

PAS 79 Fire risk assessment – Guidance and a recommended methodology



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C.S. Todd &
Associates Ltd.



Northern
Ireland Fire
Safety Panel

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Foreword

Publishing information

This Publicly Available Specification (PAS) was first prepared by BSI in association with C.S. Todd & Associates Ltd with the support and encouragement of the Institution of Fire Engineers and the Northern Ireland Fire Safety Panel, which represents building control and licensing authorities in Northern Ireland, and the Northern Ireland Fire and Rescue Service. This revised edition has, again, been developed in association with C.S. Todd & Associates Ltd.

Acknowledgement is given to the following organizations that were consulted in the development of this Publicly Available Specification.

Ark Workplace Risk Limited
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Northern Ireland Fire Safety Panel
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Scottish Fire Services College
Worcestershire County Council

BSI Committees:

FSH/14 Fire precautions in buildings
FSH/0 Fire co-ordination
FSH/24 Fire safety engineering
HS/1 Occupational health and safety management

Supersession

This is the first revision of PAS 79:2005, which is withdrawn.

Information about this document

This Publicly Available Specification has been developed and published by BSI, which retains its ownership and copyright, except for Annexes A and D (see *Use of this document*). BSI reserves the right to withdraw or amend this PAS on receipt of authoritative advice that it is appropriate to do so. This Publicly Available Specification will be reviewed at intervals not exceeding two years, and any amendments arising from the review will be published as an amendment and publicized in *Update Standards*.

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

- All references to legislation have been updated to take account of the repeal of the Fire Precautions Act 1971 [1] and the Workplace Fire Precautions Legislation [2], and to refer to the Regulatory Reform (Fire Safety) Order 2005 [3] and to the equivalent legislation in Scotland [4–5] and Northern Ireland [6– 7].
- The technical content has been subject to minor amendment in the light of experience in the use of PAS 79.
- The guidance now recommends more detailed examination and recording of certain fire precautions and fire safety arrangements, in the light of experience and the new fire safety legislation.
- Reference is now made to the requirements of the relevant fire safety legislation in respect of dangerous substances.

Use of this document

As a code of practice, this Publicly Available Specification takes the form of guidance and recommendations. It should not be quoted as if it were a specification, and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this Publicly Available Specification is expected to be able to justify any course of action that deviates from its recommendations.

It has been assumed in the drafting of this Publicly Available Specification that the execution of its provisions will be entrusted to appropriately qualified and competent people, for whose use it has been produced.

The copyright for Annexes A and D of this Publicly Available Specification is owned by C.S. Todd & Associates Ltd. Purchasers of this Publicly Available Specification are authorized to use the pro-formas contained within these annexes, and to make an unlimited number of copies for their own use, without infringement of copyright, provided that no changes are made to its text, format or copyright marking. However, it should be noted that compliance with this PAS does not necessitate use of the pro-formas in these annexes.

This Publicly Available Specification is not intended to constitute a textbook on fire safety, and it should not be regarded as a substitute for knowledge of fire safety principles and the practical use and application of fire protection measures. In carrying out the fire risk assessment, there is likely to be a need for reference to other codes of practice and guidance documents on specific aspects of fire prevention, fire protection and management of fire safety, a number of which are listed in the Bibliography. Moreover, this PAS is not intended to provide guidance on the detailed requirements of the relevant fire safety legislation. Such guidance can be found in the relevant Government guidance documents listed in the Bibliography.

Presentational conventions

The provisions in this standard 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.

It is envisaged that, when a fire risk assessment is audited for compliance with this Publicly Available Specification, the audit will be based on the recommendations only.

The word “should” is used to express recommendations of this standard. 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 standard. Notes give references and additional information that are important but do not form part of the recommendations. Commentaries give background information.

Contractual and legal considerations

In England and Wales, Article 9 of the Regulatory Reform (Fire Safety) Order 2005 (the “Fire Safety Order”) [3] requires that the responsible person, on whom the Fire Safety Order imposes requirements, must make a suitable and sufficient assessment of the risks to which relevant persons are exposed for the purpose of identifying the general fire precautions he needs to take to comply with the requirements and prohibitions imposed on him by or under the Fire Safety Order. (For the purpose of the Fire Safety Order, “relevant persons” are any person who is or may be lawfully on the premises, and also any person in the immediate vicinity of the premises who is at risk from a fire in the premises, other than fire-fighters at the time of a fire.)

