training, drills, testing and maintenance, control of processes and alterations;
- 10) the history of fires on the premises; and
- 11) the incidence of malicious fire raising and vandalism in the surrounding areas.

Although the above factors cannot (or cannot readily) be changed, their effect on fire risk (primarily as a result of their effect on the consequences of a fire) needs to be taken into account in the FRA, so that they can be reflected in the level of fire risk expressed. The level of fire precautions then needs to be proportionate to the level of risk.

Since the likelihood (i.e. probability) of fire and the consequences of fire, if it does occur, are largely independent factors (see Clause 4), they need to be considered separately in the FRA (see Figure 1).

Figure 1 – Schematic of fire risk assessment process



For example, in properly designed, constructed and maintained single-storey premises with sufficient fire exits and occupants who do not require assistance to escape, a fire might have less serious consequences to occupants (in terms of injury) than in the case of multi-storey premises with poor compartmentation and more people who require assistance to escape. Conversely, in a high-rise block of flats with well-designed escape routes and a good standard of compartmentation, if there is a significant build-up of combustible materials in the common parts, the consequences to occupants in the event of fire in the common parts could be serious. In each of these examples, poor standards of fire safety management could affect both the probability of fire and the consequences of fire.

Once the level of fire risk is determined, any need for improvements in fire precautions can be identified. It can be determined whether the problem is primarily one of high likelihood of fire, necessitating fire prevention measures in the action plan, or serious consequences in the event of fire, necessitating fire protection measures, or a combination of the two.

The determination of the likelihood of fire, the consequences of fire, and fire risk, are typically subjective in nature, and not quantified numerically. Numeric methods, including calculation of probabilities and use of fire scenarios (see 3.1.46), are not typically appropriate for housing premises.

c) Types of FRA

The scope of an FRA needs to take account of the nature of the premises and the existing information available in respect of the structural and other fire protection measures.

There are, in principle, four different types of FRA that can be carried out in any multi-occupied housing premises. These are illustrated in Figure 2. They differ in the extent to which the building is inspected, and in the use of intrusive techniques for opening up and sampling construction materials or elements that are not visible.

Figure 2 – Types of FRA

Type 1 Common areas Non-intrusive	Type 2 Common and flats Non-intrusive
Type 3 Common areas Intrusive	Type 4 Common and flats Intrusive

The fire risk assessor needs to have a clear understanding of the type and scope of FRA that is required so that they can conduct it accordingly. It is expected that this information will be given by the dutyholder.

The four types of FRA are described below.

1) Type 1: Common parts only (non-intrusive)

A Type 1 FRA is the basic FRA required for the purpose of satisfying the Fire Safety Order [1]. This is generally sufficient for most buildings where the dutyholder has a comprehensive understanding of the fabric of their building through either previous intrusive inspections or information on its design and construction standards.

The Type 1 FRA inspection is therefore non-intrusive, but, as well as considering the arrangements for means of escape, etc., the FRA includes examination of, at least, a sample of entrance doors and door sets to the dwellings (e.g. flats or bedsits). Common custom and practice is for fire risk assessors to check a minimum of 10% of dwelling entrance doors (see 15.3).

Where the building has a pitched roof, the inspection extends to the roof voids, unless access to the voids is impractical, in which case this needs to be recorded in the FRA (see 15.7).

The inspection also covers, so far as reasonably practicable, the separating construction between the dwellings and the common parts, without any opening up of construction. This includes, for example, inspection of fire stopping within sample locations within service risers.

Where there are demountable false ceilings in the common parts, it is appropriate to lift a sample of readily accessible false ceiling tiles. In addition, it is normally appropriate to open a sample of service risers, provided that access is practicable at the time of inspection (see 15.7).

In a Type 1 FRA, consideration needs to be given to external wall construction, including any cladding or attachments such as balconies (see 15.8).

In the case of external wall construction that is of traditional masonry construction, without attachments that are likely to result in serious risk of external fire spread, it will be reasonable to assume that the fire risk is acceptable without further investigation, in which case this can be recorded in the FRA. (This does not imply that the fire risk assessor is verifying that external walls conform to the requirements of building regulations that are current at the time of the FRA or were current at the time of construction of the building.) For other types of external wall construction, an FRAEW might be appropriate (see 15.8).

2) Type 2: Common parts only (intrusive)

The scope and objectives of a Type 2 FRA are generally similar to those of a Type 1 FRA, except that there is additional intrusive inspection, carried out on a sampling basis. This usually necessitates the presence of a contractor for the purpose of opening up construction and making good after the inspection.

In order to check the integrity of separating construction, the areas in which intrusive inspection is carried out might sometimes include a sample of dwellings.

A Type 2 FRA is usually a one-off exercise, which is carried out only if there is good reason to suspect serious structural deficiencies that could lead to spread of fire beyond the dwelling of fire origin. The need for a Type 2 FRA is sometimes identified in a Type 1 FRA, but ought not to be recommended as a matter of course.

3) *Type 3: Common parts and dwellings (non-intrusive)*

A Type 3 FRA includes the work involved in a Type 1 FRA, but also considers precautions within the dwellings themselves. This type of FRA considers the provision, arrangements, and maintenance of fire precautionary measures within the control of landlords, leaseholders, other dutyholders or occupiers, such as means of escape, fire detection systems and sprinkler or water mist systems, within at least a sample of the dwellings. It also considers any alterations or actions by residents that could compromise the effectiveness of the fire precautions.

Measures to prevent fire are not considered unless (e.g. in the case of maintenance of the electrical and heating installations) the measures are within the control of, for example, a dutyholder.

A Type 3 FRA can also provide an opportunity for dutyholders, leaseholders and occupiers to be given advice on best practice in the provision of fire precautions, over and above the minimum requirements of legislation (e.g. advice on additional smoke and heat alarms beyond the minimum required by the Smoke and Carbon Monoxide Alarm (England) Regulations 2015 [7]).

Matters to be considered in a Type 3 FRA could include:

- integrity of fire-resisting elements (walls, floors, ceilings) between the dwelling and other dwellings;*
- maximum travel distance from any point within a flat to the flat entrance door;*
- protection of hallways (where relevant);*
- ease of opening of the dwelling entrance door;*
- fire safety of inner rooms (if any);*
- means of escape from upper levels of any maisonettes;*
- electrical and heating installations provided by dutyholders;*
- provision of smoke and heat alarms; and*
- provision of sprinkler or water mist systems.*

4) *Type 4: Common parts only (intrusive)*

A Type 4 FRA has the same scope of work as a Type 3 FRA, except that there is a degree of intrusive inspection, in both the common parts and the dwellings, carried out on a sampling basis. This usually necessitates the presence of a contractor for the purpose of opening up construction and making good after the inspection.

This is the most comprehensive FRA, but is only appropriate in unusual circumstances, such as when a new landlord takes over a building in which the history of works carried out is unknown and there is reason to suspect serious risk to residents from both a fire in their own dwellings or a fire in a neighbour's dwelling.

As well as considering the safety of residents in the event of a fire in their own dwelling, consideration is given to the potential for fire to spread internally from that dwelling to others. Routes to assess include riser shafts running within the dwellings, bathroom and kitchen extract ducts, drainage pipework and penetrations for other services, such as gas or electricity.

NOTE In the case of buildings constructed before 2000, before cutting into walls or ceilings, etc., there is a need to confirm, by reference to the asbestos register required by the Control of Asbestos Regulations 2012 [8], that there will be no undue risk of exposure of occupants, including the contractor carrying out the work, to asbestos.

5.1 The fire risk assessor should ascertain from the dutyholder the type and scope of the FRA to be carried out.

5.2 The FRA should take into account at least the following matters:

- a) occupants and potential occupants, including the content of any PCFRAs undertaken (see also Clause 22);
- b) fire hazards and means for their elimination or their control;
- c) relevant fire protection measures (see 3.1.31 and Clause 15) and the arrangements for relevant inspection, testing or maintenance of these measures;
- d) relevant aspects of fire safety management (e.g. staffed or unstaffed buildings);

- e) any fire safety strategy adopted within the premises as part of a fire engineering solution, or alternative to prescriptive codes of practice for compliance with building regulations, such as managerial arrangements;
- f) the content of any previous FRA(s), if available.

5.3 The following matters should be agreed with the dutyholder:

- a) the arrangements and building representatives that will be needed to facilitate safe access to all parts of the building necessary to undertake the FRA;
- b) the number and location of sample areas for intrusive inspection;
- c) the sample number of dwellings and doors to be inspected, and arrangements for accessing these; and
- d) any specific items and matters, additional to those listed in **5.2**, to be inspected and addressed within the FRA.

NOTE 1 It might be appropriate to extend the number of samples if the findings of the initial sampling suggest that significant widespread deficiencies exist.

NOTE 2 It might be appropriate to sample each dwelling archetype if there are variations.

5.4 As a general principle, the FRA should be carried out only when the premises are in normal use. If, in the case of new or refurbished premises, there is a need to carry out an FRA before the premises are fully occupied and in normal use, a further FRA should be carried out soon after the premises are in normal use.

NOTE Where any premises stand unoccupied, the dutyholder still has a responsibility, under the relevant fire safety legislation, to ensure that an FRA is carried out.

5.5 If, during the course of an FRA, the fire risk assessor identifies the need for a different type of FRA or an increased scope, they should draw this to the attention of the dutyholder and document it in the action plan (see Clause **19**).

6 Adequacy of the fire risk assessment

COMMENTARY ON CLAUSE 6

*Regardless of whether the FRA is carried out by, for example, staff of an organization, or by a third-party fire risk assessor (see **3.1.80**), the ultimate responsibility for the adequacy of the FRA rests with a dutyholder (see **3.1.15**).*

*Where legislation imposes a requirement on any dutyholder for an FRA to be carried out, it needs to be clearly understood by the dutyholder that the responsibility for the adequacy and accuracy of the FRA, and of the information contained therein, rests with that dutyholder, rather than with the fire risk assessor (see **3.1.36**).*

*It is important that any person on whom the duty to carry out an FRA is imposed understands and acknowledges their responsibility for the FRA. While they can use the services of a third party to carry out the FRA, the ultimate responsibility for the adequacy of the FRA cannot be delegated, making it important that dutyholders satisfy themselves regarding the competence of the fire risk assessors regardless of whether the fire risk assessor is an employee of the dutyholder or a third party, such as a consultant (see Clause **7**).*

If FRAs are carried out by a third party, it is essential that the organization for whom the FRA is carried out understands the role of the third party and the resulting FRA; the role is to facilitate the FRA and to advise on fire precautions, but, as noted above, the responsibility for the adequacy of the FRA and the adequacy of fire precautions rests with the organization.

Where the FRA is carried out for an organization by a third party, it is essential that the organization commits itself to the FRA from the outset. This means that the organization needs to provide information and support for whoever carries out the FRA, as much of the essential information required in order to carry out the FRA will reside within the organization and cannot be obtained by a third party without the organization's cooperation.

The organization also needs to give practical support to the fire risk assessor by ensuring that the fire risk assessor has access to appropriate people from whom information is to be obtained and has sight of relevant documentation, and by facilitating access to all areas of the premises, including, for example, locked service risers and plant rooms. It is also necessary, for example, in the case of a block of flats, for the dutyholder to arrange access, so far as is practicable, to a sample of residents' flats to, at least, carry out a check of the flat

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entrance doors; it might also be necessary to check other matters, such as whether there is a common air extract system serving multiple flats.

It is acknowledged that all relevant information is not always readily available (e.g. because of the history of old blocks of flats, ownership and management of which might have changed many times since the construction of the block). Also, access to all relevant areas might be difficult to facilitate at the time of the FRA. While by means of, for example, pre-survey questionnaires, information can be researched by dutyholders in advance of the FRA, the documented FRA might need to recommend further investigation of relevant information by the dutyholder, or recommend that the dutyholder carries out their own check of areas to which access was not available at the time of the FRA.

Where practicable, the recommendations in the action plan need, in the course of the FRA, to be discussed with the management of the premises in question to so that the documented FRA can be delivered to the appropriate person(s), namely the person(s) on whom the findings impact and who can arrange for implementation of the action plan. The "ownership" of the FRA by the dutyholder will then continue throughout the life of the premises, so that, for example, the FRA is subject to review at an appropriate frequency and when changes take place (see Clause 20).

6.1 Where, within an organization, an employee of the organization is competent to carry out the FRA, where practicable that person should carry out, or oversee any third party that carries out, the organization's FRA.

6.2 The fire risk assessor should satisfy themselves that they have access to appropriate people and relevant documentation, are provided with all relevant information and have access to all areas of the relevant premises, or part(s) of the premises, at the time of the FRA. If adequate information and access cannot be provided at the time of the FRA, the action plan should identify further investigation or checking of areas to be carried out subsequently by the dutyholder or a competent person instructed by the dutyholder.

NOTE 1 This includes access to certain locked areas, such as plant rooms and at least a sample of service risers.

NOTE 2 It is the responsibility of the dutyholder to provide such access and information, to the extent practicable.

6.3 In the case of a block of flats, the fire risk assessor should satisfy themselves that they have access to a suitably representative sample of flats to check certain matters, such as the adequacy of the flat entrance doorset, and to verify whether a common air extract system serves multiple flats. Where practicable, they should also request access to at least a sample of any roof voids. In the case of flat entrance doorsets, a representative sample of door archetypes should be checked.

6.4 The fire risk assessor should advise the dutyholder to ensure that the documented FRA is studied carefully by appropriate people in the organization to verify the accuracy of documented information, to understand the contents, particularly the fire hazards, fire safety measures and any shortcomings in fire protection measures or fire safety management, and to implement the action plan.

6.5 The fire risk assessor should advise the dutyholder that after the FRA has been carried out, it be subject to regular review, particularly when changes occur that could affect fire risk, or when there is any other reason to suspect that the FRA is no longer valid (see Clause 20).

7 Competence of fire risk assessors

COMMENTARY ON CLAUSE 7

The FRA, and its periodic review (see Clause 20), is a foundation for continued adequacy of fire precautions on an ongoing basis, after compliance with building regulations. It is, therefore, essential that FRAs are only carried out by competent persons (see 3.1.11).

Competence does not necessarily depend on the possession of specific qualifications, although such qualifications might contribute to the demonstration of competence. In the case of small simple premises, where the fire risk assessor might, for example, be a non-specialist employee of the dutyholder, it is possible that, provided the fire risk is relatively low, the following attributes of the fire risk assessor might be sufficient in conjunction with a study of suitable guidance documents:

a) *an understanding of relevant current best fire safety practices in premises of the type in question;*

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- b) an awareness of the limitations of the fire risk assessor's own experience and knowledge; and
- c) a willingness and ability to supplement existing experience and knowledge, when necessary, by obtaining external help and advice.

Higher risk or more complex premises require a higher level of knowledge and experience on the part of the fire risk assessor. For complex premises, there is a need for the specific applied knowledge and skills of an appropriately qualified specialist. In such cases, evidence of specialist training and experience, or membership of a professional body, can assist in demonstrating competence.

The competence of fire risk assessors arises from a sound underpinning combination of education, training, knowledge and experience in the principles of fire safety. In this connection, education is likely to involve formal education of a relatively academic nature, often culminating in a qualification (although not necessarily to degree level). Training involves training of a practical nature, often given on the job. Knowledge can be obtained by academic study, training, working alongside others, short courses, continuing professional development or any combination of two or more of these.

The Fire Sector Federation has published guidance on competence of fire risk assessors [9].

7.1 All FRAs should be carried out by a competent person (see **3.1.11**).

7.2 The fire risk assessor need not possess any specific academic qualifications, but should:

- a) understand the relevant fire safety legislation;
- b) have a thorough knowledge and understanding of government, and other, guidance document(s) relevant to the premises in question;
- c) have appropriate education, training, knowledge and experience in the principles of fire safety;
- d) have an understanding of fire development, the response of building construction and materials to fire and the behaviour of people in fire;
- e) have an understanding of people with specific evacuation requirements who are likely to be present in the premises for which the FRA is carried out;
- f) understand the fire hazards, fire risks and relevant factors associated with people with specific evacuation requirements within premises of the type in question;
- g) understand the causes of fire and means for their prevention;
- h) understand the design principles of fire protection measures relevant to the buildings being assessed;
- i) have an understanding of critical management arrangements, emergency and evacuation planning, and any relevant staff requirements for all occupancy types;

NOTE 1 This is particularly critical for occupants with vulnerabilities or dependencies that generate a need for support, and the impact of that on evacuation plans and staffing levels.

- j) have an understanding of evacuation strategies and their application to buildings;
- k) have a good appreciation of fire precautions in older existing buildings (e.g. such as early tower blocks of flats or large houses that were converted into flats many years ago), as opposed to an understanding of only current standards under building or fire safety regulations;

NOTE 2 Fire safety specialists experienced only in the design of new buildings might not necessarily possess an appreciation of standards in buildings constructed before current building regulations came into force, nor of the extent to which such standards continue to be acceptable.

NOTE 3 Fire risk assessors might encounter differing fire safety measures across the UK as a result of variations in building or fire safety regulations in the devolved nations.

- l) have a good understanding of domestic fire safety, particularly in the case of Type 3 and Type 4 FRAs (see commentary on Clause **5**);
- m) have appropriate training and/or experience in carrying out FRAs; and

- n) have evidence of continuing professional development that includes assimilation of lessons learned from past multiple fatality fires in housing.

8 Benchmark standards for assessment of fire precautions

COMMENTARY ON CLAUSE 8

When assessing or formulating measures to eliminate or control fire hazards (see 3.1.24), it is often appropriate to adopt guidance in recognized codes of practice. This is particularly the case where these codes of practice are well established, universally recognized, produced by authoritative bodies with specialist knowledge regarding the hazard in question, and based on sound scientific or engineering principles (as opposed to arbitrary judgements). The view of the Health and Safety Executive is that it is not appropriate to use risk assessment to justify departures from practices that are universally accepted as appropriate within an industry sector [10].

In the case of fire protection measures, a plethora of standards exist. For some specific fire protection systems, a single, universally accepted standard exists and is based on sound engineering principles. This is the case in respect of, for example, fire detection and fire alarm installations (BS 5839-6) and automatic sprinkler installations (BS 9251). These standards are invariably adopted in the design of new installations within housing.

However, in many codes of practice, certain parameters, such as the illuminance levels of emergency escape lighting and the fire resistance of flat entrance doors in blocks of flats and sheltered housing, are acknowledged to be relatively arbitrary in nature. Thus, minor variations from numerically expressed limitations or performance levels need not necessarily have any significant effect on fire risk. Nevertheless, where the action plan includes recommendations for upgrading any aspect of fire precautions (e.g. improvement in the illuminance levels of an emergency escape lighting installation or replacement of a flat entrance door), it is appropriate to adopt the relevant recommendations of the appropriate current code of practice within the action plan. Notwithstanding, the use of guidance for existing premises, constructed before the introduction of a relevant code of practice, might be inappropriate and could result in an action plan that is not risk-proportionate.

Codes of practice are simple benchmarks, in respect of which there is flexibility in application. Published guidance will be a starting point or benchmark for assessment of the adequacy of fire precautions in the premises. A fire risk assessor can exercise judgement to determine whether the recommendations of such guidance ought to be relaxed, or added to, in order to determine the appropriate level of fire precautions and to formulate a risk-proportionate action plan.

8.1 Assessment of fire precautions should take into account guidance within relevant, recognized codes of practice, particularly those produced by the relevant government departments in support of the relevant fire safety legislation, albeit that rigid, prescriptive application of these might not be appropriate. While fire precautions recommended in the action plan should also take account of such codes of practice, the recommendations in the action plan should be risk-proportionate, which might necessitate measures of a standard above or below that recommended in the relevant code of practice.

NOTE Different guidance documents apply to England and Wales, Scotland and Northern Ireland.

8.2 Departures from the recommendations of recognized codes of practice should be based on the judgement of the fire risk assessor, and should take into account relevant fire safety, or fire safety engineering, principles, while adopting a pragmatic approach that is based on assessment of risk.

NOTE 1 It is of benefit, particularly to those who subsequently audit the FRA, such as enforcing authorities, if significant departures from recognized codes of practice, deemed acceptable by the fire risk assessor, are recorded and justified in the documented FRA (see Clause 10). It is then clear that there has been appropriate consideration of the matter and that it has not simply been overlooked.

NOTE 2 Departures from the recommendations of recognized codes of practice might arise from a fire engineering solution described in the fire safety strategy for the building. An understanding of the fire safety strategy, if available, is likely to be valuable in any FRA.

9 Assessment of premises design and fire precautions that do not conform to current standards

COMMENTARY ON CLAUSE 9

This clause does not apply to new, or very recently constructed, buildings in which there are defects in construction; the clause is limited to older buildings that were designed in accordance with previous standards.

Often, the design of a building for which an FRA is to be carried out, and the design, or extent, of the fire precautions for the building, does not conform to current standards as set out in either guidance for new premises

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(e.g. in England and Wales, Approved Document B [11]) or government guidance on compliance with the relevant fire safety legislation.

It is not necessarily the case that failure to comply with current guidance necessitates upgrading of fire precautions to meet current standards. Standards, in their development over a period of time, improve levels of safety, but this does not necessarily imply that older standards are unsafe.

In some cases, upgrading to current standards would, in any case, not just fail to meet the test of reasonable practicability (see Clause 19); upgrading might be architecturally impossible.

It is an inherent part of the FRA process in such cases to determine whether departures from current guidance, including guidance that supports the relevant fire safety legislation, create sufficient risk to warrant upgrading of fire precautions to current standards. The risk assessor might need to make subjective judgements, but a departure from prescriptive guidance is not, alone, sufficient justification for upgrading work.

Figure 3 is intended to assist in a logical approach in the case of older premises, constructed before recognized current guidance was published. The first step is to determine whether the fire precautions satisfy the standards that were applicable at the time of construction. This might bring to light original building defects. It might also identify aspects where the originally required fire precautions have been compromised.

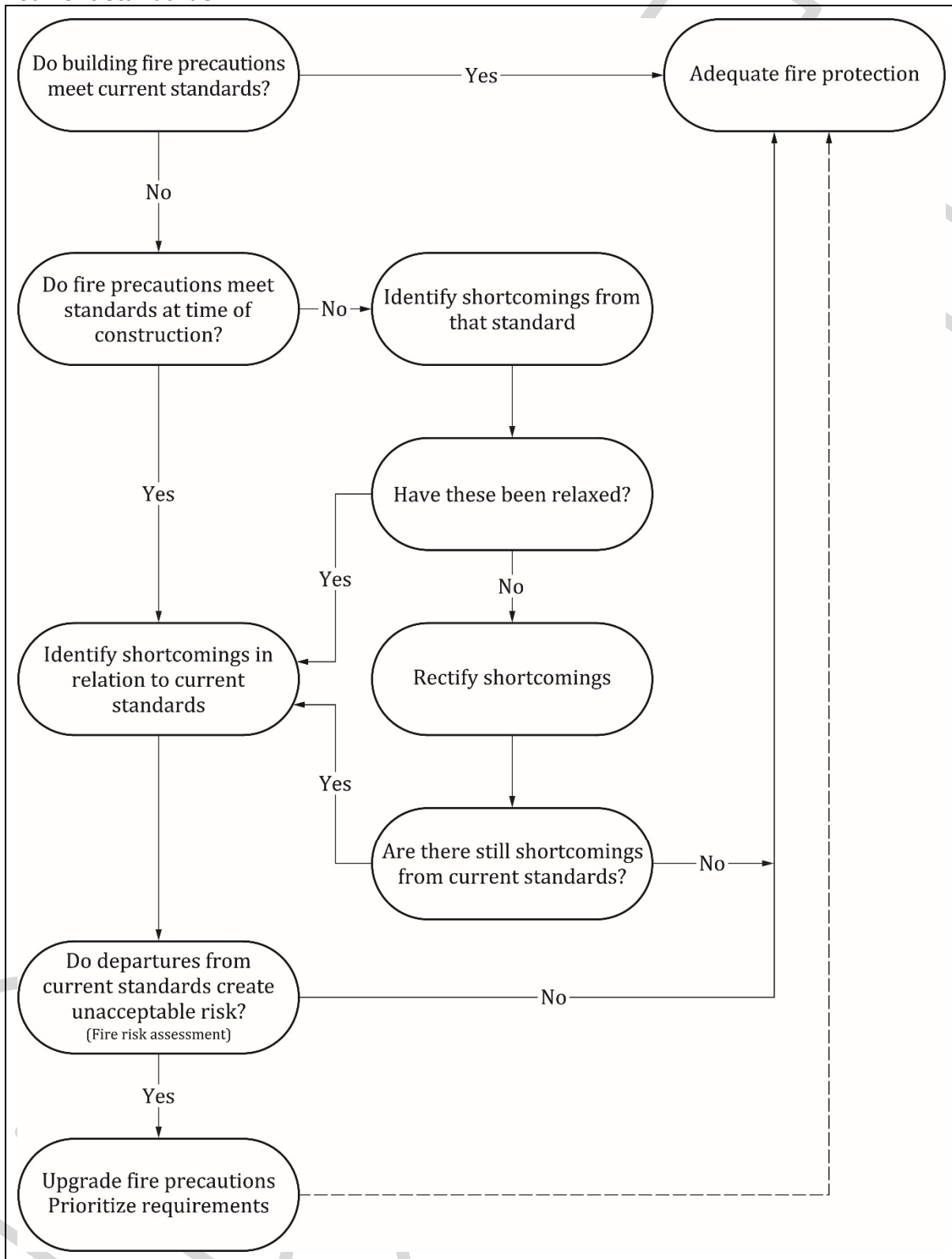
In such cases, the first measures that need to be specified in the action plan are measures to restore the conditions stipulated by the original standard. An exception to this is where the original standard is no longer applicable. The next step, having confirmed that the building met the provisions of the original standard (or having recommended measures to restore those provisions), is to confirm whether the building would meet the current standards. Sometimes, even when the building was constructed before these standards were introduced, fortuitously, the building does conform to current standards.

The crux of the FRA process is often to determine whether departures from current standards create unacceptable risk (i.e. whether the departure from current standards really matters to any degree). In making judgements, all the circumstances of the case need to be taken into account.

9.1 In carrying out an FRA of premises constructed before the introduction of current standards, the fire risk assessor should have at least a basic understanding of the standards that were applicable to the premises at the time of construction.

9.2 In formulating an action plan for the premises described in **9.1**, the fire risk assessor should follow the logic set out in Figure 3. It should not be assumed that prescriptive application of current standards is necessary, but, where the continued adoption of the original standard is considered to create significant risk, measures that are reasonably practicable should be recommended in the action plan (see Clause 19). These should accord with either prescriptive or performance-based standards and ultimately the functional requirement.

Figure 3 – Decision tree for action plan when existing premises do not conform to current standards



10 Documentation of fire risk assessments

COMMENTARY ON CLAUSE 10

There is no single correct means of documenting an FRA, and the fire risk assessor needs to make a judgement as to what is significant. There are, however, some matters that always need to be included in any documented FRA.

This clause gives recommendations for the minimum information that needs to be recorded to satisfy this British Standard; further details might be required by legislation. It is important for dutyholders to be able to understand whether the matters considered in the FRA are, in effect, legal requirements or whether they go beyond the minimum requirements of legislation. There needs to be evidence for those who audit the FRA (e.g. an enforcing authority) that the requirements of the relevant fire safety legislation have been addressed when the FRA was carried out.

Details of the information that needs to be taken into account in the FRA, and the matters on which judgements need to be made, are given in Clause 12. Such information needs to be documented, along with other relevant factual information (e.g. managerial responsibility for fire safety).

In the case of certain matters, particularly the “given” factors taken into account in assessment of the fire risk (see Commentary on Clause 5), information about the factors (e.g. number of storeys of the premises) needs to be recorded.

The report needs to speak to two divergent audiences: those that know the premises but have little understanding of fire safety, and those that are unfamiliar with the premises and have a good understanding of fire safety. Consequently, the report needs to be comprehensible to residents, dutyholders and enforcers. Where the report is to be peer reviewed, having a high level of detail allows the reviewer to develop a clear picture of the premises and the preventive and protective measures.

One suitable format for documentation is given in Annex A. The pro forma contained in Annex A is only a model, in that, if completed by a competent person (see Clause 7), the scope of the documented FRA can be expected to meet the recommendations of this British Standard. Equally, the format of a documented FRA may vary from that shown in Annex A, provided that all recommendations of this British Standard are satisfied.

10.1 The documented FRA should record, as a minimum:

- a) the type and scope of the FRA that was carried out;
- b) the name and contact details of the fire risk assessor(s) and any relevant qualifications or certification that they hold;
- c) the date(s) on which the FRA was carried out and the date that the FRA was published;
- d) the name(s) of the principal person(s) who was consulted (e.g. for supply of relevant information) at the time of the FRA;
- e) the name of the person (if any) who checked the FRA report and any relevant qualifications or certification that they hold; and

NOTE 1 This might be the same person who carried out the FRA and who wrote the report, but it needs to be made clear.

- f) information and, where relevant, comment on the matters addressed in **5.2**.

NOTE 2 Annex A contains a pro forma that is considered to be a suitable and sufficient means for documenting the FRA.

10.2 If any fire protection measure obviously and significantly departs from the standard recommended in a relevant guidance document or prescriptive code of practice, but no upgrading of the measure is recommended in the action plan, the acceptance of the existing standard should be justified within the documented FRA.

NOTE The departures to which 10.2 refers are primarily those affecting provisions for means of escape and functional aspects of fire protection systems; it is not, for example, intended that justification of the continued use of a fire alarm system or emergency escape lighting system designed in accordance with a superseded standard would normally be necessary.

10.3 The FRA should record any significant areas of the premises to which access was not possible at the time of the FRA.

10.4 For people known to have specific evacuation requirements, sufficient information should be recorded about the nature of their requirements to enable verification as to whether sufficient measures are in place (e.g. evacuation plans or other fire protection measures).

NOTE For example, it is not sufficient to record the presence of disabled people without some reference to the nature of their requirements; people who are Deaf or have a hearing impairment, for example, require different provisions for their safety to people with mobility impairments. This principle is particularly important in the case of premises in which there might be more people with specific requirements (e.g. extra care housing).

10.5 Every documented FRA should make a clear distinction between matters that have been considered for the purpose of compliance with the relevant fire safety legislation and matters that are outside the scope of legislation.

10.6 Every documented FRA should contain an expression of the level of fire risk, determined from the information recommended in **5.2**.

NOTE The level of fire risk may normally be expressed subjectively (e.g. trivial, tolerable, moderate, substantial, intolerable).

10.7 Every documented FRA should contain an action plan (see Clause **19**), unless it is expressly confirmed within the FRA that no additional fire precautions are necessary.

10.8 The documented FRA, including the action plan (see Clause **19**) should be comprehensible to all interested parties.

10.9 Where the documented FRA refers to external documents or other information resources, it should include details of the source(s), to enable the dutyholder, or others employed to assist them, to locate the information.

NOTE Such resources may include, but are not limited to, statutory guidance, standards, books, other publications and web sites. The referencing could take the form of footnotes, endnotes or a separate section within the documented FRA.

10.10 The FRA should record the date by which it is to be subject to review (see Clause **20**).

11 Nine steps to fire risk assessment

COMMENTARY ON CLAUSE 11

To promote a structured approach to fire risk assessment (see Clause **5**), this clause sets out nine steps in the FRA process, somewhat akin to the five steps to risk assessment often adopted in a health and safety risk assessment. Some guidance documents suggest five steps in an FRA; this British Standard is consistent with such guidance, but breaks down the process into more detail. The number of steps defined is irrelevant; the important matter is that an appropriately structured approach is adopted and that all relevant issues are addressed.

- a) The first step is to obtain relevant information about the premises and the occupants thereof. Where there are staff on the premises who provide assistance or care for people with specific evacuation requirements, the number, roles and availability of staff over the course of any 24 h period (particularly during the night) needs to be determined. Information about previous fires is also of value, particularly where the organization has multiple sites with common operations. This information is described in Clause **12** as the “given” factors in the FRA. Much of the relevant information can usually be obtained by interviewing a relevant representative(s) of the management, prior to carrying out a physical inspection of the premises. At that stage, it is important that relevant information is obtained about the occupants of the premises, particularly people with specific evacuation requirements. Other than in the case of small, simple premises, the fire safety strategy for the building (if a documented fire safety strategy exists) is likely to be of value to the fire risk assessor.
- b) The second step is fire hazard identification (see **3.1.25**) and the determination of existing measures for the elimination or control of the identified fire hazards. This normally involves a combination of interviewing the management and inspection of the premises.
- c) The third step is to make a (subjective) assessment of the likelihood of fire. This is based primarily on the findings of step two (see Figure 1). However, the assessment of the likelihood of fire also takes into account any relevant information obtained in step one.

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- d) *The fourth step is to determine the physical fire protection measures (see 3.1.31) relevant to the protection of people in the event of fire. The relevant information can, again, be obtained partly from the initial discussion with management, but is primarily obtained by inspection of the premises, so that the level of fire protection can be determined.*
- e) *The fifth step is to determine relevant information about fire safety management (see 3.1.40). This primarily involves discussion with management, but might also involve examination of documentation, such as records of testing, maintenance and training of staff (where present).*
- f) *The sixth step is to make a (subjective) assessment of the likely consequences to occupants in the event of fire (see Figure 1). This assessment needs to take account of the fire risk assessor's opinion of the likelihood of various fire scenarios (see 3.1.46), the extent of injury that could occur to occupants in these scenarios, and the number of people who are likely to be affected. This assessment is principally based on the fire risk assessor's findings in steps four and five, but takes account of information obtained in step one.*
- g) *The seventh step is to make an assessment of the fire risk and to decide if the fire risk is tolerable (see Figure 1). The fire risk is assessed by combining the likelihood of fire and the consequences of fire (see Clause 18).*
- h) *The eighth step is to formulate an action plan (see 3.1.2 and Clause 19), if this is necessary to address shortcomings in fire precautions in order to reduce the fire risk. Even if fire risk is assessed as tolerable, there is often a need for minor improvements in fire precautions.*
- i) *Thereafter, in the ninth step, a period of time after which the FRA is to be reviewed needs to be determined, (assuming that earlier review is not necessitated by changes to the premises and that there is no reason to suspect that the FRA is no longer valid) (see Clause 20).*

The nine steps set out above, while in a logical, structured order, are not necessarily set out in the chronological order in which the steps are carried out on site. For example, some information relevant to control of fire hazards, the determination of fire protection measures and the management of fire safety is normally most appropriately obtained in a single meeting that is held prior to inspection of the premises.

11.1 In all FRAs carried out in accordance with this British Standard, the fire risk assessor should explicitly take the following nine steps:

NOTE 1 Explicitly, in this context, means that, in the documented FRA, it needs to be clear that each of the nine steps has been taken by the fire risk assessor.

- a) obtain information on the building, the fire safety strategy for the building (where a documented fire safety strategy exists), the premises and the people present, or likely to be present, on the premises, and any recent history of fires (see Clause 12);

NOTE 2 The relevant fire safety legislation requires that consideration be given to the risk to people in the immediate vicinity of the premises from fire, as well as risk to people within the premises.

- b) identify the fire hazards and means for their elimination or control (see Clause 13);
- c) assess the likelihood of fire, at least in subjective terms (see Clause 14);
- d) determine the fire protection measures currently in the premises (see Clause 15);
- e) obtain relevant information about fire safety management (see Clause 16);
- f) make an assessment of the likely consequences to people in the event of fire, at least in subjective terms (see Clause 17);
- g) make an assessment of the fire risk (see Clause 18);
- h) formulate and document an action plan, in which recommended actions are prioritized (other than in the case of an action plan comprising only minor matters that can be actioned without delay) (see Clause 19); and
- i) define the date by which the FRA is to be reviewed (see Clause 20).

11.2 The FRA should be reviewed after a period of time defined in the FRA, or such earlier time as significant changes take place or there are other reasons to suspect that the FRA is no longer valid (see Clause 20).

12 Information about the premises and their occupants

COMMENTARY ON CLAUSE 12

This clause sets out various factors that have a major impact on fire risk. It is relevant to document information about these factors in the FRA. The manner in which the factors are to be taken into account in the FRA process is described. The factors can be divided into three broad categories: general information about the premises, information about the occupants, and the history of fires on the premises.

a) Information about the premises

The number of floors below ground and the number of floors above ground need to be determined. In assessing the fire risk, it needs to be borne in mind that basements can present particular difficulties for firefighting and, hence, rescue. Mitigating factors would be, for example, low population within basement floors and the presence of fire protection measures, such as automatic sprinkler protection, automatic fire detection and smoke control. Tall buildings, such as tower blocks, can result in extended evacuation times for occupants and more occupants requiring assistance due to the number of storeys they would have to negotiate to evacuate. External rescue by the fire and rescue service is more difficult from floors above the height of normal fire and rescue service ladders and even more difficult in the case of very tall buildings with floors beyond the reach of a turntable ladder or hydraulic platform. Robust protection of staircases, smoke control and automatic sprinkler protection mitigate the risk. The area of each floor can also be a relevant factor. Complex and extended escape routes might take longer to negotiate than simple routes.

The construction of the premises, including the external wall materials, also needs to be taken into account. This can have an effect on fire development, particularly if combustible building construction is likely to be involved in the fire prior to evacuation of occupants. Where it is obvious that the external walls of the building have any form of cladding (i.e. are not of conventional masonry construction), or have been overclad (e.g. with rainscreen cladding), or new spandrel panels have been provided below windows, since the time of original construction, it is appropriate to note this in the documented FRA, with reference to any FRAEW that has been completed). Certain modern methods of construction, such as timber frame construction, are worthy of note (though often impossible to identify by visual inspection), as the risk arising from defects in compartmentation can often be exacerbated by this form of construction. It is the responsibility of the dutyholder to provide such information to the fire risk assessor.

b) Information about the occupants

The general use to which the premises are put (the occupancy) is also relevant. An important consideration is the maximum number of occupants that can reasonably be expected at any one time. It is important that the number recorded in the FRA is a reasonably foreseeable maximum, so that it forms a basis for any calculations of required exit capacity, etc. (see Clause 15). Where staff are present and it has been identified (e.g. within the building fire safety strategy or emergency evacuation plan) that they have a role to play in providing assistance for people with specific evacuation requirements, information on the ratio of staff to residents can be a relevant factor to consider.

Due account needs to be taken of any procedures that are in place to identify residents who might be at higher risk from fire, or who have specific evacuation requirements. This could include the findings of a PCFRA (see Clause 21).

The FRA and/or PCFRA could be used as the basis for any person-centred emergency plans that might be required to support residents with specific evacuation requirements to take any particular actions, including evacuating the building if necessary. It can also be used to provide guidance on evacuation for family members, other occupants or staff if present, or for the fire and rescue service on arrival. Basic information on individual residents who might require support from the fire and rescue service to evacuate can be kept in the secure information box (see Clause 15). Occupants' requirements for assistance will change over time so there cannot be an expectation that this information will always be correct. Some occupants might also be unwilling to share information on their assistance requirements and their rights to privacy need to be respected.

c) History of fires and arson

It is relevant to take account of any fire, however small, that is known to have occurred within recent years. Factors to consider include the circumstances of the fire, including the cause, and any remedial action taken to prevent a reoccurrence. Information of this type can be of use in identifying fire hazards that would not otherwise be obvious from an inspection of the premises.

Where FRAs are carried out throughout the estate of one organization, review of the fire loss experience throughout the estate can sometimes reveal significant trends or identify remedial action that might be appropriate throughout all premises to rectify a latent hazard. Occurrence of vandalism, malicious fire-raising and general antisocial behaviour in the area of the building, or within a block of flats, can sometimes be relevant in an FRA. This might imply an increased likelihood of malicious ignition of waste and other combustible materials, so as to necessitate enhanced security measures or control over combustible materials external to the premises, as well as within the premises.

12.1 In carrying out the FRA, the fire risk assessor should take account of the following information:

- a) brief details or brief description of the principal dutyholder;
 - b) the height of the uppermost storey of the premises, or part of the premises, that is the subject of the FRA, or the number of storeys above and below ground;
 - c) brief details of construction, with information about any aspects that make a significant contribution to risk, including a reference to any FRAEW that has been completed;
- NOTE 1 PAS 9980 gives recommendations for carrying out an FRAEW.*
- d) any significant non-domestic areas of the premises, other than plant and similar rooms that would be expected in the premises in question (e.g. communal lounges, residents' halls and commercial premises);
 - e) approximate number of occupants;
 - f) type and use of the premises (e.g. staffed/unstaffed, purpose-built/converted, general/specialized housing);
 - g) whether the premises will be occupied by a significant number of persons other than residents of dwelling units (or a significant number of persons unfamiliar with the design and layout of the premises, other than residents' visitors), and, if so, the approximate number of such persons;
 - h) approximate gross floor area of the premises, or a typical floor of the premises, or part of the premises, that are the subject of the FRA;
 - i) the number of escape stairs and the floors that they serve;
 - j) the number of lifts serving the upper floors and basements, including specific reference to lifts intended for use by the fire and rescue service and/or evacuation lifts;
 - k) any arrangements that have been established, or adaptations provided, to support people who have been identified as having specific requirements in preventing fire, responding to a fire or fire alarm, and evacuating the building when necessary;

NOTE 2 This could include arrangements identified through a PCFRA (see Clause 21) or a person-centred emergency plan.

- l) any fires that have occurred in recent years (if known);
- m) any further relevant information that has a bearing on fire risk (other than the information described in **5.2**) or on the validity of the FRA;
- n) information on any enforcement, alterations, or prohibition notices that apply to the premises; and

NOTE 3 An alterations notice can be issued by an enforcing authority under the relevant fire safety legislation, requiring the enforcing authority to be notified of proposals to carry out material alterations to or a change in use of the premises.

- o) any other matters that are considered relevant by the fire risk assessor and that were taken into account in the FRA [e.g. presence of staff, hours of work or relevant working practices, tenure of flats (if known) and arrangements for management].

NOTE 4 Any such additional matters may be set out in a section recording other relevant information that is not readily addressed under other headings.

12.2 While it is not normally necessary to document the manner in which every factor referred to in **12.1** affects the FRA, there should normally be explicit information within the assessment, where relevant, regarding appropriate measures to protect people with specific evacuation requirements. To this end, the fire risk assessor should request information from the dutyholder as to whether any PCFRAs or person-centred emergency plans are in place.

13 Identification of fire hazards and means for their elimination or control

COMMENTARY ON CLAUSE 13

In this step of the FRA, the fire risk assessor identifies all reasonably foreseeable and significant fire hazards and examines the measures in place for their elimination or control. By definition, this means considering potential ignition sources (see 3.1.49), as well as situations and unsafe acts that have the potential to result in a fire. It is necessary, therefore, for the fire risk assessor to be aware of the common causes of fire in the type of premises under assessment, and to have an understanding of any effect that resident characteristics might have on the likelihood of fire and the nature of fires that might occur. There is also a need for the fire risk assessor to have an understanding of the policies and procedures that contribute to prevention of fire. At the conclusion of this step of the FRA, the fire risk assessor is normally in a position to assess the likelihood of fire (see Clause 14).

Normally, the documented FRA comprises a pro forma, which incorporates a prompt-list of fire hazards that need to be considered in the FRA. A prompt-list of fire hazards typically found in housing premises, and relevant codes of practice that give further guidance, are set out in Annex B.

It is inherent in the definition of fire hazard (see 3.1.24) that fire hazards are not limited to ignition sources. Various situations and unsafe acts, such as poor housekeeping, can constitute fire hazards.

Poor housekeeping does not only result in potential for a fire to start; inappropriate quantities of poorly located combustible materials can contribute to fire development and, hence, the consequences of a fire as well as the likelihood of fire occurring. In particular, combustible materials in the common parts of a block of flats, contrary to the policy on management of the common parts, can result in a fire that undermines the stay put evacuation strategy, which is founded on the premise that fire is unlikely to occur in the common parts, and that any such fire will be very limited in extent.

It is often appropriate to consider the means for control or elimination of fire hazards in two distinct phases, which can be regarded as policy and practice (see Figure 1). For example, in the case of a fire hazard created by faulty electrical installations, one control measure would be a policy that the installation is subject to periodic inspection and testing. The “practice” stage comes when the premises are inspected and observations can be made as to whether there is adherence to the policy (e.g. by examination of the last certificate of inspection and test if it is held on the premises). It might then be found that, for example, the inspection and test is overdue. It might also be helpful to the dutyholder if the date of the last inspection and test is recorded in the FRA, regardless of whether or not it is overdue.

The presence of lithium ion battery-powered personal vehicles, cars and devices is now very common. Examples include mobility scooters, e-scooters, e-bikes, vehicles, uninterruptible power supply (UPS) systems, and energy storage systems. These present a particular hazard due to their potential for very rapid and extreme fire development, production of extensive toxic fumes, and explosion if they are damaged or faulty. These factors increase the likelihood of means of escape routes becoming compromised very quickly and risk to people being significantly increased. The FRA needs to note the presence of any such items, assess their potential risk and address this within the action plan.

13.1 The FRA should address means for elimination or control of, at least, the common causes of fire, and shortcomings in such measures should be addressed within the action plan (see Clause 19).

13.2 Every FRA should include the following potential sources of fire:

- a) malicious ignition;
- b) electrical faults;
- c) smoking;
- d) cooking (if any is carried out other than in individual dwellings);
- e) inadequate control over the use of portable heaters;
- f) contractors’ activities and “hot work”;
- g) inadequate maintenance of heating installations; and
- h) lightning.

NOTE 1 Further information on each of these hazards is given in Annex B.

NOTE 2 It is possible that there will be a need for consideration of other fire hazards, including those associated with storage and use of dangerous substances. It is uncommon to find these in housing premises, but the effects of use or storage on the general fire precautions (fire safety measures) that are within the scope of the relevant fire safety legislation still need to be taken into account.

13.3 Assessment 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) should also be taken into account, including poor housekeeping and the presence in common areas or escape routes of items such as battery-powered mobility scooters, e-scooters and e-bikes, electric vehicles, UPS systems and energy storage systems. Any other hazards drawn to the attention of the fire risk assessor by the dutyholder, such as hoarding, should also be taken into account.

NOTE Inadequate security of access to a block of flats, particularly in an area of known crime and antisocial behaviour, might also constitute a fire hazard.

14 Assessment of the likelihood of fire

COMMENTARY ON CLAUSE 14

Once all relevant fire hazards have been identified, and measures for their control or elimination have been determined, the fire risk assessor is in a position to make an assessment of the likelihood of fire. It is not usually necessary to associate a likelihood of fire with each of the identified fire hazards. Instead, it is typically sufficient to assess the overall likelihood of fire on the premises; this can be regarded as the summation of likelihoods of fire associated with each and every one of the fire hazards identified.

The likelihood of fire need not, and usually cannot, be expressed in a meaningful numeric manner, such as in terms of a statistical probability of fire. All that is required is a subjective judgement that classifies likelihood of fire into one of several predetermined categories. Since the assessment of these factors is subjective, the use of numbers to express likelihood of fire does not confer any greater accuracy to the assessment of fire risk.

The predetermined categories of likelihood of fire may be described in the form of words, such as “low”, “medium” and “high”, or in the form of numbers (e.g. 1, 2 and 3), but there is a need for at least three categories. However, if likelihood is expressed in the form of numbers, care is necessary to ensure that it is not implied, for instance, that a likelihood of “2” indicates that fire is twice as likely to occur compared to a likelihood of “1”.

There is no upper limit to the number of categories of likelihood that can be adopted in the FRA process. However, if too many categories are adopted, the distinctions between categories are meaningless. Moreover, if the same FRA process is then applied to numerous different buildings (e.g. within the estate of a single organization), particularly by different fire risk assessors, assessments of likelihood of fire are likely to be inconsistent, and the benefits of comparing the fire risk in different buildings (e.g. for the purpose of prioritizing improvements on a building-by-building basis) are then lost.

If likelihood of fire is judged to be typical for premises of the type in question, it is normally appropriate to ascribe to the premises the middle category of the predetermined categories of likelihood of fire. Higher categories can then be used to indicate serious shortcomings in elimination or control of fire hazards (i.e. fire prevention), while lower categories can be used in cases where the likelihood of fire is abnormally low (e.g. because the extent of common parts within the scope of the relevant fire safety legislation is minimal). Minor shortcomings in fire prevention measures need not be regarded as changing the category ascribed to the premises, but need to be addressed in the action plan (see Clause 19).

14.1 In the process of every FRA, an assessment should be made of the likelihood of fire.

14.2 The FRA should express the likelihood of fire using clearly defined categories. The number of predetermined categories should be an odd number, so that the middle category can be adopted for premises that are typical for premises of the type and occupancy in question. There should be at least three predetermined categories.

NOTE The categories could be, for example, “low”, “normal” or “high”.

14.3 If the fire risk is to be determined by combining the likelihood of fire with the likely consequences of fire (see Clause 17) (e.g. by using a matrix; see Clause 18), the number of predetermined categories for likelihood and consequences should be the same.

15 Assessment of fire protection measures

15.1 General

COMMENTARY ON 15.1

In this step of the FRA, the fire risk assessor needs to assess the adequacy of the physical fire protection measures within the premises that are intended to mitigate the impact of fire and to limit fire risk.

While fire protection systems are not present in all premises, they can play an important role in the safety of occupants in certain large or complex premises. Even if the objective of such a system is property protection or assistance to the fire and rescue service, it is still appropriate to note, and take account of, the system in the FRA.

When fire occurs, the first requirement is to warn those people who need to be alerted, so that they can then use the means of escape (see 3.1.55). This might comprise all occupants of the building, but in buildings that usually have a stay put strategy (blocks of flats, sheltered housing and extra care housing), only the occupants of the flat of fire origin normally need to be alerted to the fire.