The same duty is imposed on every person, other than the responsible person, who has, to any extent, control of the premises so far as the duty relates to matters within his control. (This would normally include, for example, the landlord or managing agent of commercial premises in multiple occupation.)

The above risk assessment is commonly described as a fire risk assessment. Guidance on the requirements of the Fire Safety Order, and on the fire risk assessment required by it, is produced by the Communities and Local Government (CLG) [8–18]. The guidance in this Publicly Available Specification is more detailed in respect of the fire risk assessment process than that published by the CLG, but does not conflict with that guidance. However, the Government guidance documents provide more detailed technical information on the fire safety measures required by legislation.

In Scotland, the duty to carry out a fire risk assessment is imposed on every employer by section 53(2)(a) of the Fire (Scotland) Act 2005 [4]. The Act requires that the risk assessment identifies any risks to the safety of the employer’s employees in respect of harm caused by fire in the workplace. Section 54(2)(a) of the Act also imposes a duty, on any person who has control to any extent of relevant premises, to carry out a fire risk assessment, and this risk assessment must identify any risks to the safety of relevant persons in respect of harm caused by fire in the relevant premises; relevant persons is defined in much the same manner as it is defined in the Fire Safety Order in England and Wales. In Scotland, further requirements in respect of the fire risk assessments required by the Fire (Scotland) Act are imposed by the

Fire Safety (Scotland) Regulations 2006 [5]. Guidance on the requirements of this legislation, and the fire risk assessment required by it, is published by the Scottish Executive [19].

In Northern Ireland, the requirements for fire risk assessments are identical to those in Scotland, but are imposed by Articles 25(2)(a) and 26(2)(a) of the Fire and Rescue Services (Northern Ireland) Order 2006 [6].

Fire and rescue authorities can advise on the fire safety legislation that applies to any building, and on means for compliance. If in doubt regarding the requirements of legislation, consultation with the fire and rescue authority is strongly recommended. Advice can also be obtained from a suitably qualified and experienced fire risk assessor or fire safety practitioner. A number of bodies, including the Institution of Fire Engineers, maintain a register of persons who are considered competent to carry out fire risk assessments.

NOTE Professional bodies can advise on appropriately qualified and experienced specialists. The Institution of Fire Engineers maintain a register of fire risk assessors who have demonstrated to the satisfaction of the IFE that they have a combination of education, training, knowledge and relevant experience in the principles of fire safety, and have experience in carrying out fire risk assessments, one or more samples of which have been subject to review by the IFE to confirm that they are suitable and sufficient to meet their objective.

This Publicly Available Specification does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

This Publicly Available Specification is not to be regarded as a British Standard.

Compliance with a Publicly Available Specification cannot confer immunity from legal obligations.

Attention is drawn to the legislation described in this Foreword and to guidance produced by Communities and Local Government, the Scottish Executive and the Department of Health, Social Services and Public Safety (in Northern Ireland).

Introduction

Employers and other persons who have control of premises are required by legislation to carry out an assessment of the fire risks to occupants of buildings, and other people in the vicinity of the buildings, to ensure that these people are safe from fire and its effects. The Regulatory Reform (Fire Safety) Order 2005 [3] requires that, in England and Wales, the risk assessment is “suitable and sufficient”. This assessment is usually referred to as a “fire risk assessment”. For the purposes of this Publicly Available Specification, a fire risk assessment carried out in the structured manner described herein will be referred to as “the fire risk assessment”.

The person on whom a duty is imposed to carry out the fire risk assessment is described in different ways in different legislation across the UK. For example, in England and Wales, the Regulatory Reform (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. in premises in multiple occupation, the duty may be imposed on every tenant, the owner and the managing agents). In this PAS, the term “dutyholder” is used to describe any person on whom the relevant fire safety legislation (see 3.75) imposes a requirement to carry out a fire risk assessment.

Since legislation also requires “suitable and sufficient” assessments to ensure that organizations comply with health and safety legislation, an organization could choose to carry out, and document, a single combined health, safety and fire risk assessment. In practice, this approach is normally only adopted in the case of very small buildings, and most organizations choose to carry out a separate fire risk assessment, independent of their health and safety risk assessment. The reason for this is that, for most buildings, different skills, experience and expertise are required for each of the two forms of risk assessment.