To enable people to use means of escape safely and efficiently, there is often a need for appropriate signs and for emergency escape lighting. However, in smaller housing premises that take the form of a traditional dwelling with only a single route for access and egress (e.g. HMOs, smaller supported housing and sheltered housing schemes), fire exit signs are usually unnecessary.

Harm to occupants might also be mitigated, and safe escape facilitated, by appropriate measures to control or extinguish a fire by use of portable fire extinguishers or by activation of an automatic fire suppression system, such as an automatic sprinkler system. However, again, in housing premises, residents, who are unlikely to have been trained in the use of fire extinguishers, are not expected to attempt to tackle a fire; they might put themselves and any family members at risk in so doing. It is for this reason that fire extinguishers are not normally provided in the common parts of housing premises, other than those suitably located for use by trained staff if any are present (e.g. in a sheltered housing scheme manager's office, in plant rooms and in supported housing with a staff presence).

The presence of high-risk areas and/or dangerous substances (e.g. oxygen cylinders, energy storage systems or gas) can influence the need for, and nature of, fire protection measures.

Adequacy of the engineering design, installation and commissioning of fire protection systems and products can often be certified by organizations that are themselves third-party certificated as competent in their specialist field by an appropriate third-party certification body. More generally, there is a need for all fire protection systems to be designed, installed, commissioned and maintained by engineers competent in this specialist field.

Fire development and spread can be passively limited by fire protection measures (see 3.1.31), such as fire-resisting walls and floors (over and above any required to protect means of escape), which can be used to subdivide the premises into a number of separate fire compartments [e.g. to satisfy the requirements of building regulations for compartmentation (see 3.1.10)]. This is particularly important in blocks of flats, sheltered housing and extra care housing with a stay put strategy (see 3.1.76); in these blocks, each flat is a fire compartment bounded by fire-resisting walls and floors (other than walls forming part of the external envelope of the building). It is normally relevant, therefore, for the fire risk assessor to take account of such fire-resisting construction and to address its maintenance [e.g. the adequacy of fire stopping (see 3.1.47)], often by inspecting sample areas of construction.

On the other hand, fire development can be assisted by, for example, flammable linings on walls or ceilings, or by readily flammable furniture and furnishings, and by the accumulation of combustible material, including waste material. It can also be assisted by smoke control, ventilation and air conditioning systems. The fire risk assessor needs to take into account the presence and location of these features and, sometimes, their physical state.

Fire development and spread can be actively limited by automatic water-based and other localized fire suppression systems.

A fire hazard can result from inappropriate construction of external walls and the combustibility of any cladding, including rainscreen cladding, attached to the external walls of the building. This can cause an external fire (whether started externally by, for example, a burning car or refuse, or by flames from an internal fire emanating from, for example, windows) to bypass compartment floors and walls, so undermining the stay put strategy in a block of flats.

Since the earliest effect of fire on occupants is often loss of visibility on escape routes as a result of smoke, there is a need to take account of measures to limit spread or build-up of smoke. These can range from fire-resisting doors (see 3.1.33) to active smoke control systems, such as those designed to ventilate or extract smoke, or to maintain a positive pressure within escape routes to prevent the ingress of smoke.

In some large premises, there is a need for access for, assistance to, or protection of, firefighters in the event of fire. Such measures can assist the firefighters in effecting rescues if required.

In the subclauses that follow, the key fire protection measures that affect the consequences of fire are addressed separately. The measures are not, however, independent. In assessing the likely consequences of fire (see Clause 17), a judgement needs to be made regarding the overall effect of each of the fire protection measures discussed below in combination, and of a number of the management issues discussed in Clause 16.

15.1.1 The FRA should include, as a minimum, details, or a description, of:

- a) means for detecting fire and giving warning to occupants (see **15.2**);
- b) means of escape from the premises (see **15.3**).
- c) fire safety signs and notices (see **15.4**);
- d) emergency escape lighting (see **15.5**);
- e) means for fighting fire (see **15.6**);
- f) means to limit spread and development of fire (see **15.7**);
- g) automatic water-based and other localized fire suppression systems (see **15.9**);
- h) external walls and features (see **15.8**);
- i) smoke control systems (see **15.10**); and
- j) systems, equipment and facilities to assist firefighters (see **15.11**).

15.1.2 The extent to which fire protection measures are necessary, and the adequacy of existing measures, should be determined, and shortcomings in such measures should be addressed within the action plan (see Clause 19).

NOTE 1 It is always necessary for there to be adequate means of escape in the event of fire (see 15.3).

NOTE 2 The FRA does not normally involve a detailed engineering evaluation of fire protection systems and equipment, but a recommendation for such an evaluation might be included in the action plan if there are doubts about the adequacy of the system.

15.1.3 The fire protection measures described in this clause should each be assessed to determine their contribution to safety of occupants in the event of fire. However, none of these measures should be assessed in total isolation of the other measures; account should be taken of the effect of the entire package of measures (including relevant managerial arrangements) on the consequences of fire to life safety.

15.1.4 The FRA should take account of all fire protection systems that might be present on the premises. Fire risk assessors should understand the objective of the fire protection systems and verify, so far as practicable, that the original design concept has not been undermined (e.g. by alterations to the premises).

NOTE This does not imply that fire risk assessors need verify the design calculations for fire protection systems, as this would not be expected to be within the scope of their expertise. However, where there is reason to suspect that the design of the system is not adequate, further, separate evaluation could be recommended in the FRA.

15.1.5 The FRA should include details of the procedures that are in place to manage the resulting increase in risk that would occur if any fire protection measure were to be taken out of service, or become defective, for any reason.

15.2 Fire detection and warning

COMMENTARY ON 15.2

The arrangements for any necessary measures for detection of fire, and the means for then warning those occupants who need to be alerted to the fire, ought to be taken into account. Fire can be detected by people or by automatic fire detectors. If people are awake and alert in the area of fire origin, they normally detect fire before it is detected automatically by, for example, smoke or heat detectors.

Fire alarm systems are not generally appropriate in the common parts of blocks of flats with a stay put strategy, although fire detection might be necessary as part of smoke control arrangements. Care is necessary not to confuse fire detection provided as part of a smoke control system, which does not normally incorporate fire alarm sounders, with a fire alarm system.

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An appropriate stay put strategy ought not to be contradicted by inappropriate fire alarm systems; to do so can place residents at risk and result in liability on the part of the fire risk assessor for consequent injuries, particularly if the fire risk assessor makes recommendations for an inappropriate or unnecessary system.

However, fire detection and fire alarm systems are normally necessary in:

- a) *ancillary areas, including common amenity areas;*
- b) *the common parts (e.g. common corridors/common stairs) of sheltered housing;*
- c) *HMOs;*
- d) *some houses converted into blocks of flats, in which the fire safety design or constructional features cannot support a stay put strategy;*
- e) *supported housing, unless it is purpose-built and designed on the basis of a block of flats with a stay put strategy; or*
- f) *some purpose-built blocks of flats that have inadequate compartmentation, inadequately designed means of escape, flammable external wall systems, or other features that mean it is not possible to support a stay put strategy. Further guidance on these situations is given in Guidance to support a temporary change to a simultaneous evacuation strategy in purpose-built blocks of flats, published by NFCC and others [12].*

More detailed recommendations on fire detection and fire alarm systems for all types of domestic premises, including all those within the scope of this British Standard, are given in BS 5839-6. Guidance on types of fire detectors, their application and limitation of false alarms is given in BS 5839-1.

Fire detection is necessary within all dwellings. Fire detection within flats needs to be considered in a Type 3 or Type 4 FRA for purpose-built blocks of flats, and in all FRAs for all other forms of housing, including most sheltered housing, extra care housing, supported housing, HMOs and houses converted to flats.

In specialized housing, there is a need for a higher standard of coverage by automatic fire detection within flats than is necessary in flats within general housing. Guidance on fire detection for specialized housing is given in BS 5839-6. Guidance, for England and Wales, is also given in the National Fire Chiefs Council guide, Fire safety in specialised housing [13]; in Scotland, equivalent guidance is published by Scottish Government [14].

Older fire detection and fire alarm systems might not conform in full to current standards, particularly in respect of certain aspects of engineering design. In many cases, this is perfectly acceptable, but it is expected that new systems and new work associated with the modification of existing systems, recommended in the action plan, will conform to current standards.

Domestic smoke alarms are unsuitable for installation in the common parts of purpose-built blocks of flats (though, in any case, the provision of a fire detection and fire alarm system in the common areas is normally unnecessary and inappropriate). Domestic smoke alarms are suitable for small HMOs, but, for large HMOs, fire detection alarm equipment of the type specified in the BS EN 54 series is necessary.

Most premises in which automatic fire detection is required within common parts (e.g. an HMO) also need manual call points. In small properties, it might not be necessary for these to be installed on every level. It is also unnecessary to install manual call points in HMOs in which automatic fire detection comprises the provision of Grade D fire detection and fire alarm systems. The judgement of the fire risk assessor is necessary in this respect, having regard to the appropriate guidance for the type and size of property in question. In some premises, the provision of manual call points might be undesirable because of the likelihood of malicious operation.

It might be necessary to provide additional means for warning occupants in the event of fire beyond those provided by a typical fire detection and fire alarm system. For example, if it has been identified in a PCFRA (see Clause 21) that occupants who are Deaf or have a hearing impairment are, or are likely to be, present in any of the dwellings, such warning might comprise suitable assistance from other occupants, but could necessitate flashing beacons or other means of warning such as vibrating pagers or digital/recorded messaging systems.

Although a facility can be provided for fire alarm signals to be transmitted automatically to an alarm receiving centre (see 3.1.3) from where the fire and rescue service is summoned, in most housing premises, this is not normally necessary for the purpose of life safety. However, in sheltered and extra care housing, the early summoning of the fire and rescue service is critical, and so signals from fire detection in dwellings need to be relayed to an alarm receiving centre that can establish two-way speech communication with a flat of fire origin, normally via a social alarm system. Automatic transmission of fire alarm signals to an alarm receiving centre might also be necessary in certain supported housing in which staff levels at certain times might be low.

Normally, in an FRA, the functionality of a fire detection and fire alarm system is checked (i.e. by a simple visual check of the control and indicating equipment display), but it does not involve any detailed engineering evaluation of the system. It needs, however, to be confirmed that the fire detection and fire alarm system is subject to routine testing and maintenance, so that faults and major shortcomings are identified by this means (see Clause 16). Moreover, it is normally appropriate for the fire risk assessor to consider whether the fire alarm signal is likely to be audible in all relevant areas of the premises, based on a visual inspection of the locations of

sounders, even though shortcomings are normally identified by routine testing. The FRA might then recommend, within the action plan, that an engineering evaluation, including measurement of sound pressure levels in “suspect” areas, be carried out. Where visual alarms are necessary, some consideration of their visibility is appropriate.

15.2.1 The role, appropriate extent, cause and effect strategy, and adequacy of automatic fire detection and fire alarm systems should be addressed. The detailed information should include, as a minimum:

- a) type and location of detectors, call points and alarm devices;
- b) interface with other systems (e.g. smoke control systems, access control systems, alarm receiving centres); and
- c) grade and category of fire detection and fire alarm system (as defined in BS 5839-1 and BS 5839-6), if known, and their suitability.

NOTE 1 This could include giving warning in the event of a change in the evacuation strategy from stay put to simultaneous. Further guidance is given in Guidance to support a temporary change to a simultaneous evacuation strategy in purpose-built blocks of flats, published by NFCC and others [12].

NOTE 2 In a purpose-built block of flats, there is normally no fire detection and fire alarm system in the common parts, nor is such a system normally recommended. (In some modern, complex or larger developments, there might be public or ancillary areas which are served by a fire detection and fire alarm system, in which case PAS 79-1 might apply.)

15.2.2 In a Type 3 and Type 4 FRA, the means for warning any identified people who are Deaf or have a hearing impairment in the event of a fire in their own accommodation should be addressed.

15.3 Means of escape

COMMENTARY ON 15.3

In considering the likely consequences of fire, the fire risk assessor needs to determine the likely effects of fire on escape routes (see 3.1.16) during evacuation of the building or evacuation of a flat(s) affected by a fire. This requires a thorough evaluation of means of escape.

However, means of escape are just one of the fire protection measures that affect the consequences of fire and, hence, the fire risk. Therefore, a departure from one or more recommendations given in the relevant codes of practice regarding means of escape might be acceptable when all other fire precautions are taken into account. Such other fire precautions include early warning of fire, rapid response to the warning by occupants and measures to increase the ASET (see 3.1.7). Departures from traditionally quoted travel distances could also have arisen when the premises were designed if the designer used the approach given in BS 9991, which, for example, permits extended travel distance within the common parts of blocks of flats if the flats themselves are sprinklered. Where the premises are complex and departures from conventional design principles are significant, there might have been a need for a fire engineering solution of the type to which BS 7974 is relevant; the fire risk assessor will need to be given information regarding such a solution, as it is difficult to “reverse engineer” the principles of, and assumptions made within, a fire engineering solution simply from an inspection of the premises.

The first effect of a fire on the safety of occupants is often the presence of smoke in escape routes. This results in loss of, or reduction in, visibility. Thus, in general, adequate means of escape are provided if people can immediately, or within a short distance of travel, turn their back on any fire and move towards a place of relative safety (see 3.1.63) and ultimately a final exit (see 3.1.20) along smoke-free escape routes.

Five critical factors in the assessment of means of escape are therefore:

- a) *the maximum distance occupants need to travel to reach a place of relative or ultimate safety (see 3.1.63 and 3.1.64 respectively), such as an exit to a protected stairway (see 3.77), or to a final exit (see 3.1.20);*
- b) *the avoidance of long dead ends (see 3.1.13) in which escape is possible in only one direction;*
- c) *the number, distribution and widths of storey exits and final exits;*
- d) *the means of protecting escape routes from ingress or build-up of smoke that could otherwise compromise occupants’ escape; and*
- e) *the ability of occupants to use the escape routes.*

Some specific matters for consideration are set out below.

1) Residents with specific evacuation requirements or need for support

i) Specialized housing

In some types of housing (e.g. sheltered housing, extra care housing and supported housing), it can be expected that people with specific evacuation requirements are more likely to be present on the premises

In these cases there is normally engagement between residents and staff of the housing provider or care provider; it is therefore possible to maintain, and update, relevant records in relation to residents' characteristics and requirements, including a PCFRA if appropriate (see Clause 21), and evacuation plans. These can include, for example, relevant information relating to people who cannot self-evacuate in the event of fire, the availability of specific equipment or designated temporary waiting spaces, and any actions required by the resident, other occupiers, staff if present, or the fire and rescue service.

Evacuation plans are normally located within a secure information box, to which the fire and rescue service has access. The FRA needs to verify that, where appropriate, relevant up-to-date information, which can include those flats in which residents use oxygen cylinders, is held in a secure information box.

ii) Other housing

Residents with specific evacuation requirements or need for support in the event of fire are also likely to be present in general housing.

In blocks of flats, the presence of disabled residents is likely to reflect the prevalence of disability in the general population (approximately 20%), although statistics suggest this is higher in some specific types of housing. A PCFRA can be undertaken (see Clause 21) and/or an evacuation plan prepared for any resident who might require some level of assistance with evacuation from their flat or from the building in the event that it becomes necessary (e.g. on the instructions of the fire and rescue service). This can include, for example, relevant information relating to people who cannot self-evacuate in the event of fire, the availability of specific equipment, designated temporary waiting spaces or evacuation lifts, and any actions required by the resident, other occupiers, or the fire and rescue service. Such information could be made available to the fire and rescue service in a secure premises information box as described above, and would need to be updated on a regular basis.

Annex C sets out general key factors and specific issues to address when assessing means of escape. Guidance on building occupants with specific characteristics is given in Annex D (see also Clause 12).

2) Fire-resisting doors

In all forms of housing, one of the most important issues to consider in an FRA is the fire performance of doors that separate residents' accommodation from communal escape routes. It is essential that these doors are self-closing and that they afford adequate fire resistance. This is particularly important in blocks of flats, sheltered housing and extra care housing, but might be of equal importance in some supported housing. For flats, sheltered housing and extra care housing, it is normally impracticable, in the course of an FRA, to gain access to all flats to check the flat entrance doors; however, the dutyholder needs to have arrangements in place for periodic, routine checks to confirm that flat entrance doors remain self-closing and free from damage (to an extent that would impair their fire resistance).

It is also important that fire-resisting doors in protected lobbies and stairways are self-closing and have the appropriate level of fire resistance. Normally, there is no impediment to access in respect of these doors, all of which, therefore, need to be checked by the fire risk assessor. Doors to service risers and other ancillary spaces also need to be checked where possible.

In some premises, there is often a need for fire-resisting doors to be held in the open position, but to self-close automatically on operation of the fire alarm system. Similarly, there is often a perceived need for electronic locking of final exit doors, which are unlocked automatically on operation of any fire alarm system that is present (e.g. in many sheltered housing premises). The reliability of the arrangements for automatic operation of door release mechanisms and electronic locks in the event of fire needs to be taken into account in the FRA; for example, it needs to be confirmed that, unless there is a mechanical means of releasing the lock (e.g. a lever handle) to facilitate escape, electronic locks release on failure of the power supply to them. Electronic locks, particularly those of an electromechanical nature, can potentially introduce an additional risk, and the potentially conflicting requirements of security and fire safety need to be carefully balanced; unless the access control system incorporates suitable design features, electronic locks might also delay access for the fire and rescue service. Recommendations on the interface between a fire detection and fire alarm system and these types of door release mechanism are given in BS 7273-4.

3) **Evacuation lifts**

Many premises contain dedicated evacuation lifts, which incorporate safety measures in their design and construction that are additional to those available in normal passenger lifts.

The safety of occupants depends on the correct design specification, installation and operation of these facilities. An assessment of the suitability of evacuation lifts for a specific building would not be expected to be within the scope of the fire risk assessor's expertise. It could, for example, be based on documented evidence of the lift's operational capability supplied by the lift installer/maintenance organization.

It needs to be verified in the FRA that there are suitable arrangements for the testing and maintenance of these facilities.

15.3.1 Means of escape should be assessed taking into account the factors discussed in Annex C.

NOTE 1 A description of the means of escape is of value in subsequent FRAs, in that it can enable changes since the time of the previous FRA to be identified.

15.3.2 It should be determined whether arrangements for means of escape and evacuation for people with specific evacuation requirements (see Annex D), where known, have been provided and are suitable for the intended purpose.

15.3.3 The FRA should take account of the potential for means of escape to be compromised by smoke control, ventilation and air conditioning systems.

NOTE Although a detailed evaluation of the fire protection measures incorporated in such systems might not be practicable in the course of an FRA, where the risk to life from fire is high it might be necessary to recommend further investigation within the action plan (see Clause 19) into the fire safety strategy and the cause and effect of the fire detection and fire alarm system, and the smoke control, ventilation and air conditioning systems.

15.3.4 The FRA should include details of the type, location and position of all fire-resisting doors on the premises.

NOTE The dutyholder's records of inspection and maintenance can be a useful source of information for fire-resisting doors that cannot be directly accessed by the fire risk assessor.

15.3.5 The FRA should include details, or a description, of any lift used for emergency evacuation, including the associated lobby, smoke control, signage and maintenance arrangements.

15.4 Signs and notices

COMMENTARY ON 15.4

In smaller housing premises, the provision of fire exit signs to direct people towards means of escape can create an undesirable ambience of an institutional building. However, in large or complex buildings, it might be necessary to indicate alternative means of escape that are not in use as the normal means of access and egress. It is, therefore, important, in the FRA, to determine whether fire escape signage is necessary.

In the course of the FRA, there is also a need to determine whether other forms of fire safety signs and notices are necessary, and whether those provided are adequate. Examples include:

- a) other safe condition signs (see 3.1.69) (e.g. indicating use of escape hardware);
- b) signs on fire-resisting doors, indicating the need for the doors to be kept shut, kept locked shut or kept clear (in the case of automatically closing fire-resisting doors), as appropriate;
- c) other mandatory signs (see 3.1.53), such as those indicating the need to keep a fire exit clear;
- d) fire equipment signs (see 3.1.23), primarily where, for example, fire extinguishers or fire alarm call points are hidden from direct view;
- e) "no smoking" signs;
- f) fire procedure/fire action notices;
- g) storey identification signs and dwelling indicator signs in blocks of flats;

NOTE 1 In buildings with complex escape routes, an escape plan might be displayed to indicate escape routes. Design principles for escape and evacuation plan signs are given in BS ISO 23601.

- h) zone plans;

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NOTE 2 Where there is a multi-zone fire detection and alarm system, a suitable zone plan needs to be located in an accessible location at the controls, in accordance with BS 5839-1.

- i) warning signs (e.g. photovoltaic cells, electric vehicle charging points); and
- j) information about fire safety responsibilities.

NOTE 3 Guidance on the selection and use of safety signs (including various fire safety signs) and fire safety notices (but excluding escape route signing) is given in BS 5499-10. Registered safety signs are given in BS EN ISO 7010.

NOTE 4 Attention is drawn to the Building Safety Act 2022 [15] in respect of the requirement for buildings with a storey over 18 m or over six storeys to display in a prominent location the building assessment certificate information and information about any accountable persons.

15.4.1 An assessment should be made as to whether there is a need for fire safety signs, particularly those associated with assistance in use of escape routes.

NOTE No signs might be necessary, but there might be a need for fire action notices.

15.4.2 The suitability of any existing fire safety signs or notices should be determined.

15.5 Emergency escape lighting

COMMENTARY ON 15.5

If escape routes require artificial illumination, there is a need to determine whether emergency escape lighting is necessary. Normally, emergency escape lighting is necessary on all escape routes in housing premises, except, for example, a small, two-storey block of flats with good borrowed lighting or a small supported housing bungalow with automatic plug-in night lights. Normally, this comprises non-maintained emergency lighting, but maintained emergency lighting is equally acceptable. (Both terms are defined in BS 5266-1.)

If a judgement is made that emergency escape lighting is not necessary, it is appropriate for this to be justified in the documented FRA (see Clause 10).

Normally, the FRA does not involve any detailed engineering evaluation of an emergency escape lighting system. However, it is important to confirm that the system is subject to routine testing and maintenance, so that faults and major shortcomings are identified by this means (see Clause 16).

It is also normally appropriate for the fire risk assessor to determine whether the extent of an existing system is sufficient, based on a visual inspection of the areas of coverage and the provision of luminaires, and whether the duration for which emergency escape lighting can be provided is adequate; this is normally 3 h. The FRA might, nevertheless, recommend within the action plan that an engineering evaluation be carried out, including verification of the adequacy of levels of illuminance. It is also normally appropriate to confirm that there are suitable facilities for routine testing of the installation.

In some cases, an existing emergency escape lighting system does not conform in full to current recommendations (e.g. in respect of illuminance levels). This might be acceptable, but it is appropriate for new systems, and new work associated with upgrading of existing systems, recommended in the action plan, to conform to the current recommendations.

15.5.1 An assessment should be made as to whether there is a need for emergency escape lighting.

15.5.2 If emergency escape lighting is deemed to be necessary, the suitability of any existing emergency escape lighting should be determined.

NOTE Recommendations for the selection and installation of emergency escape lighting are given in BS 5266-1. Product requirements for emergency escape lighting are given in BS EN 1838 and BS EN 50172.

15.6 Manual firefighting equipment

COMMENTARY ON 15.6

It is not normally appropriate for housing premises to be provided with means for residents to extinguish a fire, particularly within common parts of blocks of flats, sheltered housing or extra care housing. Extinguishers are normally provided only in areas such as plant rooms, communal kitchens (in which fire blankets are also appropriate) and lounges (e.g. in sheltered housing), workplaces (such as offices) and suitable locations for staff to use. If, very unusually, a fire risk assessor were to decide that there was a need for portable fire extinguishers in areas other than these examples, there would need to be full and clear justification for this conclusion in the FRA.

If appropriate fire extinguishers are necessary, consideration might be given to the use of multi-purpose extinguishers, which can be used on more than one class of fire (as defined in BS EN 2). However, where the

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risk is predominantly associated with electrical equipment, carbon dioxide extinguishers are likely to be the most appropriate type.

Hose reels are not normally appropriate for housing premises, and dry powder fire extinguishers are not recommended for use indoors.

15.6.1 An assessment should be made as to whether there is a need for manual firefighting appliances.

NOTE Normally, fire extinguishers are unnecessary in the common parts of blocks of flats, sheltered housing and extra care housing, other than those suitably located for use by trained staff if any are present (e.g. in a sheltered housing scheme manager's office, in plant rooms and in supported housing with a staff presence)

15.6.2 The suitability of the type, number and siting of any existing manual firefighting appliances should be determined.

15.7 Structural and other measures to limit fire spread and development

COMMENTARY ON 15.7

In the course of the FRA, consideration needs to be given to structural and similar measures that are intended to limit the spread and development of fire within the premises (in addition to consideration already given to similar measures that are specifically intended to protect means of escape). Some premises might have no such measures, e.g. premises in which compartmentation (see 3.1.10) was not necessary at the time of construction for compliance with the relevant building regulations.

However, where compartment walls or floors are provided, some consideration needs to be given to the likely integrity of these. It cannot be assumed that simply because a building has been recently constructed, and that a completion/final certificate has been issued by a building control body, there is a reduced need for consideration of compartmentation and fire stopping. Numerous cases of poor construction work in newly, or recently, constructed buildings have come to light, including inadequate fire stopping of junctions between fire-resisting barriers, and of service penetrations, etc., and incomplete construction within risers and above fire-resisting doors. Some cases have been so serious that it has been necessary for enforcing authorities to consider prohibiting the use of the building under the Fire Safety Order [1]. (Sometimes transmission of noise or cooking odours between flats can be an indication of a weakness in compartmentation.)

Some specific matters for consideration are set out below.

a) Extent of the inspection and assessment of structural and other measures to limit fire spread and development

Usually, in the course of the FRA, a detailed examination of the construction of the premises is not practicable. For example, a Type 1 FRA would not normally involve opening up work, such as cutting holes in, or removal, of walls, ceilings, partitions, etc. Normally, there can only be visual inspection of a sample of reasonably accessible areas, e.g. to check visually for any obvious inadequacies in fire stopping (see 3.1.47).

However, a full and thorough visual inspection of compartmentation and other passive measures as part of the FRA is particularly important in all premises in which, in the event of fire, there is no simultaneous evacuation, such as blocks of flats with a stay put strategy (see 3.1.76), and premises with residents who require support from staff to evacuate (supported living/sheltered housing/extra care sheltered housing). In these premises, there is reliance on compartmentation and other passive measures for protection of occupants who remain within the building in the event of a fire, and therefore a full and thorough inspection of the building is critical.

It is necessary to confirm that all relevant corridors and staircases, voids, utility risers, stores and cupboards, ductwork, above false ceilings, roof spaces, basements, areas of high fire hazard and plant rooms have been checked, and that the fire separation and protection is suitable and intact.

As many areas where service penetrations could lead to breaches of compartmentation might be hidden, such sampling might need to include areas above false ceilings where many services often run. More generally, since any structural barrier will resist the passage of smoke or fire for at least some time, obvious shortcomings in fire stopping of service penetrations need to be addressed in the action plan (see Clause 19). Clause 5 provides guidance and recommendations on the intrusive inspection and opening up that are appropriate in Type 3 and Type 4 FRAs.

The fire risk assessor needs to check that a facilities manager, caretaker or other staff member is available with appropriate equipment and ladders to enable a full visual survey to be carried out.

It is recognized that this level of detailed scrutiny will not be required for every Type 1 FRA, and that future reviews and assessments of the property can take a sampling approach unless there is reason to suspect that deficiencies have been introduced due to building works or lack of maintenance (see Clause 20).

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In these buildings, it is of value for the fire risk assessor to check that the dutyholder is aware of the importance of compartmentation/separation and explain clearly any recommendations or findings.

In the case of serious concerns about compartmentation/separation or other passive measures that could compromise the evacuation strategy, the fire risk assessor needs to recommend to the dutyholder further investigation of these factors by qualified surveyors, interim measures to address the evacuation concerns, and notification of the local fire and rescue service, so that their tactical plans can be updated if necessary.

b) Roof voids

Roof voids are a potential area through which fire can spread if a fire either starts in the roof void or spreads into it from a flat below (e.g. directly, via ventilation ductwork or via the eaves). In old blocks of flats, it is not uncommon to find that compartment walls between flats do not extend through the roof void, as would now be necessary for compliance with building regulations, thereby enabling unlimited fire spread across multiple flats. However, issues can also arise in the design and maintenance of low-rise pitched roof buildings, such as are commonly found in modern sheltered housing. Fire spread within roof voids over a modern sheltered scheme has led to at least one fatal fire, in which a resident died in her own flat, two flats away from the flat of fire origin. For these reasons, it is important that the fire risk assessor endeavours to include roof voids in even a Type 1 FRA, albeit that an element of sampling is acceptable. Access to roof voids can be difficult, and, if access is not considered practicable, this needs to be made clear in the documented FRA.

c) Wall and ceiling linings

In new building work, the flammability of wall and ceiling linings is controlled under building regulations. If the linings continue to conform to the original requirements in this respect, they are likely to be satisfactory. However, consideration needs to be given to the issue of linings, as unsatisfactory linings can promote the spread and development of fire. In unusual circumstances, it might be appropriate to consider whether multiple layers of paint in common parts can affect the potential for spread of flame over walls, although this is normally very difficult to determine. In some premises, such as sheltered housing, the flammability of any furniture and furnishings that is permitted within common parts needs to be taken into account.

d) Ventilation and ducting systems

Ventilation systems can provide a path for spread of fire and smoke. Particularly in older blocks of flats, bathroom or kitchen extract systems from flats sometimes share a common extract duct, sometimes with no effective measures to prevent spread of fire or smoke between flats; this could undermine a stay put strategy. In an FRA, it is not normally possible to carry out an examination of the extract arrangement to determine whether suitable measures, such as shunt ducts (or dampers; see 3.1.12.1 to 3.1.12.3), were taken at the time of construction to prevent this. However, assessors need to determine whether common extract systems are present, so that, if necessary, further investigation can be recommended.

More generally, in an FRA, it can be difficult to determine whether the measures incorporated within the design of ventilation and air conditioning systems are adequate. Access to false ceilings within which ductwork runs can be difficult; frequently there is difficulty in determining whether dampers are fitted at appropriate locations. In general, the appropriate measures are likely to have been required for compliance with building regulations when the premises were constructed.

However, particularly where the age of the premises, or the likely extent of modifications to the premises, might suggest that ductwork could act as a route for spread of smoke into, or within, escape routes, some investigation might be needed, or it might be necessary to recommend further investigation in the action plan, if the siting of visible air extract or supply points suggests that dampers are essential.

15.7.1 The FRA should include details of the extent of the inspection and assessment, including floor areas, corridors and staircases, ceiling and roof voids, ventilation and ducting systems.

15.7.2 The suitability and adequacy of fire stopping, the flammability of linings and, where appropriate, the flammability of furniture and furnishings should be addressed so far as is reasonably practicable.

NOTE It is not normally practicable to carry out a complete review of fire stopping in premises. In a Type 1 and Type 3 FRA, reliance on a visual inspection of a sample of readily accessible areas is normally adequate. More intrusive inspection is limited to Type 2 and Type 4 FRAs.

15.7.3 In the case of serious concerns about compartmentation or separation or other measures that could compromise the evacuation strategy, the fire risk assessor should recommend to the dutyholder that further investigation of these factors be undertaken by a competent person.

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NOTE This investigation could result in, for example, interim measures to address the evacuation concerns, notification to the local fire and rescue service so that their tactical plans can be updated if necessary, and notification to residents.

15.8 External wall assessment

COMMENTARY ON 15.8

In blocks of flats it might be necessary for the FRA to address the construction of the external walls and to consider whether, in the light of current knowledge, the fire performance of cladding is likely to result in a fire hazard. In many cases, it will be manifestly obvious to a competent fire risk assessor that the risk to life from fire spread over external walls is not such as to warrant a separate fire risk appraisal of external walls (FRAEW) by a specialist. In these cases, the fire risk assessor will normally address the risk of the external wall construction as part of the FRA.

Examples of this are buildings in which the external wall construction can readily be confirmed as being of traditional masonry construction (i.e. external walls that comprise either two leaves of masonry or a solid masonry leaf), or cases in which it can, otherwise, readily be determined by a typical fire risk assessor (e.g. from the age of the building if it predates the mid-1960s, from an operation and maintenance manual, or an existing report by a competent person, based on a relevant BS 8414 test) that no FRAEW is necessary. However, although the age of a building can be a factor, care is needed in case combustible materials have been added to the external walls over time.

In other cases it might be necessary for the fire risk assessor to recommend that an FRAEW is carried out by a competent external wall assessor in accordance with a suitable methodology. PAS 9980 outlines one such methodology, including details of the competence required to undertake a basic assessment of the suitability of external walls, and also for a fire engineering analysis as part of a more detailed technical assessment.

It is expected that the dutyholder will take responsibility for making the fire risk assessor aware of any known concerns regarding the fire performance of external wall construction, or any alterations since the time of construction that might be detrimental to the fire performance of external wall construction, including the installation of any new cladding, fenestrations or attachments to the building.

In the case of cladding that is known to pose a major hazard in the event of fire, there is likely to be a need for the fire risk assessor to consider any recommendations for interim measures. This could include changes in the evacuation strategy from stay put to simultaneous. Further guidance is given in Guidance to support a temporary change to a simultaneous evacuation strategy in purpose-built blocks of flats, published by NFCC and others [12].

15.8.1 The FRA should include details, or a description, of the external wall construction and, in particular, any cladding that is present.

15.8.2 The FRA should take into account the findings of any FRAEW that has been carried out.

15.8.3 The fire risk assessor should be alert to any situation in which there is good reason to suspect that the original construction, or subsequent overcladding, failed to conform to the building regulations that were current at the time of construction. In such cases, the action plan should make a recommendation for further investigation to be carried out.

NOTE Other than in the case of construction that is likely to pose minimal risk, such as traditional masonry construction, any FRAEW is likely to need the skills of a specialist as it is beyond the competence of a typical fire risk assessor.

15.9 Automatic water-based and other localized suppression systems

COMMENTARY ON 15.9

Automatic sprinkler installations are very effective in the control of fire. The presence of an automatic water-based suppression system, such as an automatic sprinkler installation, can therefore enhance life safety, reduce risk and limit the spread of fire from its point of origin. Sprinkler protection is particularly beneficial in buildings with complex, delayed or assisted evacuation. Provision of sprinklers can allow a reduction in the performance requirements of elements of construction and compartmentation. In the case of blocks of flats designed and managed in accordance with BS 9991, the provision of sprinkler protection within flats can permit increased travel distances within common parts. Sprinklers also provide an additional layer of protection in the event of weaknesses in other measures, such as compartmentation.

Where suppression systems are part of the life safety measures in any premises, or are taken into account as compensatory features for a reduction in other fire safety measures [see 5.2e)], this needs to be noted in the FRA, and procedures are necessary to manage the resulting increase in risk that would occur if the suppression system were to be taken out of service, or become defective, for any reason.

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While an engineering evaluation of a water-based suppression system is not normally appropriate in the course of the FRA, it is normally appropriate to confirm:

- a) *the type of system present (e.g. sprinkler or water mist);*
- b) *whether there is evidence that the system was designed to an applicable British Standard (e.g. BS 5306-2, BS EN 12845 or BS 9251 for sprinklers, and BS 8458 or BS 8489 for water mist);*
- c) *that there are no obvious shortcomings, such as obstructions to sprinkler heads;*
- d) *that the system is appropriately maintained and remains in good operating order;*
- e) *the extent of suppression system protection provided (e.g. whole building or parts of a building); and*
- f) *if the building has been modified, that the suppression system been suitably updated as necessary.*

It is also appropriate to confirm that there are adequate arrangements for testing and maintenance of the system so that faults and major shortcomings can be identified (see Clause 16).

If the continued suitability of the automatic water-based suppression system is in doubt or not understood by the fire risk assessor, it might be appropriate to recommend further specialist evaluation.

Other localized fire suppression systems are not commonly installed in housing premises, although they can feature in some circumstances, such as in certain flats with open plan layouts. However, if present, it is appropriate to record their presence in the FRA and to take account of them, as they might contribute to life safety. It is also appropriate to confirm that there are arrangements for their testing and maintenance (see Clause 16).

15.9.1 The role, appropriate extent and adequacy of automatic water-based and other localized fire suppression systems should be determined.

15.9.2 Where automatic water-based or other localized fire suppression systems are part of the life safety measures in any premises, or are taken into account as compensatory features for a reduction in other fire safety measures [see 5.2e)], this should be recorded in the FRA.

15.10 Smoke control systems

COMMENTARY ON 15.10

In some housing premises, smoke control systems can be essential for protection of means of escape and/or assistance to the fire and rescue service. For example, this is normally the case in all blocks of flats, sheltered housing and extra care housing. Although an engineering evaluation of a smoke control system is usually outside the scope of the FRA, the fire risk assessor needs to understand the manner in which the smoke control is intended to function, and it is essential that there are adequate arrangements for ongoing control, testing and maintenance of such systems (see Clause 16).

15.10.1 The FRA should include details, or a description, of any smoke control system on the premises. The detailed information should include, as a minimum:

- a) type and location of smoke control equipment;
- b) interface with other systems (e.g. fire detection and alarm systems);
- c) arrangements for testing and maintenance;
- d) the position of the main control/override interface, if present;
- e) the location of instructions; and
- f) any override key or password that might be necessary for the system use.

15.10.2 The role, appropriate extent, cause and effect strategy, and adequacy of smoke control systems should be determined.

15.10.3 Where smoke control systems are part of the life safety measures in any premises, or are taken into account as compensatory features for a reduction in other fire safety measures [see 5.2e)], this should be recorded in the FRA.

15.10.4 The FRA should determine whether the smoke control system is:

- a) enabled for automatic activation either by dedicated smoke detectors or from the fire alarm system, with no system faults on the control system;
- b) regularly tested and maintained by a competent service provider, including:
 - 1) demonstrating that airflows, pressures and/or velocities are being achieved and recorded for mechanical based systems; and
 - 2) demonstrating by sample that the system operates in accordance with the design cause and effect for all types of system.

NOTE Recommendations for frequency of testing and maintenance of smoke control systems in non-residential buildings are given in BS 9999:2017, Annex I. Equivalent recommendations for residential buildings are expected to be included in the next edition of BS 9991, currently in preparation.

15.11 Systems, equipment and facilities for use by the fire and rescue service

COMMENTARY ON 15.11

Systems, equipment and facilities for use by the fire and rescue service are critical for the safety of firefighters and effectiveness of firefighting operations. Also, where a stay put or delayed evacuation strategy applies, rapid extinguishment of any fire by the fire and rescue service can be essential to the safety of the strategy, so, for example, in blocks of flats and specialized housing, measures that assist the fire and rescue service can be essential for the safety of residents.

All systems, equipment and facilities for use by the fire and rescue service therefore need to be taken into account in the FRA including confirmation that the dutyholder has ensured that they operate in accordance with their design specification, are tested and maintained, and that instructional signage for direction of the FRS is clear and appropriate. These systems and facilities include the following.

a) Dry or wet rising mains

In most premises that require the installation of dry or wet fire mains (see 3.1.14 and 3.1.84, respectively), they will be present as a requirement of building regulations. Since the safety of firefighters might depend on the correct operation of these facilities, the relevant fire safety legislation throughout the UK therefore requires that these facilities are regularly maintained and are kept in efficient working order and good repair. It needs to be verified that there are adequate arrangements for their testing and maintenance (see Clause 16).

It is unlikely that an FRA will recommend retrofitting of such facilities in premises that were not provided with them at the time of construction.

b) Lifts for use by firefighters

Many premises contain dedicated lifts for use by firefighters, which incorporate safety measures in their design and construction that are additional to those available in normal passenger lifts. These could be firefighters lifts, fire-fighting lifts or firemen's lifts (see 3.1.52.3, 3.1.52.2 and 3.1.52.4 respectively), or lifts that have been upgraded.

The safety of firefighters and the effectiveness of firefighting operations depends on the correct design specification, installation and operation of these facilities. An assessment of the suitability of evacuation lifts for a specific building would not be expected to be within the scope of the fire risk assessor's expertise. It could, for example, be based on documented evidence of the lift's operational capability supplied by the lift installer/maintenance organization.

It needs to be verified in the FRA that there are suitable arrangements for the testing and maintenance these facilities (see Clause 16).

It is unlikely that an FRA will recommend retrofitting of such facilities in premises that were not provided with them at the time of construction. It is also unlikely for an FRA to recommend that older firemen's lifts be upgraded to the more modern standards of firefighters lifts, but consideration might be given to an element of upgrading at the time of lift refurbishment or replacement; further guidance is given in BS 8899.

c) Secure information boxes

Some premises are provided with secure information boxes, containing information to assist the fire and rescue service; this can include plans and information about the building itself or about occupants who might require support to evacuate. Further guidance is given in the NFCC/FIA publication Code of practice for the provision of premises information boxes in residential buildings [16].

d) Evacuation alert systems for use by the fire and rescue service in blocks of flats

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Evacuation alert systems (see 3.1.17) can be installed in (normally high-rise) blocks of flats with a stay put strategy to enable the fire and rescue service to initiate, via control equipment at the fire and rescue service entry level, an audible evacuation alert signal in flats on a selected storey(s) of the building (or a part of a storey or the entire building).

It is important that evacuation alert systems are not confused with fire alarm systems. BS 8629 recommends that evacuation alert systems for use by the fire and rescue service are not to be integrated with any other systems, such as fire detection and fire alarm systems and smoke control systems.

As the safety of firefighters and residents depends on the correct operation of these facilities, it needs to be verified in the FRA that the evacuation alert arrangements have been trialled and documented to be correct, and that there are adequate arrangements for their testing and maintenance (see Clause 16). The relevant fire safety legislation throughout the UK requires that these facilities are regularly maintained and are kept in an efficient state, efficient working order and good repair.

As in the case of other facilities for use by the fire and rescue service, it is unlikely that an FRA will identify a need for retrospective installation of an evacuation alert system if there is no overriding reason (e.g. legislative requirements) to do so. In particular, as advised in BS 8629, it is not appropriate to provide a system as a means of mitigating shortcomings in other fire protection measures, such as compartmentation. (Deficiencies in compartmentation need either to be rectified or to result in a simultaneous evacuation strategy, supported by a suitable fire detection and fire alarm system.)

e) Smoke control systems

The safety of firefighters and the effectiveness of firefighting operations can depend on the correct design specification, installation and operation of smoke control systems.

In addition to the general recommendations for smoke control systems given in 15.10, it needs to be verified that any additional control functions for use by the fire and rescue service are in efficient working order and good repair.

f) Wayfinding signage

The safety of firefighters and the effectiveness of firefighting operations can depend on the correct positioning and content of wayfinding guidance signs (e.g. floor identification signs).

g) High voltage signage

Fire and electrical safety regulations require certain high voltage signage to have cut-off switches for use by the fire and rescue service. Such switches themselves need to have adequate testing and maintenance regimes and appropriate signage.

15.11.1 The FRA should include details, or a description, of the systems and facilities available for use by the fire and rescue service, including:

- a) dry or wet rising mains;
- b) lifts for use by firefighters;
- c) secure information boxes;
- d) evacuation alert systems for use by the fire and rescue service in blocks of flats;
- e) smoke control systems;
- f) wayfinding signage; and
- g) high voltage signage.

15.11.2 In premises where a secure information box is required, it should be determined in the FRA whether the secure information box is present and whether it contains the relevant information.

NOTE The provision of a secure information box is a legal requirement for some buildings. They are also commonly provided in sheltered and extra care housing, and in buildings with a temporary simultaneous evacuation strategy.

15.11.3 The role, appropriate extent and the adequacy of evacuation alert systems should be determined.

15.11.4 Where evacuation alert systems are part of the life safety measures in any premises, or are taken into account as compensatory features for a reduction in other fire safety measures [see 5.2e)], this should be recorded in the FRA.

15.11.5 If faults are apparent in any systems, equipment or facilities by use for the fire and rescue service, the dutyholder should be advised immediately to alert the fire and rescue service if corrective action cannot be achieved within 24 h.

16 Assessment of fire safety management

COMMENTARY ON CLAUSE 16

In the FRA, fire safety management (see 3.1.40) needs to be regarded as of equal importance to fire protection measures. It is important that matters in the paragraphs that follow are properly addressed in the FRA and that fire safety management is taken into account in the subjective judgement of overall fire risk (see Clause 18).

a) Responsibility for fire safety

It is important to confirm, in the FRA, the name, role and contact details of the person(s) (or representative of a corporate body) that is responsible for fire safety within the premises.

Depending on the manner in which the organization is structured, the person(s) or representative of a corporate body named in the FRA might be an owner, landlord, director, building manager, facilities manager, health and safety manager, fire safety manager (see 3.1.41), estates manager, etc. The person might or might not work within the premises, and the responsibility could even be shared by two or more people. It is, however, important in the management of any organization that an individual or corporate body is, and accepts that they are, responsible for fire safety, particularly in the case of premises in which there are multiple dutyholders.

b) Access to advice

The relevant fire safety legislation requires the appointment or nomination of one or more “competent persons” to assist in compliance with that legislation.

The “competent person” required by the relevant fire safety legislation might, or might not, be the person responsible for fire safety. The two are often different, since the person having responsibility for fire safety might be a premises manager, scheme manager or corporate body, while the “competent person” might be a trained professional in the field of fire safety or health and safety, often based in a remote location, such as a group head office.

The fire policy needs to set out the organizational structure and indicate the sources of competent assistance available to the dutyholder. Often, organizations are able to appoint one or more of their own employees for this purpose, while large organizations might appoint whole departments with specific health and safety responsibilities, including specialists in various matters, such as fire safety. Equally, if consultants are used for advice, it is necessary for their activities to be coordinated by the organization, since external consultants are usually appointed in an advisory capacity only, and their appointment does not absolve the organization from its responsibilities (see Clause 6).

c) Procedures for identifying people who might be at higher risk from fire

In the course of the FRA, there is a need to verify that procedures are in place for identifying people with specific evacuation requirements (see 3.1.60), and that such procedures are appropriate and adequate for the purpose.

It also needs to be determined whether procedures are in place for establishing person-centred emergency plans, if required, to identify specific arrangements or support required for residents.

d) Fire actions and procedures

In the course of the FRA, there is a need to verify that there are formal, documented procedures for people to follow in the event of fire, and that these procedures are adequate. Such procedures typically include:

- 1) actions to follow on discovery of fire, including immediate operation of any fire alarm system;*
- 2) in properties with a fire alarm system, actions to follow on hearing the fire alarm signal;*
- 3) in properties with a fire alarm system or an evacuation alert system for use by the fire and rescue service, the importance of evacuating the premises immediately when an alarm signal is given;*
- 4) arrangements for evacuation, including any specific arrangements for residents requiring support;*
- 5) in housing premises with staff, procedures for any staff with special duties in the event of fire. These could include, for example, concierge staff, waking watch staff, staff in supported housing, a scheme manager (when present) in sheltered housing, or care staff in extra care housing;*

- 6) *in premises with staff, the policy on firefighting by employees;*
- 7) *the summoning of the fire and rescue service;*
- 8) *in premises with a simultaneous evacuation strategy, the location of the evacuation assembly point(s); and*
- 9) *the arrangements for re-entry to the premises after evacuation after instruction by either the fire and rescue service or a responsible manager.*

e) Nomination of people with special duties in the event of fire

In carrying out the FRA, there is a need to verify that any staff (as well as all residents) are aware of the means for summoning the fire and rescue service in the event of fire. The arrangements are expected to form part of the fire procedures for the premises [see item d) above], but it might be the case that summoning the fire and rescue service is the responsibility of a nominated post-holder, such as care staff in supported and extra care housing. Even if there are means for automatic transmission of fire alarm signals to an alarm receiving centre, defined procedures are still needed (particularly where staff are present) for summoning the fire and rescue service by means of the public emergency call system.

In premises with 24 h staffing and a simultaneous evacuation strategy, the fire risk assessor needs to investigate the adequacy of any defined arrangements for ensuring that the premises are evacuated, and to verify that there is suitable control, coordination and monitoring of evacuation procedures. The fire risk assessor also needs to investigate the adequacy of any defined arrangements for staff to pass information on the status of the evacuation to the fire and rescue service when they arrive at the premises.

In supported housing with on-site staff, if residents require assistance to evacuate, it is appropriate to consider, within the FRA, whether sufficient levels of staff are present to ensure the safety of residents during both day and night. This normally necessitates discussions with the care provider.

f) Liaison with the fire and rescue service

In large and complex premises, it is important that there are arrangements for local fire and rescue service crews to familiarize themselves with the premises and with, for example, the facilities for firefighting and smoke control. While there are legislative requirements imposed on fire and rescue services in this respect, it can be beneficial for dutyholders to be proactive in inviting the fire and rescue service to carry out familiarization visits. In some such premises, there might be a need for predetermining emergency procedures with the fire and rescue service.

g) Routine inspections

There is a need for the fire risk assessor to verify that there are arrangements for routine inspections to detect deficiencies in fire precautions.

Such inspections need little or no specialist knowledge, but can make a major contribution towards the maintenance of fire precautions by checking that, for example, means of escape remain unobstructed, self-closing fire-resisting doors operate correctly, fire exit doors that are not in normal use open easily and there is no storage in escape routes that need to remain relatively sterile. Day-to-day inspections, of a basic nature, can be carried out by, for example, a scheme manager in sheltered housing or the caretaker of a block of flats. It is important that adequate procedures are in place to enable any deficiencies identified in the course of routine inspections to be reported and subsequently addressed (e.g. within the scope of a maintenance schedule).

h) Staff training and fire drills

Most housing premises do not have 24 h staff, but it is necessary to provide fire safety training to any staff (even if working part time in the premises) who are present. This would particularly apply to scheme managers in sheltered housing, care staff in extra care housing, and care and support staff in supported housing.