The term “suitable and sufficient” is not defined in legislation. Moreover, legislation requires that the “significant findings” of the risk assessment, and any group of persons “especially at risk”, be recorded if the organization employs five or more people (in the entire organization, and not just in the building in question), or if legislation requires licensing, registration or certification of the premises, or if an alterations notice (requiring that the relevant enforcing authority is notified of proposals to carry out certain alterations to the premises) is in force. Again, the terms “significant findings” and “especially at risk” are not defined in the relevant legislation. It follows, therefore, that the adequacy of any fire risk assessment is a matter for subjective judgement. This can lead, and has led, to inconsistency in interpretation, creating some difficulties for organizations, their advisers and enforcing authorities. These difficulties have been exacerbated, even for fire safety specialists, by a distinct move, in recent years, towards “risk-proportionate” fire precautions, and away from the more traditional “prescriptive” approach in which there was often a more rigid application of codes of practice without full consideration of fire risk.

This shift is beneficial to those who own and manage buildings, since it provides a better match between risk and precautions, more akin to that found in the field of general health and safety. It therefore precludes unnecessary expenditure in circumstances in which the risk does not justify it. Equally, it ensures adequate protection (possibly to an even higher standard than applied under prescriptive codes) when warranted by the fire risk. Ultimately, the final arbiter as to whether fire precautions satisfy legislation can, however, only be the Courts.

There is, therefore, no single correct or incorrect method of carrying out and recording the significant findings of a fire risk assessment. Rather, there are many approaches that can lead to a suitable, and satisfactorily documented, fire risk assessment, which, at first sight at least,

bear little similarity. Nevertheless, the prerequisites for a suitable and sufficient fire risk assessment are implicit in legislation, and, accordingly, close scrutiny of most adequate fire risk assessments will reveal consideration of many common factors.

This Publicly Available Specification does not purport to contain a methodology and documentation that is necessarily superior to all others. It is likely to satisfy requirements of current fire safety legislation and will, if necessary, be amended at the relevant time to ensure that this is the case. The fire risk assessment methodology is intended to facilitate protection of people from fire. Guidance on fire precautions to protect property, and to protect against interruption to business, from fire can be obtained from property insurers, and many suitably qualified and experienced fire safety consultants can advise on these issues as well as on life safety.

The objectives of this Publicly Available Specification are:

- to provide organizations and their advisers with a methodology for meeting their legislative responsibilities to undertake fire risk assessments;
- to assist non-fire specialists with a framework for assessment of fire risk, albeit that an underpinning knowledge of fire safety principles will be required in order to carry out the fire risk assessment described in this Publicly Available Specification;
- to promote better understanding of fire risks and fire safety by organizations and non-fire specialists;
- to enable common relevant terminology to be adopted by those who carry out fire risk assessments;
- to provide an understanding of the principles and scope of fire risk assessments;
- 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 fire risk assessments;
- to establish a satisfactory basis for documentation of fire risk assessments;
- to provide a benchmark for a suitable and sufficient fire risk assessment.

This PAS is largely consistent with the approach to fire risk assessment set out in Government guidance documents on the relevant fire safety legislation. These guidance documents not only explain the legal requirements in respect of fire risk assessment, but give technical guidance on compliance with the legislation. However, in the particular area of fire risk assessment, this PAS expands on the advice in the Government guidance documents.

1 Scope

This Publicly Available Specification gives guidance and corresponding examples of documentation for undertaking, and recording the significant findings of, fire risk assessments in buildings and parts of buildings for which fire risk assessments are required by legislation. It is not applicable in the case of a single-family private dwelling, or necessarily applicable to buildings during the construction phase¹. The methodology is intended to provide a structured approach for people with knowledge of the principles of fire safety; it is not intended as a guide to fire safety for non-specialists.

The recommended approach to carrying out fire risk assessments is intended to determine the risk-proportionate fire precautions required to protect building occupants including employees, contractors, visitors and members of the public and to protect people in the immediate vicinity of the building. The fire risk assessment is not necessarily sufficient to address the safety of fire-fighters in the event of a fire in the building.

The recommended methodology is not intended to address protection of property (the building and its contents) or the environment, or to address protection of a business, process or activity against interruption. Buildings with special hazards, with the potential for high risk to life (e.g. chemical or nuclear hazards), will require consideration of additional factors associated with these hazards and their means of control, and are beyond the scope of this document.

2 Normative references

The following referenced documents are indispensable for the application of this document. The latest edition of the referenced documents (including any amendments) applies.