Fire drills might also be of assistance in some supported housing, if they would assist in imparting an understanding of fire procedures to residents who might have difficulty in this respect because of cognitive difficulties, and to staff that have to support residents to evacuate.

Fire safety induction training (see 3.1.39) of any staff is appropriate, and fire safety refresher training (see 3.1.44) needs to be given periodically. The frequency of refresher training needs to take into account the turnover of staff, the complexity of the premises and their fire procedures, and the fire risk. There might be a need to provide additional, or dedicated, training for people who have special responsibilities in the event of fire.

j) Provision of information for third parties

Where the employees of third parties work in the premises, the fire risk assessor needs to verify that procedures are in place to pass relevant information to the third party. Such third parties include contractors working on the premises and contract cleaners.

j) Testing and maintenance of fire protection measures

The fire risk assessor needs to verify that there are adequate arrangements for testing and maintenance of all fire protection measures, including facilities, systems and equipment for use by, or safety of, firefighters and occupants. There is also a need to verify that the workplace itself is adequately maintained in order to avoid fire hazards.

k) Record keeping

The relevant fire safety legislation requires appropriate arrangements to be put in place for the effective planning, organization, control, monitoring and review of the measures that the FRA identifies as being necessary for compliance with that legislation. Other than in the case of certain small businesses, it is a legal requirement for these arrangements to be recorded. Therefore, there is a need for a fire safety manual for the premises (see 3.1.42).

Records of training, inspection, testing, maintenance, etc., are an important means of demonstrating, if required, that all legislative obligations have been satisfied. It is, therefore, relevant for the fire risk assessor to consider any records that exist and to make recommendations, where appropriate, for keeping of suitable records. These records can also be important in demonstrating that there have been no breaches of good practice that could result in litigation in the event of injury to an occupant of the premises in the event of fire.

Where there is a fire detection and fire alarm system, it is also good practice to maintain records of false alarms. Dutyholders might be unaware of the value of keeping these records, so it is beneficial for fire risk assessors to remind dutyholders of the importance of such records, particularly in buildings with a large number of smoke detectors. This can enable unacceptable rates of false alarms, and the need for action in respect of these, to be identified.

l) Cooperation and coordination between dutyholders

Where two or more organizations share responsibility for fire safety, the safety of all occupants can be achieved only if the organizations cooperate with one another and coordinate their fire safety measures. It is not uncommon for there to be multiple dutyholders in, for example, supported housing. For example, these might comprise a landlord, a housing association, which leases the property, and a care provider; the local authority that places persons in the property might, arguably, be a further dutyholder. In such cases, it is essential that there is a record of the agreed responsibilities of each dutyholder and that this is checked for adequacy and accuracy in the FRA.

The NFCC publication Fire safety in specialised housing [13] contains a model matrix for recording the responsibilities for fire safety measures in those specialized housing premises in which there are multiple dutyholders. The purpose of the matrix is to ensure that the responsibilities of each dutyholder are clear and that none of these responsibilities are overlooked. The matrix can form part of the fire safety manual (see 3.1.42) and can be regarded as part of the record of the fire safety arrangements that is required by the relevant fire safety legislation.

In all housing, it is important that housing providers and other relevant dutyholders engage and communicate with residents in relation to fire safety. It is important that residents are provided with the following information:

- 1) measures to prevent fire in their own flat and in the common parts;*
- 2) the importance of keeping their block secure and being vigilant for deliberate fire setting;*
- 3) the need to avoid the storage of petrol, bottled gas and other dangerous substances in their flats, on their balcony or in shared areas;*
- 4) action in the event of fire, including any specific arrangements for individual residents who have person-centred emergency plan;*
- 5) the means of escape from their flats and the building;*
- 6) in buildings with a stay put strategy, a clear explanation of what this strategy entails;*
- 7) the responsibility of residents to safeguard communal escape routes;*
- 8) the policy regarding housekeeping in the common parts;*
- 9) the importance of not carrying out alterations that could be detrimental to fire safety;*
- 10) the importance of routine testing of smoke alarms;*
- 11) the importance of avoiding obstruction of fire and rescue service access to the block and to fire main inlets and landing valves (where provided); and*
- 12) means for reporting defects in fire safety measures within their flat and the common parts.*

Residents' handbooks are one means of communicating this information, which can also be included on any website of the housing provider. Notices within the building and leafleting of residents can also assist in keeping the relevant information fresh in the minds of residents. It is important that, for those residents for whom English is not their first language, written advice is presented in alternative languages.

Other means of communicating information to residents include periodic meetings. At any meeting with residents, there is an opportunity to remind them of fire procedures, fire prevention measures, the importance of provision, and testing, of smoke alarms, etc. Engagement with residents needs to facilitate residents' voices to enable expression of any concerns in respect of fire safety. This also provides an opportunity to identify the need for support to residents from other agencies. Such engagement needs the cooperation of occupants, who need to contribute to a dialogue with dutyholders.

16.1 The FRA should record the name(s) or post(s) of the person(s) or corporate body responsible for fire safety in the premises.

16.2 It should be verified that there are arrangements for obtaining competent advice on the requirements of fire safety legislation.

16.3 In the course of the FRA, the following matters should be taken into account. Any shortcomings in these matters should be identified in the documented FRA and should be addressed in the action plan (see Clause 19):

- a) the fire procedures, including but not limited to:
 - 1) actions to follow on discovery of fire;
 - 2) actions to follow in the event of a fire alarm;
 - 3) the evacuation arrangements for the premises;
 - 4) procedures for any people with specific responsibilities in the event of fire;
- b) procedures for identifying people with specific evacuation requirements (see Clause 21 and Annex D);
- c) procedures for establishing PCFRAs (see Clause 21) or person-centred emergency plans, if required, to identify specific arrangements or support required for residents;
- d) any arrangements for summoning the fire and rescue service in the event of fire;
- e) information on any staff who respond to a fire in the premises;
- f) information on any people who assist with evacuation (e.g. of disabled people);
- g) any arrangements for liaison with the fire and rescue service;
- h) arrangements for routine inspections of the premises and their fire precautions;
- i) in the case of premises with multiple dutyholders, arrangements for cooperation and coordination between different dutyholders;
- j) training of any staff, including on the use of evacuation equipment;
- k) fire drills (though these might not be appropriate in all cases);
- l) arrangements for engagement with residents to provide relevant fire safety information;
- m) provision of information to third parties;
- n) testing and maintenance of fire protection systems and equipment by a competent person (including systems and equipment installed for use by, or for the safety of, firefighters);
- o) maintenance of the premises;
- p) records of false alarm information as described in BS 5839-6; and
- q) other appropriate records, including, normally, a fire safety manual.

16.4 Where, in specialized housing, there are multiple dutyholders under the relevant fire safety legislation, the fire risk assessor should check that a matrix of responsibilities (see the NFCC publication *Fire safety in specialised housing* [13]) has been completed, remains accurate and is comprehensive and effective.

17 Assessment of likely consequences of fire

COMMENTARY ON CLAUSE 17

After the hazards, fire protection measures, aspects of fire safety management and emergency procedures have been assessed, the fire risk assessor is able to assess the likely consequences of fire. This assessment is influenced by whether occupiers are likely to be able to evacuate the building, or areas in which they are in danger, before the means of escape routes are compromised and they are placed at risk from fire or smoke (see Clause 12).

The assessor needs to consider the range of reasonably anticipated fire scenarios, which will depend primarily on the presence of ignition sources and fire loading, and the potential for those scenarios to affect the occupants.

In most blocks of flats (with stay put strategies), the ignition sources and fire loading are primarily within the flats, and potential fire scenarios that impact on common means of escape are limited. In HMOs and specialized housing, the variations in occupancy and premises are wider, and the presence of additional common amenity areas, common parts, simultaneous evacuation and requirement for staff to support evacuation might generate further scenarios.

As well as consideration of these factors, account needs to be taken of the decision making and actions of occupiers and staff (if present). It is not, for example, appropriate for the FRA to assume perfection in the response of occupiers or staff to fire alarm signals. Account needs to be taken of factors including potential occupant and staff behaviour, potential delays and challenges for staff in supporting occupiers with specific requirements to evacuate.

The principles of fire safety engineering may be used, in a subjective manner, to assess the likely consequences of fire, using the principle of timelines. Factors such as variations in layout, design and contents of buildings, and in the rate of fire development, make an accurate quantitative “available safe egress time” (ASET) (3.1.7) versus “required safe evacuation” (RSET) (3.1.68) period very difficult to determine. It is not considered necessary for complex assessments to be undertaken by an assessor; instead, the use of a timeline allows an assessor to make qualitative decisions on the likely consequences. Figure 4 provides an indicative timeline.

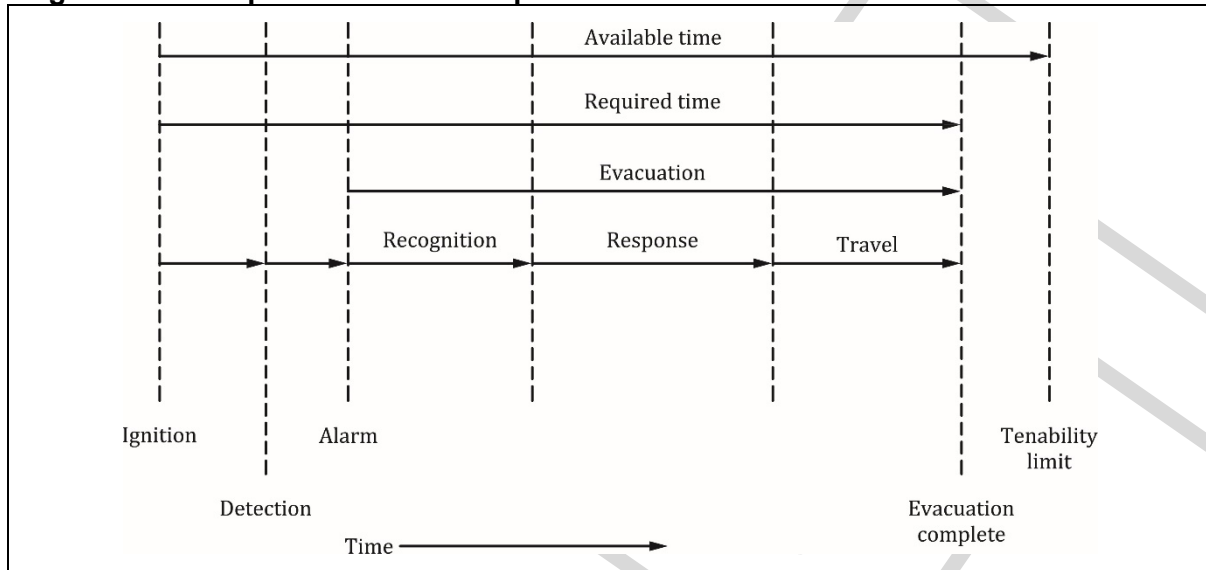
In Figure 4, RSET comprises:

- a) the time between ignition of a fire and detection of the fire (whether by occupants or by an automatic fire detection system);*
- b) the time between detection and the giving of the alarm warning to relevant occupants;*
- c) the time between the alarm warning and the recognition by occupants that it is a warning of fire;*
- d) the time between this recognition and the response by occupants (i.e. the time to begin evacuation); and*
- e) the time between response and completion of evacuation of occupants to a place of ultimate safety.*

For safe evacuation of occupants, the ASET needs to be significantly longer than the RSET. In the FRA, Figure 4 can be used as the basis for an analytical approach to situations in which evacuation, when required, might be prolonged, for example, because of the characteristics of residents.

If the assessor identifies that existing arrangements might not provide sufficient ASET, they can recommend options to address this (e.g. measures to extinguish or suppress the fire or to control smoke which increase ASET) and/or options for reducing the RSET (e.g. improved detection and alarm, enhanced training, reducing travel distances to nearest exit, additional staff).

Figure 4 – Example of timeline comparison between ASET and RSET



Once the timelines for evacuation have been determined, it is possible to assess the likely consequences for life safety. These cannot usually be expressed in a statistical manner (e.g. probability of death or serious injury) and a subjective judgement that classifies likely consequences of fire into predetermined categories will normally be sufficient. The predetermined categories of likely consequences of fire may be described in the form of words, provided that these terms are defined. For example, the descriptors and definitions could be as follows.

- 1) **Slight:** Outbreak of fire is unlikely to result in serious injury of any occupant. There might be slight smoke inhalation for a few individuals that can be treated on scene and does not require further medical attention.
- 2) **Moderate:** Outbreak of fire could foreseeably result in injury of one or more occupants. There might be some delays in evacuation that cause more significant smoke inhalation, anxiety or some minor physical injuries that require medical care from a medical practitioner.
- 3) **Extreme:** Outbreak of fire could provide a significant potential for serious injury or death of one or more occupants. The significant delay, or inability, to evacuate before evacuation is complete might cause severe smoke inhalation, panic and physical injuries, which might require immediate medical care at a hospital, or a fatality.

17.1 In the process of every FRA, an assessment should be made of the likely consequences of fire in relation to life safety and the potential for injury to occupiers.

17.2 The FRA should express the likely consequences of fire using clearly defined categories. There should be at least three predetermined categories.

NOTE The categories could be, for example, "slight", "moderate" or "extreme".

17.3 If the fire risk is to be determined by combining the likelihood of fire (see Clause 14) with the likely consequences of fire (e.g. by using a matrix; see Clause 18), the number of predetermined categories for likelihood and consequences should be the same.

18 Assessment of fire risk

COMMENTARY ON CLAUSE 18

The categories for classification of fire risk are derived from those used to determine the likelihood and likely consequences of fire (see Clause 14 and Clause 17). Whereas it is normally sufficient to classify likelihood of fire, or likely consequences of fire, into one of three predetermined categories, a greater number of categories of fire risk is normally appropriate in order to cater for the range of levels of fire risk that can occur. Thus, a minimum of five predetermined categories of fire risk (trivial to intolerable) is normally appropriate.

The category of fire risk for any premises can be determined by combination of the likelihood of fire and the likely consequences of fire, using a matrix; this is a method of risk assessment commonly adopted in the field of health and safety.

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The advantage of this approach is that it tends to result in relatively consistent assessments of risk (and, hence, fire risk) by different risk assessors; the risk assessor need select from the matrix only one of three levels of likelihood and one of three levels of likely consequences, but can derive thereby any one of five levels of fire risk.

18.1 In the process of every FRA, an assessment should be made of the fire risk in the premises in relation to life safety and the potential for injury to occupiers.

18.2 The FRA should express the likely consequences using clearly defined categories. There should be at least five predetermined categories.

NOTE The categories could be, for example, “trivial”, “tolerable”, “moderate”, “substantial” or “intolerable”.

18.3 The FRA methodology adopted should be such that there is a transparent means for combining the likelihood of fire and the likely consequences of fire to derive the fire risk.

NOTE Table 1 shows an example matrix of categories of likelihood and consequences that can be adopted in assessment of fire risk.

Table 1 – An example of a simple risk level estimator

Likelihood of fire	Classification of fire risk		
	Likely consequences of fire		
	Slight harm	Moderate harm	Extreme harm
Low	Trivial risk	Tolerable risk	Moderate risk
Medium	Tolerable risk	Moderate risk	Substantial risk
High	Moderate risk	Substantial risk	Intolerable risk

19 Formulation of an action plan

COMMENTARY ON CLAUSE 19

The outcome of the FRA is the action plan. The action plan comprises recommendations that are intended to ensure that the fire risk is reduced to, or maintained at, a tolerable level (see 3.1.81). Even if the fire risk is already tolerable, there might be a need to make recommendations in the action plan, often involving low cost or changes in managerial arrangements, to address minor deficiencies in fire precautions.

In formulating an action plan for premises in which the fire risk has been assessed as unacceptably high, the subjective but analytical approach to fire risk assessment permits backtracking to determine whether, in effect, the problem arises from inadequate fire prevention (i.e. inadequate means for control or elimination of fire hazards), inadequate fire protection (e.g. unsatisfactory means of escape or fire warning systems), shortcomings in fire safety management, or a combination of these.

The action plan is an inventory of actions, normally prioritized and time-constrained, to devise, maintain or improve controls. Where appropriate, the inventory includes measures to eliminate or control hazards (e.g. better separation of combustible materials from ignition sources). A blend of physical and procedural controls is often necessary.

The fire risk assessor needs to be confident of the adequacy of the action plan before it is finalized, and to this end it is appropriate to ask the following questions.

- Will the revised controls lead to tolerable fire risk levels?*
- Could any of the recommended actions create new hazards to health and safety?*
- Have the most cost-effective solutions been chosen?*
- What will residents affected think about the need for, and practicality of, the revised fire precautions?*
- Will the revised fire precautions be adopted, maintained in practice and be suitable for the normal use of the premises? For example, fire-resisting doors fitted with automatic door release mechanisms because they would be an impediment to residents if self-closing.*

All of these questions have a relevance to any action plan, the objective of which is to achieve tolerable risk, but without the creation of new hazards. A single fire safety objective (see 3.1.43) can often be satisfied by a variety of measures.

It is normally appropriate to allocate priorities to each measure recommended in the action plan, to reflect the urgency of the measure, as determined in the FRA. (This might be unnecessary if, for example, most of the recommended measures are minor in nature and will be implemented in the short term in any case.)

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If prioritization is appropriate, it is often helpful to have a scheme of prioritization. There is no right or wrong scheme of prioritization, but, whatever scheme is adopted, it needs to be simple to understand, facilitate consistent application and be relatively unambiguous as far as allocation of priorities is concerned. It is therefore usually appropriate for there to be no more than three or four priorities.

It is important for dutyholders to be able to understand whether recommendations in the action plan are, in effect, legal requirements or whether they go beyond the minimum requirements of legislation.

If, during the course of a Type 1 FRA, there is reason to suspect deficiencies in structural or other fire protection measures, it is appropriate for the action plan to recommend that one of the other types of FRA be carried out or that further investigation be carried out by specialists. However, this is not expected to be a generic recommendation of all Type 1 fire risk assessments; the recommendation needs to be based on an identification of the issues that justify the reason for doubt.

In some circumstances, the risk to persons might be so serious that the fire risk assessor needs to take steps to inform a suitable representative of the dutyholder immediately, before the assessor leaves the premises. A record of the circumstances needs to be recorded in the FRA, with, where relevant, a suitable recommendation to preclude the recurrence of these circumstances.

Where FRAs are carried out for a large number of premises of similar type, on behalf of a single dutyholder, there can be advantage in an analysis of all the action plans produced, to give an overview to the dutyholder regarding the state of their portfolio of properties, common problems and prioritization of the premises in which capital work might be necessary. In this situation, there is a need for procedures to be in place to facilitate the consistency of the FRAs, particularly if they are carried out by more than one fire risk assessor.

19.1 Every documented FRA should incorporate an action plan setting out any risk reduction measures that are necessary (which could include a range of options if appropriate). If the fire risk and existing fire precautions are such that no improvements are necessary, it should be explicit within the FRA that, in the opinion of the fire risk assessor, the only actions necessary are those to maintain the existing standard of fire precautions.

19.2 The action plan should be such that, if the measures within it are implemented, it will reduce fire risk to, or maintain fire risk at, a tolerable level.

19.3 Where appropriate, the action plan should address both physical fire precautions and managerial issues.

19.4 Any measures recommended in the action plan should be both reasonably practicable to implement and possible to maintain, taking into account both the premises and the characteristics of the residents.

NOTE The term “reasonably practicable” is used in this context in the sense defined by the Health and Safety Executive (<https://www.hse.gov.uk/enforce/expert/alarplance.htm>).

19.5 No new significant hazards to health and safety should result from implementation of the action plan.

19.6 Where relevant, the action plan should recommend:

- a) matters for further investigation by the dutyholder; and

NOTE These could include, for example, a recommendation for a PCFRA to be undertaken (see Clause 21).

- b) areas that need to be checked by the dutyholder (e.g. where relevant information and access to certain areas were not available at the time of the FRA).

19.7 If, during the course of an FRA, there is reason to suspect that there are matters falling outside the scope of that FRA that might require a different type of FRA, an increased scope or specialist advice, an appropriate recommendation should be made in the action plan, together with a clear justification for making the recommendation.

NOTE For example, deficiencies in fire protection measures might be identified during the course of a Type 1 FRA that would necessitate a Type 2 FRA to be carried out, or the nature of the external envelope of the building might indicate the need for an FRAEW (see 15.8).

19.8 The action plan should include advice to the dutyholder regarding any parties with which information needs to be shared, and the nature of any such information.

NOTE This could include sharing information about the building risks with residents, and sharing information about residents with the fire and rescue service. Attention is drawn to the Data Protection Act 2018 [17].

19.9 There should be a clear distinction in the action plan between recommendations that are considered necessary for compliance with the relevant fire safety legislation and recommendations that exceed the requirements of relevant fire safety legislation.

19.10 The action plan should contain information regarding the urgency associated with the measures recommended. Urgency should be proportionate to fire risk. If a scheme of prioritization is adopted, it should be suitable for the way in which the organization operates and projects are planned.

19.11 Where an action is required before the formal report is submitted, the circumstances and the fact that the matter has been reported should be recorded.

19.12 Where FRAs are carried out for a number of properties on behalf of a single dutyholder, there should be arrangements in place to facilitate the consistency of the FRAs in terms of the assessment of risk and the actions specified in the action plan to address the risk.

NOTE Such quality assurance procedures are normally required under third-party certification schemes for fire risk assessment companies; other than in the case of sole traders, this involves independent validation of each FRA by someone other than the person who carried out the FRA.

19.13 When the FRA is provided to the dutyholder, the attention of the dutyholder should be drawn to the presence of the action plan and the need to implement any recommendations therein.

20 Periodic review of fire risk assessments

COMMENTARY ON CLAUSE 20

The FRA is a living document, in that it cannot remain valid for an unlimited length of time. The FRA is likely to cease to be valid when, for example:

- a) a material alteration takes place;*
- b) a significant change occurs in the “given” factors that were taken into account when the FRA was carried out (see Commentary on Clause 5);*
- c) a significant change in fire precautions occurs; or*
- d) an incident occurs.*

Significant changes in the “given” factors could, for example, comprise occupation of supported housing by significantly more disabled residents or a change in the level of staffing of premises in which staff are employed. Significant changes in fire precautions include major changes in the provision or design of fire protection measures and major changes in the measures for control or elimination of fire hazards, but also include changes resulting from more gradual deterioration of fire precautions as a result of constant use or lack of maintenance (e.g. wear and tear on fire doors). Gradual changes can also occur as a result of changes in management, turnover of employees and minor changes in layout that, after a prolonged period and numerous changes, have a significant effect on means of escape. It is also relevant to review the FRA after any fire.

It follows, therefore, that, when any of the step changes described in items a) to d) above occur, the FRA needs to be reviewed. However, as gradual changes over a long period of time can also affect the validity of the FRA, there is a need for regular review of the FRA, even if there are no obvious changes that affect its validity.

When the FRA is reviewed, consideration needs to be given to the extent to which the original action plan has been implemented. Work that has not been completed needs to be identified.

There is no correct or incorrect frequency for the regular review of the FRA. This is a matter for the judgement of the fire risk assessor and the organization’s own fire policy (see 3.1.27). It is, however, appropriate to take account of the likely frequency of significant changes.

A best practice default is commonly annual review of FRAs. However, as a general guide, for a low risk, modern, low-rise block of flats (e.g. a block of no more than three storeys above ground, built since 2000), a review every two years might be sufficient, with a new FRA completed every four years. For blocks with higher risk (arising

from social factors, the age of the building, etc.) and blocks over four storeys in height, an annual review might be more appropriate, with a new FRA every three years. In extreme cases, for the highest risk premises, a new FRA every year might be appropriate. However, it is not intended that these suggested frequencies are applied prescriptively, as they are not intended to be rigid “rules”. More frequent reviews might, for example, be appropriate in buildings where the risk to residents is higher owing to their specific characteristics and requirements.

A review of the FRA is not always synonymous with a complete new assessment. In a regular review, all aspects of the original FRA might need to be revisited to check that they have not been subject to change. On the other hand, if the review has arisen purely as the result of a specific material alteration, a limited review might be sufficient.

In buildings with a stay put strategy, or with residents who have specific requirements and might require support from staff to evacuate (e.g. in extra care or supported housing), a full and thorough inspection of the protection arrangements within the building is particularly critical.

If, during the course of a review, the fire risk assessor identifies that a full and thorough inspection has not been completed as part of a previous FRA, it is appropriate to recommend to the dutyholder that a full FRA be undertaken.