BS 4422, *Fire – Vocabulary*

BS EN ISO 13943, *Fire safety – Vocabulary*

3 Terms and definitions

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

3.1

access room

room that forms the only escape route from an inner room (see **3.58**)

3.2

action plan

measures identified in the course of a fire risk assessment that need to be implemented to ensure that the required level of fire safety is achieved or maintained

NOTE The required standard of fire safety will normally be defined within the organization's fire safety policy, but will never be of a lower standard than that required by legislation.

¹ Fire risk assessments are, however, required, for example, in the case of common parts of houses in multiple occupation and blocks of flats in England and Wales, and for licensed houses in multiple occupation in Scotland. Fire risk assessments are also required for construction sites. Nevertheless, these fire risk assessments are outside the scope of this PAS.

3.3**alarm receiving centre (ARC)**

continuously manned 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

3.4**alternative escape routes**

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

3.5**automatic door release mechanism**

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

3.6**available safe egress time (ASET)**

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

NOTE To ensure the safety of occupants, the escape time (see 3.21) needs to be shorter than the ASET.

3.7**class A fires**

fires involving solid materials, usually of an organic nature, in which combustion normally takes place with the formation of glowing embers

NOTE These are normally carbonaceous fires.

3.8**class B fires**

fires involving liquids or liquefiable solids

3.9**class C fires**

fires involving gases

3.10**class D fires**

fires involving metals

3.11**class F fires**

fires involving fats and cooking oils

3.12**combustible**

capable of burning in the presence of oxygen

3.13

compartmentation

subdivision of a building by fire-resisting walls and/or floors for the purpose of limiting fire spread within the building

3.14

competent person

person with sufficient training and experience, knowledge or other qualities, to enable them to carry out a defined task properly

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

3.15

dead end

area from which escape from fire is possible in one direction only

3.16

dry fire main

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

3.17

dutyholder

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

NOTE 1 The term “dutyholder” only has meaning within this PAS, and is used for convenience; it is not a term used in this context within fire safety legislation, in which the dutyholder could be a number of different parties according to circumstances.

NOTE 2 The dutyholder can be determined from the relevant fire safety legislation.

NOTE 3 The dutyholder is normally an organization, such as an employer, rather than a specific named person.

NOTE 4 There might be more than one dutyholder within any building. For example, in a multi-tenanted office building, normally each tenant, and the landlord or managing agents, will be dutyholders.

3.18

emergency escape lighting

part of the emergency lighting that provides illumination for the safety of people leaving a location or attempting to terminate a potentially dangerous process before doing so

3.19

emergency lighting

lighting provided for use when the supply to the normal lighting fails

3.20

escape route

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

3.21**escape time**

time from ignition until the time at which all the occupants of a building, or a specified part of a building, are able to reach a place of safety

3.22**evacuation lift**

lift that may be used for the evacuation of disabled occupants in a fire under the direction of management or fire-fighters

3.23**false alarm**

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

3.24**final exit**

termination of an escape route from a building, giving direct access to a street, passageway, walkway or open space, where people are no longer in danger from fire

3.25**fire audit**

systematic and, whenever possible, independent examination to determine whether standards of fire safety conform to those required in order to achieve the organization's fire safety policy and objectives

3.26**fire damper**

mobile closure or intumescent device within a duct, which is operated automatically and is designed to prevent the passage of fire and which, together with its frame, is capable of satisfying for a stated period of time the same fire resistance criterion for integrity as the element of the building construction through which the duct passes

3.27**fire/smoke damper**

combined fire and smoke damper

NOTE See fire damper (3.26) and smoke damper (3.78).

3.28**fire door**

door or shutter provided for the passage of people, air or objects 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

3.29**fire drill (evacuation drill)**

rehearsal of the evacuation procedure involving participation of the occupants of a building

3.30

fire equipment sign

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

3.31

fire exposure

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

3.32

fire-fighting lift

lift with fire protection measures, including controls that enable it to be used under the direct control of the fire and rescue service during a fire

3.33

fire hazard

source or situation with potential to result in a fire

NOTE Examples of fire hazards include ignition sources and accumulation of waste that could be subject to ignition.

3.34

fire hazard identification

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

3.35

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

3.36

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

3.37

fire prevention measures

measures to prevent the outbreak of fire

3.38

fire procedure

pre-planned actions to be taken in the event of fire

3.39

fire protection measures

design features, systems, equipment or structural measures to reduce danger to people and property if fire occurs

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

3.40**fire resistance**

ability of an item to fulfil for a stated period of time the required load-bearing capacity and/or integrity and/or thermal insulation, and/or other expected duty specified in a standard fire resistance test

3.41**fire risk**

combination of likelihood and consequence(s) of fire

NOTE In the context of this PAS, the relevant consequences are those involving injury to people, as opposed to damage to property.

3.42**fire risk assessment**

overall process of identifying fire hazards and evaluating the risks to health and safety arising from them, taking account of existing risk controls (or, in the case of a new activity, the proposed risk controls)

NOTE A fire risk assessment is a legal requirement for virtually all non-domestic premises, and for certain multiple-occupancy dwellings and parts of such dwellings.

3.43**fire risk assessor**

person who carries out, and documents, a fire risk assessment

NOTE It is essential that the fire risk assessor is a competent person (see 3.14), and the fire risk assessor has a duty of care to the organization on which legislation imposes a requirement for the fire risk assessment. However, the ultimate responsibility for the adequacy of the fire risk assessment rests with the dutyholder (which could be an organization – see 3.17 and related notes) rather than with the fire risk assessor (see Clause 6).

3.44**fire safety engineer**

person suitably qualified and experienced in fire safety engineering

3.45**fire safety engineering**

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

3.46**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 the employees from fire

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

3.47

fire safety management

task(s) carried out by a defined individual or individuals with appropriate powers and resources to ensure that the fire safety systems, passive, active and procedural, within the building are working properly at all times

3.48

fire safety manager

person nominated to monitor and control management of fire safety

3.49

fire safety manual

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

3.50

fire safety objective

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

3.51

fire safety policy

documented strategy that sets the standards of fire safety that an organization is committed to maintaining

NOTE For example, the starting point of a fire safety policy is expected to be that the organization complies with all legislative requirements in respect of fire safety.

3.52

fire safety refresher training

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

3.53

fire scenario

detailed description of conditions, including environmental conditions, of one or more stages from before ignition to after completion of combustion in an actual fire at a specific location

3.54

fire stopping

sealing or closing an imperfection of fit between elements, components or constructions of a building, or any joint, so as to restrict penetration of smoke and flame through the imperfection or joint

3.55

fire warden

individual charged with specific responsibilities in the event of fire, normally involving a check to ensure that a particular area of the building has been evacuated

3.56

ignition

initiation of combustion

3.57**ignition source**

source of energy that initiates combustion

3.58**inner room**

room from which the only escape route is through another room

NOTE The room that provides the escape route from an inner room is known as an access room (see 3.1).

3.59**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

3.60**maintained emergency lighting**

lighting system in which all emergency lighting lamps are illuminated at all material times

3.61**mandatory sign**

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

3.62**manual call point**

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

3.63**material alteration**

alteration that changes (usually lowering or with the potential to lower) the standard of fire protection originally provided

3.64**means of escape**

structural means whereby a safe route in the event of fire is provided for persons to travel from any point in a building to a place of safety (without external assistance)

3.65**non-combustible**

not capable of undergoing combustion under specified conditions

3.66**non-maintained emergency lighting**

lighting system in which all emergency lighting lamps are illuminated only when the supply to the normal lighting fails

3.67

occupant(s) especially at risk

building occupant(s) who, as a result of their physical or mental state, age or location in the building, are at greater risk from fire than an able-bodied, fully alert adult afforded adequate means of escape and other fire precautions, whether on a short-term or long-term basis

3.68

panic bolt

mechanism, consisting of a minimum of two sliding boltheads 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

3.69

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

3.70

phased evacuation

system of evacuation in which different parts of the building are evacuated in a controlled sequence of phases, those parts of the building expected to be at greatest risk being evacuated first

3.71

place of safety

place in which people are in no danger from fire

3.72

products of combustion

solid, liquid and gaseous materials resulting from combustion

3.73

protected (corridor, route or staircase)

corridor, route or staircase enclosed in fire-resisting construction

3.74

refuge

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 for disabled occupants to await assistance for their evacuation

NOTE Refuges are relatively safe waiting areas for short periods. They are not areas where disabled occupants should be left indefinitely until rescued by the fire and rescue service or until the fire is extinguished. It is the organization's responsibility to provide assistance, and the arrangements for this should be incorporated within the building's fire procedures. (This should not be confused with the use of refuges in progressive horizontal evacuation, e.g. in hospitals from which people might not need to escape, but from where there is the potential for further escape should that become necessary.)