The original FRA, in conjunction with one or more documented reviews, constitutes a form of audit trail that demonstrates ongoing control of fire safety. After a period of time in which there have, for example, been several reviews in which significant changes and the need for new risk control measures have been identified, the audit trail is likely to become unwieldy. At that stage, the documentation of a new and complete FRA might be appropriate. Typically, not more than two reviews will be carried out before the next new and complete FRA.

20.1 The FRA should be subject to review when:

- a) material alterations to the premises take place;
- b) a significant change occurs in the matters taken into account when the FRA was carried out;
- c) a significant change in fire precautions occurs;
- d) there is any other reason to suspect that the original FRA might no longer be valid (this might include the occurrence of a fire); and
- e) a defined period of time, which is expected to have been recorded in the original FRA [see 11.1i)], has elapsed.

20.2 When determining the frequency of the FRA review, account should be taken of:

- a) the likely frequency of significant alterations to the premises, or to the nature of the residents;
- b) the period after which major changes in fire precautions are likely to have taken place as a result of the measures recommended in the action plan; and
- c) the level of fire risk.

20.3 When the FRA is reviewed, it should be confirmed whether any work recommended in the original action plan has been carried out. If any recommended work has not been carried out, this should be brought to the attention of the dutyholder and recorded in the FRA review.

20.4 The FRA review should determine whether there have been any changes to the matters raised in Clause 12 to Clause 17 that could affect the fire risk. If any such changes are identified, the original action plan should be updated or a new action plan formulated (see Clause 19), as appropriate.

20.5 When an FRA is being reviewed, if it becomes apparent to the fire risk assessor that the previous FRA or review was not adequate, they should recommend to the dutyholder that a full FRA be undertaken.

20.6 The FRA review should record the name of the fire risk assessor(s) performing the review, the date(s) on which the review was carried out and the name(s) of the principal person(s) with whom there was consultation (e.g. for supply of relevant information) at the

time of the review. It should also be clear as to the number of reviews that have been carried out since the previous FRA.

20.7 The FRA review should record the date by which the next periodic review is to be carried out.

21 Person-centred fire risk assessments

COMMENTARY ON CLAUSE 21

The vast majority of fires in housing occur within residents' own individual accommodation. A person-centred fire risk assessment (PCFRA) is a simple risk assessment process, completed by dutyholders with the residents (including, but not limited to, people with specific evacuation requirements; see Annex D), to help identify fire hazards in their home and identify specific arrangements that might be needed to support them to prevent fire, respond to a fire or fire alarm operating, and to evacuate when necessary. The need to undertake a PCFRA could be identified by a resident themselves, carers, family members, landlords or any agency involved in engagement with the resident.

This process can capture information to help identify any specific fire safety arrangements and control measures that might need to be put in place to support residents and reduce risks to a tolerable level. It can also be used as the basis for any person-centred emergency plans that might be required to support residents to take any particular actions or to evacuate if necessary and practicable, potentially providing guidance for family, other occupants or staff if present, or for the fire and rescue service on arrival. Basic information on individual residents who might require support from the FRS may be kept in the secure information box (see Clause 15).

The scope of an FRA does not normally extend to recording the detail of risks to individual residents from a fire within their own accommodation, and it is not normally expected that the fire risk assessor will carry out a PCFRA themselves. However, the outcomes of any PCFRAs or person-centred emergency plans that are in place ought to be considered alongside the arrangements for means of escape (see 15.3) and building management (see Clause 16), and incorporated in the findings of the FRA. The FRA therefore needs to determine whether there are arrangements in place for PCFRAs to be carried out, whether a PCFRA or person-centred emergency plan has identified residents with characteristics that might require specific fire safety arrangements and/or support to evacuate, and whether these have been implemented as appropriate. A PCFRA might conclude that no specific fire safety arrangements or control measures are required. However, it might equally identify risks that need to be addressed.

In the case of specialized housing premises in particular (supported living, sheltered housing, extra care sheltered housing), it is important for collaboration to take place between different dutyholders (e.g. landlord, operator of the building, care/support providers), to enable a PCFRA to be completed where appropriate.

This British Standard does not give recommendations for undertaking a PCFRA, but some simple guidance and a model pro forma are given in Annex E, to give the fire risk assessor an idea as to what might be contained in a PCFRA. More detailed guidance on the steps involved in carrying out a PCFRA is given in Fire safety in Specialised housing [13], published by the National Fire Chiefs Council.

21.1 The fire risk assessor should assess the adequacy of any processes that are in place for determining the need for, and carrying out, a PCFRA. If there is no process in place, this should be noted in the action plan.

21.2 The FRA should take into account the information captured by any existing PCFRA(s) or person-centred emergency plan(s) when assessing the adequacy of means of escape arrangements, evacuation strategies, emergency plans and staffing levels (where relevant).

21.3 If, in the process of an FRA, the fire risk assessor identifies that a PCFRA is or might be required, they should draw this to the attention of the dutyholder as an action.

21.4 Where a PCFRA identifies undue risk to residents, the dutyholder should be informed of the risk and advised to take appropriate action.

NOTE For example, if a PCFRA identifies that the safety of a resident is at serious and immediate risk from a fire occurring, and that risk cannot be mitigated by specific arrangements or support, it might be appropriate for the dutyholder to make a safeguarding referral to the adult social care team of the local authority.

Annex A (informative)

Model pro forma for documentation of a fire risk assessment

A.1 This annex contains a model pro forma for documentation of an FRA.⁵⁾ If the pro forma is properly completed by a competent person, the format and scope of the FRA will be suitable and sufficient to satisfy the recommendations of this British Standard.

A.2 The format of a documented FRA may vary from that shown in this annex, provided that the recommendations of each clause of this British Standard are satisfied. For example, in the case of means of escape, compliance with Annex C necessitates that the key factors in Table C.1 are explicitly addressed in the documented FRA, but not all the specific issues shown in Table C.1 and in the pro forma contained in this annex need necessarily be included in all documented FRAs conforming to the recommendations of this British Standard, as they might not all be relevant. It is, however, necessary for compliance with this British Standard, that the specific issues have, at least, been considered by the fire risk assessor while carrying out the FRA.

A.3 This pro forma largely consists of a series of headings with space for the fire risk assessor to record their findings. As with variations in the format (see **A.2**), variations in the headings may be made provided that the recommendations of each clause of this British Standard are satisfied. Where a heading is inappropriate for or irrelevant to the premises undergoing assessment, it may be removed; where additional heading or subheadings are needed, they may be added.

A.4 Where a description of any fire hazards or fire precautions is considered appropriate, this can be recorded under the appropriate “Hazards not elsewhere recorded” or “Relevant fire protection systems and equipment not elsewhere recorded” heading in the pro forma.

A.5 There are three subheadings under each section: “Observation”, “Comment” and “Conclusion”.

- a) The “Observation” section gives the assessor the opportunity to record the preventive and protective measures that are in place. Terms such as “it was observed”, “it is understood”, and “records indicate” can give an indication of the source of the information recorded.
- b) The “Comment” section gives the assessor an opportunity to discuss shortcomings in the measures, or set out justification for accepting measures that depart significantly from prescriptive norms (see **10.2**). Information recorded can include positive findings as well as deficiencies, as this helps to contextualize the assessment of risk.
- c) The “Conclusion” section enables the assessor to record whether the measure is satisfactory, action is required, or the measure is not applicable. The “Not Applicable” option would only be appropriate where a measure is highly unlikely to be necessary, as might be the case with (for example) an evacuation alert system in low-rise premises.

A.6 While it might not be essential to record further information in every section of the pro forma, care needs to be taken to ensure that the pro forma does not become purely a tick-list with inadequate supporting information. Such an FRA is unlikely to satisfy fire safety legislation, nor would it meet the recommendations of this British Standard.

A.7 For many types of housing, obtaining relevant information for completion of the pro forma in this annex can prove challenging (e.g. because there is no one who can provide the information available on the premises). Under these circumstances, the “Observation” and “Comment” sections may be used to record any deficiencies.

⁵⁾ It is anticipated that an electronic version of the pro forma will be made available with the published standard.

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A.8 Within the pro forma in this annex, for each main topic, the subclause or paragraph within this British Standard that provides guidance on that topic is shown in parentheses alongside the topic heading. This is for the guidance of the user of this British Standard, and the clause references need not be shown in the documented fire assessment provided to the dutyholder.

A.9 The grey italicized text in the “Observation” and “Comment” sections within the pro forma is for guidance only, and is intended to be removed and replaced with the actual observations and comments of the FRA being undertaken. It gives an indication of the type of information that may be recorded, but is not to be regarded as an exhaustive list.

FIRE RISK ASSESSMENT

Notes on the completion of this pro forma:

- *Cross-references are to subclauses and paragraphs of BS 9792:202X.*
- *Text in grey is intended to be deleted and replaced with the actual observations and comments of the FRA being undertaken.*

GENERAL INFORMATION

(Step 1: Record information about the premises and the occupants [11.1a) and Clause 12])

This fire risk assessment was carried out for and on behalf of (Client):

Address of the premises:

Person from whom information was obtained:

Identity of the assessor:

Include:

- *The assessor's name*
- *The assessor's employer, e.g. the housing association or the specialist contractor*

Report peer-reviewed by:

Where the report is peer reviewed, the name of the reviewer

Relevant dates:

Date the assessor inspected the premises
Date of peer review
Date of issue

Date of previous fire risk assessment or review[:

Date proposed for review:

Purpose of the assessment:

Express the purpose of the assessment, e.g.:

The purpose of this report is to provide an assessment of the risk to life from fire in these premises, and, where appropriate, to make recommendations to ensure compliance with applicable fire safety legislation; see "Applicable fire safety legislation".

The report does not address the risk to property or business continuity from fire.

This report must not be used as a snagging report against building regulations.

Scope of the assessment:

Indicate which areas fall within the scope of the assessment and any areas that were specifically excluded. For example, in flats, “Common parts only (excluding lofts), and a 10% sample of front doors”.

Record which parts of the premises could not be inspected (e.g. due to access) or were beyond the capabilities of the assessor [e.g. the building exterior (cladding)].

In the case of flats, where the LGA “Fire safety in purpose-built blocks of flats” guide is used, indicate the type of assessment.

Where terms are used, e.g. “Type 1”, include an explanation of what these mean and where they come from.

Executive summary:

While not a provision of BS 9792, assessors often record a brief summary of the findings of the assessment. This is useful where the premises are complex or the report lengthy and is often done to draw the dutyholders’ attention to matters which could otherwise be lost in the in the body of the report or to make a specific point. This could include:

- *areas of the preventive and protective measures that are of particular concern;*
- *aspects of the preventive and protective measures that are good and should be retained;*
- *an overall assessment of risk, possibly restating Steps 3, 6, and 7; and*
- *significant corrective actions.*

Occupancy

Record a simple description or the type of premises, e.g.:

- *General needs flats (indicate the number of flats)*
- *Maisonettes*
- *Sheltered housing*
- *Extra care housing*
- *Houses in multiple occupation*
- *Supported housing*

Note that this format might not be applicable to:

- *Single-family private dwelling, or shared house in England or Wales*
- *Premises during the construction phase or before the building is used*
- *Premises used solely for short-term letting*
- *Peer-to-peer rented accommodation*
- *Non-domestic premises*
- *Residential care homes*

Dutyholder (e.g. employer) or person having control of the premises:

Record the identity of the principal dutyholder. This is usually an organization, such as a housing association, but may be an individual, e.g. landlord, freeholder, care provider.

Number of storeys above and below ground [12.1b]:

Height of the uppermost storey of the building(s) on the premises or in which the premises are located [12.1b]:

Record the height of the highest habitable floor above the ground level at the lowest entrance.

Brief details of construction [12.1c]:

Include information about any aspects that make a significant contribution to risk, e.g.:

- *Traditional construction of masonry walls, timber floors and stairs and pitched roof.*
- *Steel frame, steel reinforced concrete floors, internal block wall, and external curtain wall.*

Include details of:

- *External walls of the building that have any form of cladding (i.e. are not of conventional masonry construction), or have been overclad (e.g. with rainscreen cladding).*
- *New spandrel panels that have been provided below windows, since the time of original construction.*
- *Modern methods of construction (MMC), e.g. timber frame construction.*

Significant non-domestic areas [12.1d]:

It might not be necessary to mention plant and similar rooms that would be expected in the premises, but areas such as communal lounges, tenant halls and commercial premises should be mentioned.

Approximate number of occupants [12.1e]:

Number of residents

Type and use of the premises [12.1f]:

Record the type and use of the premises, e.g. staffed/unstaffed, purpose-built/converted, general/specialized housing.

For supported housing, record the number of staff available to assist residents with evacuation.

Where staffing levels vary through the day or week, record the different staffing levels.

It can be useful to record the staff/resident ratio.

Number of persons other than residents [12.1g]:

Record the numbers of people who are not residents, e.g. visitors, carers, maintenance staff, and support workers where this is significant, e.g. where the premises are complex and/or there are likely to be significant numbers of people who are unfamiliar with the design and layout of the premises.

In general blocks of flats, it is not usually necessary to record visitor numbers.

Where escape routes are shared with other, non-residential occupants, an estimate of the number of people who might use them can be useful in determining the adequacy of means of escape.

Approximate floor area [12.1h]:

The area of each floor can be a relevant factor as complex escape routes might take longer to negotiate than simple routes.

It might only be necessary to include the approximate gross floor area, or a typical floor, part of the premises, the largest floor area of the premises or demise under assessment. There is usually no need to record the dimensions of any other floors).

If whole buildings are being assessed, it is often sufficient to record the dimensions of the building footprint.

Number of escape stairs and the floors that they serve [12.1i]:

Indicate the number, type and location of all stairs. Include:

- *Accommodation stairs*
- *External fire escape stairs*
- *Protected stairs*
- *Firefighting stairs*

Where there is more than one stair, they should be identified, especially where fire protection measures detailed elsewhere in the report cross-reference them.

Number of lifts serving upper or basement floors [12.1j]):

The number of lifts serving the upper floors and basements, including specific reference to lifts intended for use by the fire and rescue service and evacuation lifts which can be used.

Occupants especially at risk [12.1k]):

Record the number of occupants especially at risk. Include:

- *People who have specific evacuation requirements.*
- *People who might be at risk for other reasons, e.g. lone workers.*

Fire history [12.1l]):

Record the details of any fires or near miss incidents that have occurred. Include the cause, the response (e.g. fire brigade called), and any control measures which were introduced as a result.

Other matters that could have an impact on fire risk [12.1m]):

Record any matters not recorded elsewhere, e.g. occurrence of vandalism, malicious fire-raising and general antisocial behaviour in the area that might imply an increased likelihood of malicious ignition.

Authority enforcing fire safety legislation [12.1n]):

Identify the authority having jurisdiction of fire safety matters.

Relevant enforcement action [12.1n]):

Record information on any enforcement action taken by the enforcing authority, e.g. alterations and prohibition notices.

Applicable fire safety legislation [12.1n]):

e.g.:

- *The Regulatory Reform (Fire Safety) Order 2005 (as amended)*
- *The Fire (Scotland) Act 2005*
- *The Fire and Rescue Services (Northern Ireland) Order 2006*

Other legislation that impacts on fire safety [12.1n]):

Record:

- *Other legislation that might apply*
- *Any statutory licences that might apply*

Identify other statutory bodies which:

- *Enforce other legislation*
- *Take an interest in fire safety (e.g. CQC)*
- *Issue licences*

Any other relevant matters [12.1o]):

Record any other matters that might be relevant that were taken into account in the FRA and are not recorded elsewhere. This could include, but is limited to:

- *Presence of staff, hours of work or relevant working practices*
- *Tenure of flats, if known*
- *Arrangements for management, e.g. no regular presence on site*

Record any assumptions that the assessor has made which have not been recorded elsewhere.

Relevant guidance used in this assessment:

List the guidance that is applicable to the type of premises e.g.:

- *Statutory guidance prescribed by legislation*
- *LGA publication "Fire safety in purpose-built blocks of flats"*
- *NFCC publication "Fire safety in specialised housing"*
- *Other applicable guidance*

ELIMINATION AND CONTROL OF FIRE HAZARDS

(Step 2: Identify fire hazard and the existing measures for their elimination or control [11.1b) and Clause 13])

Malicious ignition [13.2a) and B.1a)]

Observation

Record:

- *The extent and location of combustible storage and waste.*
- *Refuse chutes, fire-resisting enclosures of bin stores, proximity or combustible storage and waste to windows and combustible cladding.*
- *Security arrangements.*

Comment

Conclusion

Satisfactory Action Required Not Applicable

Electrical faults [13.2b) and B.1b)]

Observation

Record any significant fire hazards and measures in place for their elimination or control.

Record:

- *The appearance of the fixed electrical system (satisfactory/not satisfactory).*
- *If the fixed installations are periodically inspected and tested (e.g. 5-yearly).*
- *If the fixed installations is tested, the date and significant details of the inspection, e.g. relevant C1 or C2 corrective actions required.*
- *Where corrective actions were required, whether rectification work has been carried out and when.*
- *Whether photovoltaic (PV) cells are present.*
- *If PV cells are present, the location of the control gear and isolation switches.*

Record:

- *The appearance of the portable electrical equipment, trailing leads, extension cables and adaptors, and whether they are satisfactory/not satisfactory.*
- *If portable appliance testing (PAT) is carried out, the frequency and the date of the last PAT.*
- *If there are charging arrangements for electric vehicles, where they are located.*
- *If there are charging arrangements for mobility scooters, where they are located.*

Comment

Conclusion

Satisfactory Action Required Not Applicable

Smoking [13.2c) and B.1c)]

Observation

Record:

- *Whether there is a smoking policy. If there is a policy, outline it (e.g. who is permitted to smoke, where, and when).*
- *The arrangements (e.g. the location of smoking shelters or rooms, the presence of waste receptacles and cleaning arrangements).*
- *If the smoking policy appears to be observed (e.g. are there signs of illicit smoking).*
- *Whether “No smoking” signs are provided*.*

** This is in relation to fire safety and not for compliance with other requirements.*

Comment

Conclusion

Satisfactory Action Required Not Applicable

Cooking (if any is carried out other than in individual dwellings) [13.2d) and B.1d)]

Observation

Other than in a private dwelling, record:

- *What cooking facilities are provided.*
- *The measures taken to prevent fires as a result of cooking, e.g. restricting cooking to staff and supervised residents.*
- *Arrangements for cleaning of filters and ductwork.*
- *What extinguishing appliances or system are provided.*
- *The maintenance arrangements for gas appliances.*
- *Where appropriate, the cleaning arrangements for extract systems.*

Comment

Conclusion

Satisfactory Action Required Not Applicable

Inadequate control over the use of portable heaters [13.2e) and B.1e)]

Observation

Record:

- *The type and location of portable heaters that were observed in use.*
- *Where used, whether the heaters are suitable to the application.*
- *Where used, whether the heaters appear to be in good order and suitably maintained.*

Comment

Conclusion

Satisfactory Action Required Not Applicable

Contractors' activities and "hot work" [13.2f) and B.1f)]

Observation

Record an outline of the control measures that are in place.

Comment

Conclusion

Satisfactory Action Required Not Applicable

Heating installations [13.2g) and B.1g)]

Observation

Record:

- *The type of heating installations.*
- *The maintenance arrangements.*
- *Details of the last service, e.g. date and faults noted.*
- *Where rectification was required, work done to affect the rectification.*

Comment

Conclusion

Satisfactory Action Required Not Applicable

Lightning [13.2h) and B.1h)]

Observation

Indicate if a lightning protection is provided.

If lightening protection is provided, record:

- *The maintenance arrangements, including frequency.*
- *The date of the last inspection and test.*

Comment

Conclusion

Satisfactory Action Required Not Applicable

Housekeeping (13.3)

Observation

Outline the arrangements for:

- *Cleaning.*
- *Control over combustible materials in common parts.*
- *Storage or rubbish.*
- *Policies relating to storage of mobility scooters and electric vehicles.*
- *Inspections not covered by other maintenance.*

Comment

Conclusion

Satisfactory Action Required Not Applicable

Hazards not elsewhere recorded

Observation

e.g.:

- *Fuel storage tanks for generators.*
- *Storage and use of dangerous substances (e.g. flammable and highly flammable materials, oxidizing agents).*

Comment

Conclusion

Satisfactory Action Required Not Applicable

ASSESSMENT OF THE LIKELIHOOD OF FIRE

(Step 3. Make a subjective assessment of the likelihood of fire [11.1c) and Clause 14])

From the foregoing, it is estimated that the likelihood of a fire occurring is: (Clause 14)

Record a subjective estimate, such as:

- *Low*
- *Medium*
- *High*

The estimate of the likelihood of a fire occurring is based on the following three levels:

High	Indicates serious shortcomings in the elimination or control of fire hazards (i.e. fire prevention).
Medium	Where the likelihood of fire is typical or normal for type of premises.
Low	Where the likelihood of fire is abnormally low (e.g. because the extent of common parts are minimal).

Minor shortcomings in fire prevention measures might not significantly increase the likelihood of a fire occurring but would still be addressed in the action plan.

ASSESSMENT OF FIRE PROTECTION MEASURES

(Step 4. Identify the physical fire protection measures in place [11.1d) and Clause 15])

Detection and warning (15.2)

Observation

Typical information that might be recorded:

- *For dwelling such as houses or flats, state the type of detection provided. State whether this was observed (in a Type 3 or Type 4 FRA) or is understood to be present.*
- *For the common parts of a flat, including sheltered housing, extra care, and buildings converted to flats, state if detection is provided for evacuation.*
- *State if the fire detection is provided for purposes other than evacuation, e.g. activate smoke control in stairs, corridors and carparks, and access control.*
- *Indicate the type and location of detectors and call points and whether there is a control panel.*
- *Indicate the type of alarm devices in use.*
- *Indicate single stage, multistage, delayed (staff alarms) or phased alarms.*
- *State if the system is monitored, e.g. via a social alarm system or an alarm receiving centre.*
- *State if there were any faults displayed on the controls, damage or anything which reduce the effectiveness of the system.*

Comment

State if the fire detection and fire alarm system is compatible with the evacuation strategy, e.g. no alarms within dwellings where there is a stay put strategy.

State what category and grade of system would be appropriate and whether the type and location of detectors is consistent with that category/grade.

Indicate if the alarm devices are suitable for the building occupants, e.g. suitable for occupants with a hearing impairment.

Conclusion

Satisfactory Action Required Not Applicable

Means of escape (15.3)

Observation

Briefly describe the design of the escape routes, e.g.:

- *Escape routes lead to final exits.*
- *Doors on escape routes open in the direction of travel.*
- *Revolving doors or sliding doors have suitable bypass doors.*
- *Block of flats – number of stairs, lobby protected, protected corridors.*
- *Flats and houses – open plan, entrance hall, protected stairs.*
- *Adaptations – evacuation lifts, evacuation aids.*
- *Whether the common escape routes are shared with other occupancies.*

Where relevant:

- *Indicate the approximate travel distance, one direction and more than one direction:*
 - *Within flats and houses, and*
 - *Within the common parts of blocks of flats.*
- *Indicate where there are extended travel distance and related compensatory measures, e.g. sprinklers.*
- *Indicate widths of storey exits and final exits.*
- *Indicate whether smoke control is present in stairs, lobbies and corridors.*
- *Describe the ability of occupants to use the escape routes.*

• Indicate the arrangements people with specific evacuation requirements:

- To escape from their dwelling, and
- To escape through common areas.

For protected escape routes, describe:

- Fire-resisting construction, e.g. walls extend into voids.
- Fire-resisting doors, e.g. certificated, rating thickness and construction, and their associated hardware, e.g. hinges, latches, strips and seals, self-closers.

Describe the means of securing doors on escape routes, e.g.:

- Access-controlled (linked to the fire detection system).
- Thumb turns.
- Night latch.

Obstructions on escape routes, e.g.:

- Occupant's personal possessions on stair landings.
- Mobility scooters.
- Bicycles.

Describe the front doors of flats, principally:

- Original or replaced.
- Fire-resisting or not fire-resisting.
- Self-closing.
- Hinges.
- Strips and seals.
- Damage.
- Where fitted, suitable letter flaps.

Indicate the doors sampled.

Indicate whether or not the doors are periodically checked (see also Step 5).

Comment

Indicate where there are significant departures from accepted guidance for:

- Escape routes.
- Travel distance.
- Protection of escape routes.

Where there are departures from the basic recommendations and compensating measures recommended in the same guidance (e.g. sprinklers providing extended travel distance), indicate if these are appropriate and effective.

Where there are compensating measures for departures from guidance, and these are based on a fire engineering solution, indicate if these are in accordance with the fire safety strategy and are appropriate and effective.