3.75**relevant fire safety legislation**

<in England and Wales> Regulatory Reform (Fire Safety) Order 2005 [3]

<in Scotland> combination of the Fire (Scotland) Act 2005 [4] and the Fire Safety (Scotland) Regulations 2006 [5]

<in Northern Ireland> Fire and Rescue Services (Northern Ireland) Order 2006 [6], together with the Fire Safety (Northern Ireland) Regulations [7]

3.76**safe condition sign**

safety sign that provides information about safe conditions

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

3.77**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 The term “smoke alarm” is normally reserved for devices intended for domestic use.

3.78**smoke damper**

mechanical device which, when closed, prevents smoke passing through an aperture within a duct or structure

NOTE In a particular building, smoke dampers might be automatically operated, or only manually operated, or a combination of the two, and their normal position might be either open or closed.

3.79**structural fire protection**

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

3.80**third-party fire risk assessor**

independent fire risk assessor 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 consultant is an example of a third-party fire risk assessor.

3.81**tolerable level (of fire risk)**

level at, or close to, that acceptable to an organization, taking into account the requirements of fire safety legislation, the fire safety policy of the organization (see **3.51**), the nature of the building, the fire hazards in the building (see **3.33**), the nature of the occupants, the cost of additional fire precautions and any other relevant factors

3.82**travel distance**

actual distance to be travelled by a person from any point within the floor area to the nearest storey exit, having regard to the layout of walls, partitions and fixings

3.83

voice alarm system

sound distribution system that provides means for automatically broadcasting speech messages and warning signals

3.84

wet fire main

water supply pipe installed in a building for fire-fighting purposes and permanently charged with water from a pressurized supply, fitted with landing valves at specific points

4 The concepts of fire risk and fire hazard

COMMENTARY ON CLAUSE 4

It is important that, in the fire risk assessment, confusion does not result from loose, inexact or conflicting use of terminology. Particular care needs to be taken to avoid improper use of the terms “fire hazard” (see 3.33) and “fire risk” (see 3.41). BS 4422 defines a fire hazard as potential for injury and/or damage from fire. In the field of health and safety, BS 8800 defines a hazard as a source or a situation with a potential for harm in terms of death, ill health or injury, or a combination of these. In this PAS, a fire hazard is defined as a source or situation 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. This is consistent with both BS 4422 and BS 8800.

BS 4422 defines fire risk as the product of the probability of occurrence of a fire to be expected in a given technical operation or state, and the consequence or extent of damage to be expected on the occurrence of fire. Accordingly for the purpose of this PAS, fire risk is defined as the combination of the likelihood and the consequences of fire. This, again, is consistent with the broader concept of risk in the field of general health and safety.

This clear distinction between fire hazard and fire risk is of great value in any analytical approach to fire safety, but particularly in a fire risk assessment. It can be considered that fire risk 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 layman, 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 fire risk assessment, care should be taken to distinguish clearly between the concepts of fire hazard and fire risk.

4.2 In the fire risk assessment, the terms “fire hazard” and “fire risk” should only be used in a context consistent with definitions 3.33 and 3.41.

5 Principles and scope of fire risk assessments

COMMENTARY ON CLAUSE 5

The fire risk assessment is a systematic and structured assessment of the fire risk (see Clause 4) in the relevant building for the purpose of expressing the current level of fire risk, determining the adequacy of existing fire precautions (see 3.36) 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 3.2), which forms part of the documented fire risk assessment (see Clause 9). The objective of the action plan is to set out measures that will ensure that the fire risk is reduced to, or maintained at, a tolerable level (see 3.81).

The fire risk assessment needs to be a genuine and open-minded approach to the assessment of fire risk and fire precautions. It is not, for example, appropriate to use the fire risk assessment to justify a decision regarding fire precautions that has already been made, or to justify significant departures from universally recognized good practice.

It follows from the definition of fire risk that the fire risk assessment involves consideration of relevant fire hazards and the means for their elimination or control, i.e. fire prevention measures. This contrasts with the approach adopted in now repealed fire safety legislation, which tended to concentrate on fire protection measures (see 3.39), rather than fire prevention measures (see 3.37).

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 fire risk assessment begins with endeavours to reduce the likelihood of fire. In this sense alone, fire risk assessment is a more holistic approach to control of fire risk than that adopted under earlier legislation.

The likelihood of fire can, however, never be reduced to zero. Accordingly, there is normally need for fire protection measures of the nature commonly prescribed under earlier legislation, such as means of escape (see 3.64), measures that assist in the use of escape routes (see 3.20), means of giving warning of fire and means for fighting fire. However, fire protection measures, by definition, only have a bearing on fire safety after fire has occurred and, therefore, fire prevention has failed.

Most of the visible fire precautions in a building are fire protection measures, and it is with these measures that the fire safety provisions within building regulations are primarily concerned. However, in a modern building, the risk to people (and property) from fire is often governed more by the quality of fire safety management (see 3.47) than the level of fire protection. Indeed, significant factors in most non-domestic, multiple fatality fires, particularly those involving, say, ten deaths or more, are failures in fire safety management, rather than failures in building design or fire protection measures.

Thus, in contrast with the approach to compliance with building regulations, it is absolutely essential that every fire risk assessment gives thorough attention to fire safety management and, therefore, to matters such as the fire safety strategy for the building, fire procedures (see 3.38), staff training, testing and maintenance of fire protection equipment, inspection of means of escape, etc. Good fire safety management also contributes to the prevention of fire by incorporating policies and measures that reduce the likelihood of fire.

It follows, therefore, that the fire risk assessment can only validly be carried out on a building that is in use, so that the actual working conditions, practices and procedures can be taken into account. The fire risk assessment is not a means for snagging fire precautions in a newly constructed building prior to occupation. Parts of the fire risk assessment can be used for such a purpose, in order to ensure the building is safe for occupation, but such an exercise would not constitute a suitable and sufficient fire risk assessment, as management issues and operational issues cannot be properly addressed.

The fire prevention measures, fire protection measures and components of fire safety management can be considered as variables, the standard of which can be reduced or increased, according to the fire risk, in order to provide an integrated package of measures that limits fire risk to a tolerable level. However, some factors that have a major impact on fire risk are not variable, but are “given” factors for the building in question. Usually, basic information on such factors can be considered as significant findings of the fire risk assessment, and accordingly, such information needs to be recorded.

Such factors include:

- a) the height of the building (e.g. single storey or multi-storey, low rise or high rise, the presence of basements);*
- b) the construction of the building [e.g. largely non-combustible (see 3.65) or mainly combustible (see 3.12)];*
- c) the activities and processes carried out in the building [e.g. handling of highly flammable materials, creation of combustible wastes, use of ignition sources (see 3.57)];*
- d) the complexity of the building (e.g. simple, straightforward escape routes or complex, convoluted escape routes);*
- e) the approximate floor area of the building;*
- f) the nature of the occupants (e.g. young or old, infirm or able-bodied);*
- g) the familiarity of the occupants with the building (e.g. fully familiar, slightly familiar or totally unfamiliar);*
- h) the state (or likely state) of the occupants (e.g. awake or asleep, alert or under the influence of alcohol or drugs);*
- i) the history of fires in the building; and*