Conclusion

Satisfactory Action Required Not Applicable

Signs and notices (15.4)

Observation

Record the presence and suitability of:

- *Fire exit signs.*
- *Other safe condition signs, e.g. indicating use of escape hardware.*
- *Mandatory signs on fire doors, e.g. "Kept shut", and "Kept locked".*
- *Other mandatory signs, e.g. "Fire exit keep clear".*
- *Fire equipment, e.g. extinguishers and call points.*
- *"No smoking" signs.*
- *Fire procedure/fire action notices.*
- *Warning signs (e.g. photovoltaic cells, electric vehicle charging points).*
- *Where necessary, wayfinding signage for the fire service. If such signage is present, indicate whether it is in accordance with relevant guidance.*

Comment

Conclusion

Satisfactory Action Required Not Applicable

Emergency escape lighting (15.5)

Observation

Indicate:

- *If emergency lighting is provided on internal escape routes. If it is not provided, indicate the justification, e.g. the presence of good, borrowed light from street lights.*
- *Whether or not external escape routes have or require emergency lighting.*
- *The type of emergency lighting, e.g. non-maintained, maintained, integrated into the primary lighting, and duration (typically 3 hours).*
- *The presence of suitable facilities for routine testing of the installation.*
- *If the emergency lighting is routinely tested.*

Comment

Conclusion

Satisfactory Action Required Not Applicable

Manual firefighting equipment (15.6)

Record the type and location of:

- *Portable firefighting equipment (PFE).*
- *Hose reels.*
- *Fixed manually operated firefighting equipment.*

Comment

Indicate where firefighting equipment is, for example:

- *Inappropriate.*
- *Required.*
- *Incorrectly located.*
- *Not subject to maintenance.*

Conclusion

Satisfactory Action Required Not Applicable

Limiting fire spread and development (over and above any required to protect means of escape) (15.7)

Observation

Other than the enclosure of escape routes, indicate:

- *The areas requiring fire-resisting construction (e.g. flats, plant rooms and service risers).*
- *The areas that were sampled.*

If roof voids are present:

- *If they were accessed, indicate the areas and degree of sampling.*
- *If they were not inspected, indicate why not, e.g. impractical to do so or excluded from the scope;.*

Identify any shortfalls in fire-resisting construction, e.g.;

- *Incomplete construction.*
- *Holes.*
- *Gaps between building elements.*
- *Indirect indication of failure, e.g. transmission of noise or cooking odours between flats.*
- *Fire stopping of junctions between fire-resisting barriers.*
- *Incomplete construction within risers and above fire doors.*
- *Compartment walls between flats that do not extend through the roof void.*

Where there are service penetrations, indicate:

- *The areas that were sampled.*
- *Any obvious shortcomings in fire stopping of service penetrations.*

Where there are ductwork systems that connect or pass between compartments (e.g. bathroom or kitchen extract systems or HVAC), indicate:

- *The presence of shared common extract ducts, e.g. shunt ducts and dampers.*
- *Whether dampers are present, and if so, where.*
- *Whether any unprotected ducting enters a roof void.*

Indicate where other measures, e.g. sprinklers, are used to actively limit fire spread.

Indicate the presence or absence of flammable linings on walls or ceilings in common parts, e.g.:

- *Wall hangings.*
- *Extensive notice boards.*
- *Multiple layers of paint.*

In common areas, indicate the presence of readily flammable furniture and furnishings, and damage to upholstery.

Comment

Indicate any shortcomings in:

- *Fire-resisting construction.*
- *Cavity barriers.*
- *Fire stopping.*
- *Linings in common parts.*
- *Furnishing.*

Conclusion

Satisfactory Action Required Not Applicable

Fire spread over external walls (15.8)

Observation

Give a simple description of the appearance of the external wall, e.g. appears to be solid masonry, or appears to comprise unidentified or combustible materials.

Where the external wall or attachments might comprise combustible materials, indicate them, e.g. rainscreen cladding, spandrel panels, balconies, and photovoltaic panels.

Presence of combustible storage, barbeques, etc. on balconies.

Where appropriate, indicate if an external wall survey has been carried out.

Summarize the findings of any external wall survey that has been completed.

Comment

Indicate any shortcomings such as:

- *An abundance of combustible exterior attachments.*
- *Likelihood of fire occurring and spreading due to items stored on balconies.*

Where the external wall construction incorporates cladding, indicate whether a fire risk appraisal of external walls (FRAEW) has been carried out, or whether there is adequate documentary evidence that the cladding conforms to suitable guidance. Where there is no such evidence, include a recommendation in the action plan to carry out an FRAEW in accordance with PAS 9980.

Conclusion

Satisfactory Action Required Not Applicable

Automatic fire suppression (15.9)

Observation

Where automatic fire suppression is fitted, indicate:

- *The type (e.g. a sprinkler, water mist, or kitchen suppression system).*
- *The purpose (e.g. life safety or property protection).*
- *Areas covered by the system.*

Where the suppression system has been provided to compensate for shortcomings in other fire safety measures, e.g. extended travel distances and the absence of protected halls in flats:

- *State the justification given in the fire safety strategy.*
- *Indicate if there are procedures in place to manage the increased risk that would occur if the system were to be defective or in any way compromised.*

From the system documentation, e.g. commissioning and maintenance certificates, record the standard to which the system was designed, e.g. BS 5306-2, BS EN 12845 or BS 9251 for sprinklers, and BS 8458 or BS 8489 for water mist.

Comment

Record any obvious shortcomings in the system, e.g.:

- *Obstructions around the heads.*
- *System isolated.*
- *Not maintained.*
- *Alterations in the building or use of the building.*
- *The system no longer appears to support the fire safety strategy.*

Conclusion

Satisfactory Action Required Not Applicable

Smoke control (15.10)

Observation

Describe the smoke control arrangements, where fitted. Record:

- *A brief description of the system, e.g. openable windows, natural or mechanical ventilation.*
- *How the system is activated, e.g. manual or automatic detection.*

Comment

Indicate if smoke control would be required to conform to current building guidance but is not fitted. Record any obvious shortcomings in the system, e.g.:

- *The system no longer appears to support the fire safety strategy.*
- *Fault indications, damage, and vents or shutters in the open position when they should be closed.*
- *Lack of maintenance.*

Conclusion

Satisfactory Action Required Not Applicable

Facilities for firefighters (15.11)

Observation

Where lifts for the use of firefighters are provided:

- *Record the type of lift where known, e.g.:*
 - *Firemen's lift (to BS 2655-1 and BS 5655-1).*
 - *Fire-fighting lift (to BS 5588-5).*
 - *Firefighters lift (to BS EN 81-72 and BS 5588-5).*
 - *Modernized lift for fire service use (to BS EN 81-72).*
- *Record if firefighters' switches for high voltage illuminated signs are provided.*
- *Record if isolation facilities for photovoltaic systems are provided.*
- *Where there are rising mains, record the type (e.g. wet or dry).*
- *Record whether and where fire telephones are provided.*
- *Where relevant, record details of wayfinding for firefighters under signs and notices.*

Comment

Record shortfalls and concerns in the suitability or maintenance of:

- *Lifts for firefighters.*
- *Rising mains.*
- *Communication systems.*
- *Wayfinding (see also Signage section).*

Conclusion

Satisfactory Action Required Not Applicable

Evacuation alert systems for use by the fire and rescue service (15.10.4)

Observation

The presence of an evacuation alert system should be noted along with the location of the controls.

Comment

Record any shortfalls, such as:

- *The controls not being easily accessible to firefighters.*
- *Faults.*
- *The condition of the system from the service and maintenance records.*
- *Whether the system is subject to a maintenance contract.*

Conclusion

Satisfactory Action Required Not Applicable

Relevant fire protection systems and equipment not elsewhere recorded

Observation

Where other relevant fire protection systems and equipment are provided, record:

- *A brief description of the system or equipment.*
- *Whether the system or equipment appears to support the fire safety strategy.*
- *Any obvious shortcomings, e.g. fault indications, damage, and vents or shutters in the open position when they should be closed.*
- *The apparent condition of the system or equipment.*
- *Whether the system or equipment is subject to a maintenance contract.*

Comment

Record the potential consequences of any shortcomings in the system or equipment.

Conclusion

Satisfactory Action Required Not Applicable

ASSESSMENT OF FIRE SAFETY MANAGEMENT

(Step 5. Record details of the fire safety management in place [11.1e] and Clause 16)

Fire safety is managed by:

*Name the senior manager or director responsible for fire safety.
Identify any people with special responsibilities either by name or job title.*

Fire procedures [16.3a]

Observation

*State the evacuation strategy, e.g. stay put or simultaneous evacuation.
Outline the emergency procedures, e.g.:*

- *Arrangements for summoning the fire and rescue service, including, where relevant, the means of summoning assistance:*
 - *By individual residents in their dwelling.*
 - *Common areas, such as common lounges.*
 - *From temporary waiting spaces.*

Arrangements for meeting the fire and rescue service.

- *The location of the fire assembly point.*
- *General arrangements for the evacuation of disabled people.*
- *Use of fire extinguishers (e.g. whether there are staff to tackle a small fire if it is considered safe to do so).*
- *Arrangements for ensuring that all occupants are accounted for.*

Indicate how the emergency procedures are:

- *Documented.*
- *Communicated to relevant persons.*

Comment

Record any concerns or shortcomings.

Conclusion

Satisfactory Action Required Not Applicable

Procedures for identifying people with specific evacuation requirements [16.3b]

Observation

Presence and effectiveness of procedures for identifying people with specific evacuation requirements

Where person-centred evacuation plans (PCEP) have been prepared, indicate:

- *How many there are.*
- *What form they take, e.g. PEEP or personal emergency action plan.*
- *How the information captured has affected the general fire precautions.*

Comment

Record any concerns or shortcomings.

Conclusion

Satisfactory Action Required Not Applicable

Person-centred fire risk assessment (PCFRA) [16.3c]

Observation

Presence and effectiveness of procedures for obtaining PCFRAs.

Where PCFRAs have been prepared, indicate:

- *How many there are.*
- *How the information captured by the PCFRA has affected the general fire precautions.*

Comment

Record any concerns or shortcomings.

Conclusion

Satisfactory Action Required Not Applicable

Staff who respond to a fire [16.3e] and people who assist with evacuation (e.g. of disabled people) [16.3f]

Observation

Record brief details about the staff who respond to a fire in the premises generally and people who assist with evacuation (e.g. of disabled people).

Comment

Record any concerns or shortcomings.

Conclusion

Satisfactory Action Required Not Applicable

Liaison with the fire and rescue service [16.3g]

Observation

Record arrangements for liaison with the fire and rescue service, e.g. familiarization visits and predetermining emergency procedures.

Comment

Record any concerns or shortcomings.

Conclusion

Satisfactory Action Required Not Applicable

Routine inspections of the premises [16.3h]

Observation

Record the arrangements for routine inspections of the premises and their fire precautions, including the frequency and when the last inspection and/or test was carried out. Give details of, for example:

- *Detection and warning, e.g. daily check that the system is on and fault-free, and weekly alarm test.*
- *Emergency lighting, e.g. monthly short duration (flick) test.*
- *First aid firefighting, e.g. daily check that equipment is present and appears to be in good order.*
- *Automatic fire suppression, e.g. daily check that the sprinkler system is on and fault-free, and weekly test of pumps.*
- *Fire-resisting doors, e.g. daily and monthly checks of the release mechanisms, and semi-annual full inspection of the door and hardware.*
- *Hose reels, e.g. daily check that they are present and appear to be in good order and monthly run-out of the hose.*
- *Gaseous, foam and powder extinguishing systems, e.g. weekly inspection to check that the system appears to be fault-free and in good order, and monthly check that the users are properly trained and authorized.*
- *Smoke control, e.g. weekly, and where necessary quarterly, check that the system functions (possibly linked with the alarm test).*
- *Lifts for evacuation and firefighting use, e.g. weekly functional test of all controls, and monthly check that the standby/alternative power supply functions.*
- *Fire hydrants, e.g. weekly check that they appear to be in good order.*
- *Emergency and panic escape doors (e.g. fire exits) and automatic opening doors, e.g. monthly functional test that they fail safe on alarm and/or supply failure.*

Note 1: The foregoing list is based on the recommendations of BS 9999.

Note 2: Door inspections by the dutyholder might be required to satisfy a legal requirement. If this is the case, express an opinion, based on government guidance, as to the effectiveness of these inspections.

Comment

Record any shortfalls in the inspections and tests.

Conclusion

Satisfactory Action Required Not Applicable

Cooperation and coordination [16.3i]

Observation

Where two or more organizations share responsibility for fire safety, record if there is a record of the agreed responsibilities of each dutyholder and briefly outline the arrangements.

This might, for example, involve: a landlord, a housing association that leases the property, and a care provider.

Comment

Record any apparent shortfalls or lack of documented records.

Conclusion

Satisfactory Action Required Not Applicable

Training of any staff [16.3j)]

Observation

Outline the arrangements for staff training, indicating:

- *Basic fire awareness for all staff.*
- *Additional training for those with special roles, e.g. wardens, firefighting, and supporting people who need assistance.*
- *Frequency of training, e.g. on induction and refresher training.*

Indicate how training is:

- *Provided, e.g. in house, external training provider or online.*
- *Recorded.*

Comment

Record any concerns or shortcomings.

Conclusion

Satisfactory Action Required Not Applicable

Fire drills (though these are not normally necessary or appropriate) [16.3k)]

Observation

Indicate:

- *Whether fire drills are carried out.*
- *The frequency of fire drills.*
- *The date and findings of the most recent fire drill.*

Comment

Indicate whether fire drills are appropriate. If fire drills have been carried out, indicate whether they are effective.

Conclusion

Satisfactory Action Required Not Applicable

Resident engagement [16.3l)]

Observation

Where there are arrangements for engagement with residents, outline the arrangements.

Comment

Record any concerns or shortcomings.

Conclusion

Satisfactory Action Required Not Applicable

Information to third parties [16.3m]

Observation

It might be necessary to provide information to third parties because it is good practice or because it is a legal requirement. Indicate here, where known, what information has been provided and to whom, e.g.:

- *To residents – Fire safety information (including any fire safety risks, means of warning and escape), the identity and contact details of the principal dutyholder and their agents, the identity of the fire risk assessor, and statutory information.*
- *To the fire and rescue service – Building plans and location plans, the location and access to SIBs, and faults and rectification work in/on lifts and fire safety equipment.*
- *To statutory bodies (e.g. building safety regulator) – Prescribed information such as a safety case.*

Where information is provided to satisfy legislation, indicate compliance with government guidance. Where necessary, indicate whether fire safety information is given to employees of contractors working on the premises.

Comment

Discuss here any shortcomings in the information to third parties which:

- has an impact on fire safety, or
- falls within the scope of a statutory requirement to carry out a fire risk assessment.

Conclusion

Satisfactory Action Required Not Applicable

Testing and maintenance by a competent persons [16.3n]

Observation

Record the arrangements for maintenance of the fire safety systems and equipment (including that provided for use by, or for the safety of, firefighters), including periodic inspections and servicing by a competent person. In particular, record the frequency, when the last service was done, significant remarks by the maintainer, and whether suitable records are kept. This might include one or more of the following:

- *Detection and warning, e.g. six monthly and annually.*
- *Emergency lighting, e.g. six monthly and annually.*
- *First aid firefighting, e.g. annually.*
- *Automatic fire suppression, e.g. sprinklers six monthly and annually.*
- *Hose reels, e.g. annually.*
- *Gaseous, foam and powder extinguishing systems, e.g. six monthly and annually.*
- *Smoke control, e.g. annually.*
- *Evacuation lifts and firefighting lifts, e.g. six monthly and annually.*
- *Fire hydrants, e.g. annually.*
- *Evacuation alert systems for use by fire and rescue services in buildings containing flats, e.g. six monthly and annually.*
- *Other relevant fire protection systems and equipment.*

Indicate if the maintenance provider appears to be competent (e.g. third-party certification, member of a recognized trade or professional body).

Note: The foregoing list is based on the recommendations of BS 9999.

Comment

Conclusion

Satisfactory Action Required Not Applicable

Maintenance of the premises [16.3o]

Observation

Express a general view of the condition of the premises.

Record the arrangements for maintenance of potentially hazardous systems and equipment (e.g. gas and oil fired heating equipment), including periodic inspections and servicing by a competent person. In particular, record the frequency, when the last service was done, significant remarks by the maintainer, and whether suitable records are kept. Indicate if the maintenance provider appears to be competent (e.g. Gas Safe Register).

Record the arrangements for maintenance of fire safety systems and equipment, including periodic inspections and servicing by a competent person. In particular, record the frequency, when the last service was done, significant remarks by the maintainer, and whether suitable records are kept. Indicate if the maintenance provider appears to be competent (e.g. third-party certification). Where present, this should include:

- *Fire detection and fire alarm systems*
- *Emergency lighting*
- *Portable firefighting equipment*
- *Rising mains*
- *Fire brigade evacuation systems*
- *Smoke control systems*
- *Communication systems (fire telephones and systems in temporary waiting spaces)*
- *Sprinklers*
- *Other fire suppression systems*

Comment

Indicate any shortcomings in the maintenance and where maintainers have indicated the need for rectification which has not been carried out.

Conclusion

Satisfactory Action Required Not Applicable

False alarms [16.3p]

Observation

Indicate if records of false alarm are maintained as described in BS 5839-6. Where there have been false alarms, indicate if there appears to be any consistent cause and what, if any, corrective action has been taken.

Comment

Conclusion

Satisfactory Action Required Not Applicable

Secure information box (15.11)

Observation

*Indicate if there is an SIB and if this is required by law or for some other reason.
Where present, indicate whether the contents are current and correct.*

Comment

Conclusion

Satisfactory Action Required Not Applicable

Documents and records not referred to elsewhere [16.3q]

Observation

Other appropriate records, including, normally, a fire safety manual.

Comment

Conclusion

Satisfactory Action Required Not Applicable

ASSESSMENT OF LIKELY CONSEQUENCES OF FIRE

(Step 6. Make a subjective assessment of the likely consequences of fire [11.1f) and Clause 17])

From the foregoing, it is estimated that the likely consequence of a fire occurring is:

Record a subjective estimate, such as:

- *Slight harm*
- *Moderate harm*
- *Extreme harm*

The estimate of the consequences of fire is based on the following three levels:

Slight harm:	It is unlikely that serious injury or death will result from a fire on the premises.
Moderate harm:	It is unlikely that multiple fatalities would result from a fire on the premises but could result in serious injury.
Extreme harm:	It is likely that one or more occupants would be serious injury or die.

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ASSESSMENT OF FIRE RISK

(Step 7. Make an assessment of the risk, based on steps 3 and 6 [11.1g) and Clause 18])

Classification of fire risk

Likelihood of fire \ Likely consequences of fire	Slight harm	Moderate harm	Extreme harm
Low	Trivial risk	Tolerable risk	Moderate risk
Medium	Tolerable risk	Moderate risk	Substantial risk
High	Moderate risk	Substantial risk	Intolerable risk

Risk level

Descriptor	Descriptor meaning
Very high risk (intolerable)	The situation is intolerable. All or part of the building is unsafe for occupation. Significant effort and/or expenditure might be required to rectify the situation.
High risk (substantial)	Significant improvements are required. Urgent and/or substantial rectification work to at least normalize the risk.
Normal risk (moderate)	Improvements are necessary to reduce the risk to a tolerable level.
Low risk (tolerable)	While some very minor improvements might be required, essentially the existing controls only require maintenance.
Very low risk (trivial)	The risk to life is exceptionally low. No action is needed.

ACTION PLAN

(Step 8. Formulate an action plan [11.1h) and Clause 19])

It is considered that the actions listed below should be implemented in order to reduce fire risk to, or maintain the risk at:

Low risk (tolerable)	<input type="checkbox"/>
Very low risk (trivial)	<input type="checkbox"/>

Definition of priorities (where applicable):

Identify how actions are prioritized, e.g.:

- 1) *Immediate (to be implemented as soon as possible), including, where relevant, interim measures necessary to ensure the safety of occupants until permanent measures can be implemented.*
- 2) *Short term (to be implemented within, perhaps, three months).*
- 3) *Medium term (to be implemented within, perhaps, three to six months).*
- 4) *Long term (to be implemented as and when the opportunity arises, such as at the time of replacement of a fire door or refurbishment of premises).*

Other methods of prioritization are acceptable.

Actions

Ref. no.	Action	Priority	Action by whom	Date completed
<i>Heading to which this action relates</i>	<i>Detail the action: Introduction Discussion Conclusion Avoid using the word “recommend”. To comply with fire safety law, all fire precautions that are necessary must be provided.</i>	<i>Use the priority given in “Definition of priorities” above.</i>	<i>For completion by the purchaser</i>	<i>For completion by the purchaser</i>

Where the action listed above cannot be put into effect in the short term, the interim measures listed below should be put in place until the actions above are effected.

Interim measures

Ref. no.	Action	Priority	Action by whom	Date completed

PERIODIC REVIEW OF FIRE RISK ASSESSMENTS

(Step 9. Determine the period reviewed [11.1i) and Clause 20])

This fire risk assessment is likely to cease to be valid when, for example:

- a) a material alteration takes place;
- b) a significant change occurs in the “given” factors that were taken into account when the FRA was carried out;
- c) a significant change in fire precautions occurs.

There is no correct or incorrect frequency for the regular review of the FRA. However, taking account the likely frequency of significant changes, the age, height and occupancy of the building it is recommended that the fire risk assessment is:

Reviewed	<i>Indicate a date or interval of time, including a justification, e.g.</i> <ul style="list-style-type: none">• <i>For a low risk, modern, low-rise block of general needs flats (e.g. a block of no more than three storeys above ground, built within the last 20 years), 2 years.</i>• <i>For blocks with higher risk (arising from social factors, the age of the building, etc.) and blocks over four storeys in height, 1 year.</i>• <i>In extreme cases, for the highest risk premises, a review might not be applicable, and a full reassessment might be more appropriate.</i>
Replaced	<i>Indicate a date or interval of time, including a justification, e.g.</i> <ul style="list-style-type: none">• <i>Low-risk, modern, low-rise block of general needs flats (e.g. a block of no more than three storeys above ground, built within the last 20 years), 4 years.</i>• <i>For blocks with higher risk (arising from social factors, the age of the building, etc.) and blocks over four storeys in height, 3 years.</i>• <i>In extreme cases, for the highest risk premises, 1 year.</i>

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REFERENCES

The following sources of information have been referred to in the report.

Annex B (informative)

Fire hazard prompt-list

B.1 At least the following potential sources of fire are included in every FRA:

- a) malicious ignition, the hazard of which can be addressed by suitable security of the building to prevent malicious ignition by outsiders (e.g. electronic access control in blocks of flats) and avoidance of unnecessary fire load in close proximity to the building;
- b) electrical faults, the fire hazard of which needs to be addressed by periodic inspection and testing of fixed electrical installations, portable appliance testing (e.g. of any portable electrical equipment supplied to tenants or in offices);
- c) smoking, which, other than within residents' own dwellings, is controlled under legislation, assisted by suitable signage;
- d) use of cooking appliances (e.g. in communal lounges and kitchens in sheltered housing), giving rise to the need for the availability of suitable fire extinguishing appliances, cleaning of any filters and ductwork in ventilation extract facilities that might be found in larger kitchens, etc.;
- e) improper use of portable heaters, which, other than in residents' own dwellings, ought to be avoided as far as possible, and ought to be limited to appliances that are the least hazardous;
- f) contractors' operations, in respect of which there is a need for suitable contract conditions and site control, particularly in relation to "hot work", involving cutting, welding, use of blowlamps, etc.;
- g) faults in fixed heating installations, which ought to be subject to regular maintenance; and
- h) lightning, the hazard of which is addressed by lightning protection.

NOTE 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.

B.2 The FRA typically takes into account the following situations that could lead to a fire or to the development of a fire:

- a) poor housekeeping, necessitating control over combustible materials in common parts;
- b) storage, charging and use of battery-powered mobility scooters, e-bikes and e-scooters in common areas or escape routes, and/or storage facilities for these directly accessed via escape routes, the hazard of which can be minimized by suitable policies to control these factors and applying passive and active protection to storage facilities;
- c) charging of electric vehicles, the hazard of which can be minimized by suitable location of facilities, passive and active fire protection, and management arrangements; and
- d) charging of fixed battery systems (UPS or energy storage), the hazard of which can be minimized by suitable location of facilities, passive and active fire protection, and management arrangements.

B.3 Guidance on the typical fire hazards found in housing premises, and means for their control or elimination, is given in the following publications, which contain comprehensive bibliographies relating to specific fire hazards:

- *Fire safety in specialised housing – Guidance*, published by the National Fire Chiefs Council [13];
- *Practical fire safety for existing specialised housing and similar premises*, published by Scottish Government [14];

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- *Fire safety in purpose-built blocks of flats*, published by the Local Government Association [18];
- *Practical fire safety guidance for existing high rise domestic buildings*, published by Scottish Government [19];
- *Mobility scooter guidance for residential buildings*, published by NFCC [20];
- *E-bikes and e-scooters fire safety guidance*, published by NFCC [21];
- *Covered car parks – Fire safety guidance for electric vehicles*, published by Ove Arup & Partners Ltd [22]; and
- *Guidance on Li Ion battery fires*, published by FIA [23].

Annex C (normative)

Key factors and specific issues to address in assessment of means of escape

C.1 The key factors shown in Table C.1 should always be explicitly addressed in assessment of means of escape. These key factors (most of which are quite broad and encompass a number of more specific issues) can be used as a form of prompt-list and should, therefore, normally be shown in the documented FRA (see Clause 10), as evidence that they have been addressed.

C.2 The more specific issues should always be addressed in the FRA process, but do not necessarily need to be explicitly shown in the documented FRA.

NOTE Where the experience of the fire risk assessor is limited, it might be of value for at least some of the specific issues to be included in the pro forma used, so that they act as prompts or reminders to the fire risk assessor.

C.3 Where it is determined that there are significant departures in compliance of any key factor or specific issue with recognized guidance or codes of practice, but it is considered that the departures are acceptable (and, hence, no relevant recommendation needs to be made in the action plan), the reasoning behind the acceptance of each departure should be documented in the FRA (see 10.2).

NOTE Guidance on means of escape is contained in government guidance documents that support the relevant fire safety legislation.

Table C.1 – Key factors and specific issues to address in assessment of means of escape

Key factor	Specific issues to address	Notes
Design of escape routes	<ul style="list-style-type: none"> • Do escape routes lead to final exits? • Do doors on means of escape open in the direction of escape where necessary? • Are doors on means of escape fitted with appropriate panic bolts or latches? • Will occupants of inner rooms (see 3.1.50) be aware of a fire in the access rooms (see 3.1.1)? • Do revolving doors or sliding doors have suitable bypass doors where necessary? • Are there (and is there a need for) alternative escape routes (see 3.1.4)? • Are the means of escape appropriate for the evacuation strategy? • Are the means of escape appropriate for the occupants in the building (see Annex D)? 	—
Distances of travel	<ul style="list-style-type: none"> • Are travel distances (see 3.1.82) reasonable? • Are travel distances in dead ends (see 3.1.13) suitably limited? 	Recommended maximum travel distances are given in all guidance documents and codes of practice on means of escape, but these distances alone are insufficient to make a judgement if they are considered in isolation of other fire protection measures. The likely rate of fire development, and the consequent time available for escape, need to be taken into account.
Protection of escape routes	<ul style="list-style-type: none"> • Are escape routes, such as staircases, dead end corridors, bedroom corridors, etc., protected (see 3.1.66) where necessary? • Are all fire doors properly self-closing, kept locked shut or only held open by suitable, correctly functioning automatic door release mechanisms (see 3.1.6)? 	Where automatic door release mechanisms are used, it is important that there is adequate provision of suitably sited smoke detectors and that the interface with the fire alarm system is appropriate. Recommendations are given in BS 7273-4.
Adequate provision of exits and escape routes	<ul style="list-style-type: none"> • Is there a sufficient number of fire exits and escape routes? • Are the number and widths of fire exits and escape routes sufficient for the number of occupants? 	Methods of calculating exit capacity are given in all codes of practice that cover means of escape.
Exits easily and immediately openable	<ul style="list-style-type: none"> • Are fire exits easily openable without, for example, the use of a key? • Is there only a single means of securing each fire exit? • Where necessary, do the means of securing fire exits comprise panic bolts (see 3.1.57) or panic latches (see 3.1.58)? • Where electronic locking is used, is its use acceptable, and are the means of releasing the locks suitable? 	Recommendations on the interface between fire detection and fire alarm systems and electronically secured doors are given in BS 7273-4.
Escape routes unobstructed	<ul style="list-style-type: none"> • Are escape routes kept unobstructed? • Are adequate widths of corridors and other escape routes maintained at all times? 	Escape route widths need to be sufficient for the number of people who need to use the escape route.

Annex D (informative)

People with specific evacuation requirements

Occupants' potential response in an emergency situation and their approach to evacuation can vary greatly. This annex gives information on a range of characteristics that might be captured in a PCFRA for a resident of any of the buildings within the scope of this British Standard.

People whose characteristics could potentially (but not always) impact on their approach to evacuation include (but are not limited to):

- blind or partially sighted people;
- people who are Deaf or have a hearing impairment;
- people who are morbidly obese or would fall under the classification of “bariatric”;
- people who have a health, breathing or heart condition;
- people who experience sensory/neurological processing differences;
- people with neurodegenerative conditions;
- people who have a cognitive impairment or learning difficulty;
- people who require alternative communication approaches;
- people who have conditions involving chronic fatigue;
- people with an ambulant mobility impairment;
- wheelchair or mobility scooter users;
- older people who have acquired one or more of the above conditions due to age (but might not identify as disabled);
- people who have a temporary injury or illness;
- people in the later stages of pregnancy or who have young babies; and
- people who are using drugs (prescription or recreational) or alcohol that could impact their cognitive functioning and/or mobility.

Many people who come under some of the occupant groups above could potentially be reliant on powered medical equipment.

Within a number of these occupant groups, there might be people who are reliant on ongoing medical care, which could include mechanical interventions requiring power. Where this is the case, the potential response in an emergency (Table D.1) is likely to be “Require additional assistance”.

People might have more than one of the above characteristics, which could combine to impact in a particular way on an individual's response in an emergency.

Additional information on the characteristics listed above, and their impact on escape/potential response in an emergency, is given in Table D.1. The table gives an indication as to whether each characteristic listed is likely to be permanent (P), temporary (T) or potentially requiring a mobility aid (MA). It uses the abbreviation “FRS” for the fire and rescue service.

Table D.1 also gives examples of additional fire protection measures that might be in place or might be suitable, some of which might require dwelling or building adaptations or features (e.g. handrails, powered door holders/openers, level access or ramps; further guidance is given in BS 8300-2).

Table D.1 – Characteristics of occupants and impact on escape

End user group/ characteristic	Occupant's potential response in an emergency	P	T	MA	Options for evacuation in emergency	Examples of additional fire protection measures that might be in place or might be suitable	
						Means of early warning	Potentially suitable means of escape measures
Blind or partially sighted people	Varying impact on mobility and residual vision levels Potential to use a guide dog or long cane	✓		✓	Independent self-evacuation	—	Person-centred emergency plan (see 3.1.61) Specialist equipment to support wayfinding, e.g. tactile signage
					Evacuation with assistance (e.g. companion or family member, or staff in specialized housing)	—	Person-centred emergency plan (see 3.1.61)
					Require additional assistance (e.g. rescue by FRS)	Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Person-centred emergency plan (see 3.1.61) Location details and summary of person-centred emergency plan kept within a secure information box at entrance for FRS use
People who are Deaf or have a hearing impairment	Dependent on hearing level and/or auxiliary aids Potential to remain in dwelling as not aware, or aware too late	✓		✓	Independent self-evacuation	Visual or sensory alarm system	Person-centred emergency plan (see 3.1.61)
					Evacuation with assistance (e.g. companion or family member, or staff in specialized housing)	Visual or sensory alarm system	Person-centred emergency plan (see 3.1.61)
					Require additional assistance (e.g. rescue by FRS)	Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Person-centred emergency plan (see 3.1.61) Location details and summary of person-centred emergency plan kept within a secure information box at entrance for FRS use

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End user group/ characteristic	Occupant's potential response in an emergency	P	T	MA	Options for evacuation in emergency	Examples of additional fire protection measures that might be in place or might be suitable	
						Means of early warning	Potentially suitable means of escape measures
People who are morbidly obese or would fall under the classification of “bariatric”	Dependent on weight and level of mobility	✓		✓	Independent self-evacuation	—	Person-centred emergency plan (see 3.1.61)
					Evacuation with assistance (e.g. companion or family member, or staff in specialized housing)	—	Specialist equipment to support mobility as required
							Person-centred emergency plan (see 3.1.61)
							Specialist equipment to assist evacuation as required, e.g. bariatric bed, wheelchair, hoist systems
					Require additional assistance (e.g. rescue by FRS)	Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Temporary waiting space
							Evacuation lift
Person-centred emergency plan (see 3.1.61)							
Location details and summary of person-centred emergency plan kept within a secure information box at entrance for FRS use	Specialist equipment to assist evacuation as required, e.g. bariatric bed, wheelchair, hoist systems	Temporary waiting space					
		Evacuation lift					
		Person-centred emergency plan (see 3.1.61)					

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Table D.1 – Characteristics of occupants and impact on escape

End user group/ characteristic	Occupant's potential response in an emergency	P	T	MA	Options for evacuation in emergency	Examples of additional fire protection measures that might be in place or might be suitable	
						Means of early warning	Potentially suitable means of escape measures
People who have a health, breathing or heart condition	Dependent on severity of condition, mobility levels and potential reliance on oxygen supply	✓	✓	✓	Independent self-evacuation	—	Person-centred emergency plan (see 3.1.61)
					Evacuation with assistance	Specialist equipment to support mobility as required	
						Person-centred emergency plan (see 3.1.61)	
						Specialist equipment to assist evacuation as required	
					Require additional assistance	Temporary waiting space	
						Evacuation lift	
Person-centred emergency plan (see 3.1.61)							
Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Location details and summary of person-centred emergency plan kept within a secure information box at entrance for FRS use						
	Specialist equipment to assist evacuation as required						
	Temporary waiting space						
	Evacuation lift						

Table D.1 – Characteristics of occupants and impact on escape

End user group/ characteristic	Occupant's potential response in an emergency	P	T	MA	Options for evacuation in emergency	Examples of additional fire protection measures that might be in place or might be suitable	
						Means of early warning	Potentially suitable means of escape measures
People who experience sensory/ neurological processing differences ^{A)}	Range of reaction in emergency situation Potential for disorientation and confusion or seizures due to sensory overload	✓		✓	Independent self-evacuation	Fire alarm system with voice/visual/sensory alerts (Further guidance in FIA <i>Fire alarm considerations for people with sensory sensitivities</i> [24].)	Person-centred emergency plan (see 3.1.61)
					Evacuation with assistance	Fire alarm system with voice/visual/sensory alerts (Further guidance in FIA <i>Fire alarm considerations for people with sensory sensitivities</i> [24].)	Person-centred emergency plan (see 3.1.61)
					Require additional assistance	Fire alarm system with voice/visual/sensory alerts (Further guidance in FIA <i>Fire alarm considerations for people with sensory sensitivities</i> [24].) Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Person-centred emergency plan (see 3.1.61) Location details and summary of person-centred emergency plan kept within a secure information box at entrance for FRS use

Table D.1 – Characteristics of occupants and impact on escape

End user group/ characteristic	Occupant's potential response in an emergency	P	T	MA	Options for evacuation in emergency	Examples of additional fire protection measures that might be in place or might be suitable	
						Means of early warning	Potentially suitable means of escape measures
People with neurodegenerative conditions ^{B)}	Dependent on severity, potential for disorientation and confusion, difficulty in problem-solving	✓		✓	Independent self-evacuation	Fire alarm system with voice/visual/sensory alerts (Further guidance in FIA <i>Fire alarm considerations for people with sensory sensitivities</i> [24].)	Person-centred emergency plan (see 3.1.61) Specialist wayfinding/equipment to assist evacuation as required
					Evacuation with assistance	Fire alarm system with voice/visual/sensory alerts (Further guidance in FIA <i>Fire alarm considerations for people with sensory sensitivities</i> [24].)	Person-centred emergency plan (see 3.1.61)
					Require additional assistance	Fire alarm system with voice/visual/sensory alerts (Further guidance in FIA <i>Fire alarm considerations for people with sensory sensitivities</i> [24].) Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Person-centred emergency plan (see 3.1.61) Location details and summary of person-centred emergency plan kept within a secure information box at entrance for FRS use

Table D.1 – Characteristics of occupants and impact on escape

End user group/ characteristic	Occupant's potential response in an emergency	P	T	MA	Options for evacuation in emergency	Examples of additional fire protection measures that might be in place or might be suitable	
						Means of early warning	Potentially suitable means of escape measures
People who have a cognitive impairment or learning difficulty	Varies greatly, dependent on the nature of impact on the occupant Potential need for pictograms and graphics	✓			Independent self-evacuation	Fire alarm system with voice/visual/sensory alerts (Further guidance in FIA <i>Fire alarm considerations for people with sensory sensitivities</i> [24].)	Person-centred emergency plan (see 3.1.61) Specialist wayfinding/equipment to assist evacuation as required
					Evacuation with assistance	Fire alarm system with voice/visual/sensory alerts (Further guidance in FIA <i>Fire alarm considerations for people with sensory sensitivities</i> [24].)	Person-centred emergency plan (see 3.1.61)
					Require additional assistance	Fire alarm system with voice/visual/sensory alerts (Further guidance in FIA <i>Fire alarm considerations for people with sensory sensitivities</i> [24].) Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Person-centred emergency plan (see 3.1.61) Location details and summary of person-centred emergency plan kept within a secure information box at entrance for FRS use

Table D.1 – Characteristics of occupants and impact on escape

End user group/ characteristic	Occupant's potential response in an emergency	P	T	MA	Options for evacuation in emergency	Examples of additional fire protection measures that might be in place or might be suitable	
						Means of early warning	Potentially suitable means of escape measures
People who require alternative communication approaches	Communicate in a different way/ English is not first language Potential need for pictograms and graphics	✓	✓		Independent self-evacuation	Fire alarm system with voice/visual/sensory alerts (Further guidance in FIA <i>Fire alarm considerations for people with sensory sensitivities</i> [24].)	Person-centred emergency plan (see 3.1.61) Specialist wayfinding/ equipment to person-centred emergency plan evacuation as required
					Evacuation with assistance	As above	Person-centred emergency plan (see 3.1.61)
					Require additional assistance	Fire alarm system with voice/visual/sensory alerts (Further guidance in FIA <i>Fire alarm considerations for people with sensory sensitivities</i> [24].) Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Person-centred emergency plan (see 3.1.61) Location details and person- centred emergency plan (see 3.1.61) kept within a secure information box at entrance for FRS use

Table D.1 – Characteristics of occupants and impact on escape

End user group/ characteristic	Occupant's potential response in an emergency	P	T	MA	Options for evacuation in emergency	Examples of additional fire protection measures that might be in place or might be suitable	
						Means of early warning	Potentially suitable means of escape measures
People who have conditions involving chronic fatigue ^{C)}	Varies greatly; dependent on the severity of condition and the nature of impact on the occupant	✓	✓	✓	Independent self-evacuation	—	Person-centred emergency plan (see 3.1.61) Specialist equipment to support mobility as required
					Evacuation with assistance	—	Person-centred emergency plan (see 3.1.61)
							Specialist equipment to assist evacuation as required, e.g. wheelchair, hoist systems, evacuation chair type devices
							Temporary waiting space
					Require additional assistance	Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Evacuation lift
							Person-centred emergency plan (see 3.1.61)
Location details and summary of person-centred emergency plan kept within a secure information box at entrance for FRS use							
Require additional assistance	Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Specialist equipment to assist evacuation as required, e.g. wheelchair, hoist systems, evacuation chair type devices					
		Temporary waiting space					
Require additional assistance	Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Evacuation lift					

Table D.1 – Characteristics of occupants and impact on escape

End user group/ characteristic	Occupant's potential response in an emergency	P	T	MA	Options for evacuation in emergency	Examples of additional fire protection measures that might be in place or might be suitable	
						Means of early warning	Potentially suitable means of escape measures
People with an ambulant mobility impairment	Difficulty walking or climbing stairs, likely to use mobility aid Potential to be a non-regular wheelchair user	✓	✓	✓	Self-evacuation independently	—	Person-centred emergency plan (see 3.1.61)
					Evacuation with assistance	—	Specialist equipment to support mobility as required
							Person-centred emergency plan (see 3.1.61)
							Specialist equipment to assist evacuation as required, e.g. wheelchair, hoist systems, evacuation chair type devices
					Require additional assistance	Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Temporary waiting space
							Evacuation lift
Person-centred emergency plan (see 3.1.61)							
Require additional assistance	Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Location details and summary of person-centred emergency plan kept within a secure information box at entrance for FRS use					
		Specialist equipment to assist evacuation as required, e.g. wheelchair, hoist systems, evacuation chair type devices					
		Temporary waiting space					
		Evacuation lift					

Table D.1 – Characteristics of occupants and impact on escape

End user group/ characteristic	Occupant's potential response in an emergency	P	T	MA	Options for evacuation in emergency	Examples of additional fire protection measures that might be in place or might be suitable	
						Means of early warning	Potentially suitable means of escape measures
Wheelchair or mobility scooter users	Reliance on wheelchair or scooter Require level access and assistance in transferring or hoisting	✓	✓	✓	Independent self-evacuation		Person-centred emergency plan (see 3.1.61)
					Evacuation with assistance		Specialist equipment to support mobility as required
							Person-centred emergency plan (see 3.1.61)
							Specialist equipment to assist evacuation as required, e.g. wheelchair, hoist systems, evacuation chair type devices
						Temporary waiting space	
						Evacuation lift	
Require additional assistance	Fire detection in dwelling linked to a monitoring service to enable earliest warning and response of FRS	Person-centred emergency plan (see 3.1.61)					
		Location details and summary of person-centred emergency plan kept within a secure information box at entrance for FRS use					
		Specialist equipment to assist evacuation as required, e.g. wheelchair, hoist systems, evacuation chair type devices					
		Temporary waiting space					
		Evacuation lift					

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Table D.1 – Characteristics of occupants and impact on escape

End user group/ characteristic	Occupant's potential response in an emergency	P	T	MA	Options for evacuation in emergency	Examples of additional fire protection measures that might be in place or might be suitable	
						Means of early warning	Potentially suitable means of escape measures

A) Such as autism, ADHD, dyslexia, epilepsy, Tourette's.

B) Such as dementia, MS, Parkinson's.

C) Such as ME, thyroid, anaemia, sleep apnoea.

Annex E (informative)

Guidance and model pro forma for a person-centred fire risk assessment (PCFRA)

E.1 This annex contains brief guidance on undertaking a PCFRA, and a model pro forma on which the results of a PCFRA can be recorded⁶⁾. More detailed guidance on the steps involved in carrying out a PCFRA is given in *Fire safety in specialised housing guide* [13], published by the National Fire Chiefs Council.

E.2 A PCFRA does not need to be undertaken by a fire safety specialist. It is intended to allow non-specialists to capture information in order to determine whether additional fire precautions might be needed. The appropriate person to carry out the PCFRA depends on the circumstances of the housing and support provision. Ideally, it will be carried out by someone who regularly engages with the resident, with input from specialists where necessary. It is desirable for PCFRAs to be undertaken with the direct involvement of the person themselves wherever possible, and their consent is needed for any prevention/protection arrangements and action plans.

E.3 A simple approach to a PCFRA involves nine steps, as set out below. The outcomes of the PCFRA need to be relayed to any people identified to assist the resident (if required).

- a) Step 1: Determine the characteristics of the resident.
- b) Step 2: Determine the potential causes and likelihood of fire.
- c) Step 3: Identify any circumstances that could lead to rapid fire development.
- d) Step 4: Identify existing measures to protect the resident if fire occurs.
- e) Step 5: Consider the resident's likely response to fire alarm signals or signs of fire.
- f) Step 6: Consider whether or how the resident will make their way to safety.
- g) Step 7: Informed by the above information, determine the level of risk to the resident from fire.
- h) Step 8: Prepare an action plan, if required, to remove or reduce any risks to a level that is reasonable in the circumstances, or to provide fire safety arrangements and support as necessary.
- i) Step 9: Determine the period for review of the assessment, taking into account the level of risk, the measures that need to be put in place and the extent to which risk could potentially increase with time (e.g. as a result of potential changes to a person's characteristics).

⁶⁾ It is anticipated that an electronic version of the pro forma will be made available with the published standard.

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PERSON-CENTRED FIRE RISK ASSESSMENT

PCFRA details	
Date PCFRA undertaken	
Resident's surname	
Resident's first name	
Resident's date of birth	
Resident's address	
Location of property (floor, block, etc.)	
How is property accessed (e.g. lifts or stairs)?	
Name of assessor undertaking PCFRA	
Role of assessor	
Reason for PCFRA being undertaken	
Source of request for PCFRA being undertaken, e.g.: <ul style="list-style-type: none">• person who requested it• if not resident, their relationship to resident• staff/housing provider process• care planning/management process	
Does resident consent to PCFRA being shared with fire and rescue service?	

Step 1: Consider the characteristics of the resident.		Risk rating/comments
<p>Any relevant resident-specific characteristics, including but not limited to cognitive, neurodiversity, sensory, mental or physical health, mobility, older or younger.</p> <p>“Relevant characteristics” = characteristics that require specific arrangements to support the resident to:</p> <ul style="list-style-type: none"> • prevent fire, • respond to a fire or fire alarm operating, • evacuate when necessary. 		
<p>Any specific measures required to make resident aware of emergency alarm? (e.g. fire alarm system with voice/visual/vibrating alerts)</p>		
<p>Any resident communication requirements? (e.g. British Sign Language user, hearing aid user, visual alert, clear directional signage)</p>		
<p>Use of specific mobility aids?</p>		
<p>Reliance on powered medical equipment?</p>		
<p>Reliance on oxygen supply?</p>		
<p>Prescription drug use which could impact on reaction?</p>		
<p>Relevant alcohol or recreational drug use?</p>		
<p>Significant emollient/paraffin cream use combined with ignition sources such as smoking/e-cigarettes, portable heaters, open fires, candles, gas cooker?</p>		

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Use of pressure relieving mattress combined with ignition sources such as electric blankets, smoking/e-cigarettes, candles, portable heaters, electrical items?		
Is any of the above information likely to change over time? If so, how?		
Step 2: Determine the potential causes and likelihood of fire.		
Potentially unsafe smoking or vaping? <ul style="list-style-type: none"> • Burn marks to clothes, bedding, furnishings or carpets • Overcharging of e-cigarettes • Other (please specify) 		
Potentially unsafe cooking? <ul style="list-style-type: none"> • Ignitable items too close to cooker • Potential to leave cooking unattended • History of alarm signals or small fires from cooking • Other (please specify) 		
Electrical safety issues? <ul style="list-style-type: none"> • Overloaded sockets, extension leads/adaptors • Faulty equipment or cables • Electric blankets with maintenance issues • Mobility scooters, e-bikes and e-scooters using incorrect chargers, overcharging or storage in escape routes • Other (please specify) 		

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<p>Potentially unsafe use of heaters/open fires?</p> <ul style="list-style-type: none"> • Placed on unstable surfaces • Sited too close to combustible materials • Use for drying clothes or warming meals • Unguarded open fires • Other (please specify) 		
<p>Potentially unsafe use of candles?</p> <ul style="list-style-type: none"> • Placed too close to furnishings • Placed within reach of children • On unstable surfaces • Other (please specify) 		
<p>Step 3: Identify any circumstances that could lead to rapid fire development.</p>		
<p>Significant hoarding/fire loading combined with unsafe use of ignition sources such as smoking materials, cooking, candles, portable heaters, open fires.</p>		
<p>Oxygen therapy combined with ignition sources such as smoking/e-cigarettes, candles, open fires, portable heaters.</p>		
<p>Other (please specify).</p>		

Step 4: Identify existing measures to protect the resident if fire occurs.	
<p>For example:</p> <ul style="list-style-type: none"> • Suitable early detection and warning of fire (smoke or heat alarms) in all rooms where fire could start. • Fire detection linked to a monitoring service. • Fire suppression system (sprinklers or watermist). • Suitable and accessible means of escape routes clear of obstructions. • Specialist adaptations/equipment to support evacuation as required. • Other (please specify) 	
Step 5: Consider the resident's likely response to fire alarm signals or signs of fire.	
Resident's likely response in an emergency, e.g. immediate, delayed, no response?	
Other assistance required to prompt a response?	
Is the resident likely to raise the alarm and do they have the means to do so?	
Step 6: Consider whether or how the resident will make their way to safety.	
Independent self-evacuation?	
Evacuation with assistance (e.g. companion or family member, or staff in specialized housing)?	
Require additional assistance (e.g. rescue by fire and rescue service)?	
Suitable means of escape measures provided for resident if self-evacuating or with assistance?	

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Specialist equipment to assist evacuation as required, e.g. use of a specific wheelchair, hoist systems, evacuation chair type devices? Dwelling or building adaptations or features, e.g. handrails, powered door holders/openers, level access, ramps, handrails? Temporary waiting space? Evacuation lift?		
Are escape routes kept clear of obstructions, immediately accessible and doors openable without the use of a key?		
Step 7: Informed by the above information, determine the level of risk to the resident from fire.		
Summary: level and nature of specific risks, discussed with and agreed by resident, and others if appropriate.		
Step 8: Informed by the above information, prepare an action plan if required.		
Action required: Physical provisions or specific arrangements/adaptations/equipment required?		
Action required: Further specialist advice required from fire and rescue service, local authority, housing provider, care provider?		
Person-centred emergency plan required?		
People identified to assist: roles and training undertaken?		
Information to be placed in secure information box for use by fire and rescue service?		
Step 9: Determine the period for review of the assessment.		
Date for review of PCFRA		

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