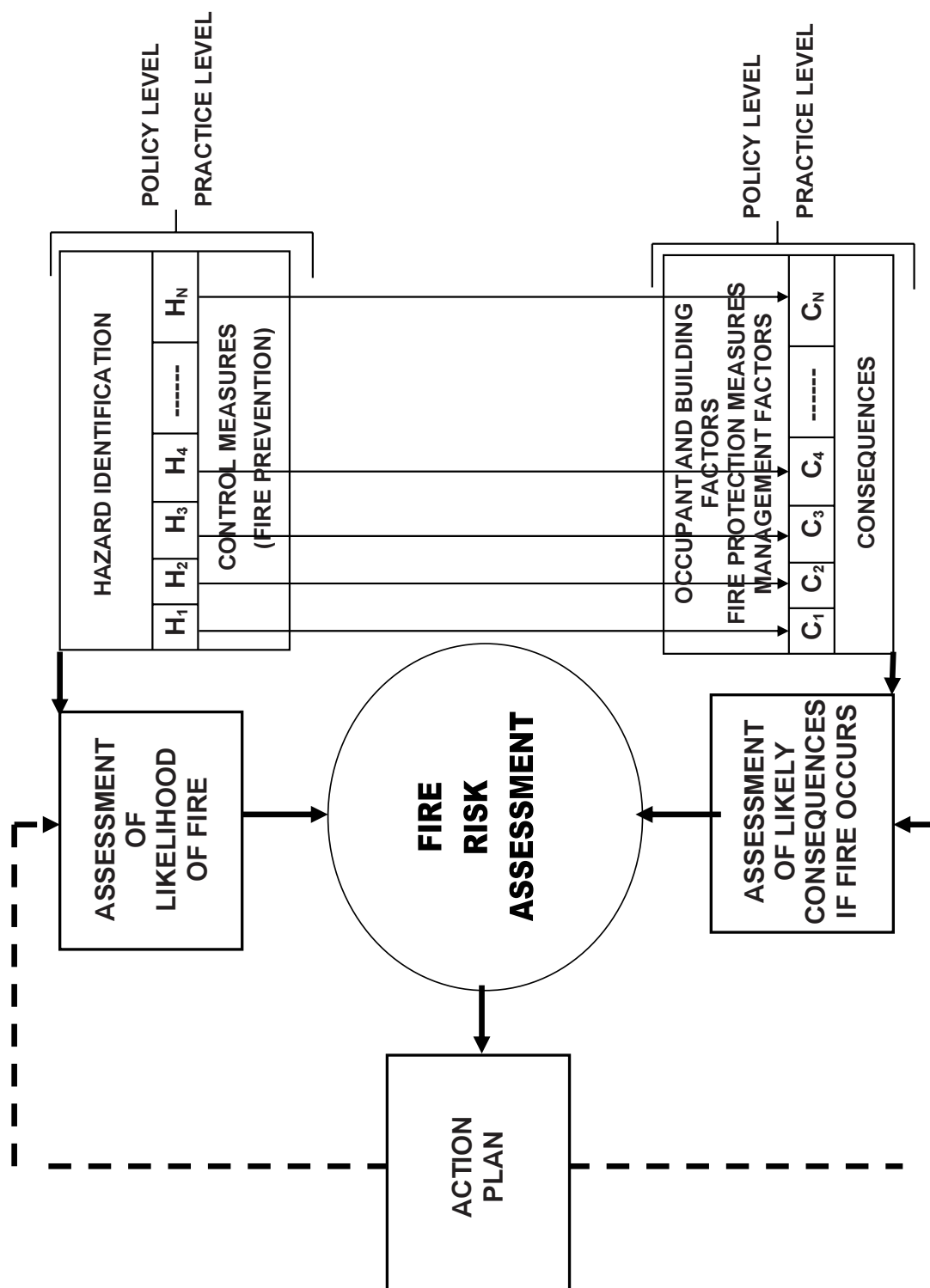
j) *the incidence of arson and vandalism in the surrounding areas.*

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 fire risk assessment, so that they are reflected in the level of fire risk expressed in the fire risk assessment. 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 in the fire risk assessment (see Clause 4), they need to be considered separately in the fire risk assessment (see Figure 1). For example, in a single-storey, open plan building with an abundance of readily available fire exits, a high probability of fire (e.g. as a result of numerous small fires in an industrial process) does not imply serious consequences to occupants (in terms of injury) in the event of fire.

On the other hand, in a large, multi-storey building with minimal fire load (see 3.35) and few ignition sources (e.g. a store for metal components), if there are inadequate means of escape and inadequate means of warning people in the event of fire, the consequences to occupants in the event of fire could be serious. It should, equally, be noted that, in each of these examples, poor standards of fire safety management could affect both the probability of fire and the consequences of fire.

Figure 1 – Schematic of fire risk assessment process



Once the level of fire risk is determined, any need for improvements in fire precautions can be identified. The separate consideration of probability of fire and consequences of fire is then of value, since, if the fire risk is unacceptably high, the source(s) of the high fire risk can be identified by separating the fire risk into its two component factors. It can then 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 hence the fire risk, can normally be subjective in nature, and will not normally be quantified numerically. Numeric methods, including calculation of probabilities and use of fire scenarios (see 3.53), need normally only be used in specialist industries (such as the chemical industry) with potential for very high fire risk, or be used in the formulation of designs based on complex fire safety engineering (see 3.45). Moreover, care is necessary to ensure that simple points schemes, which purport to evaluate fire risk numerically, are not misleading (see Clause 17).

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

The action plan (see Clause 18) needs to contain measures that are practicable and risk-proportionate, while resulting in compliance with legislation and the organization's fire safety policy (see 3.51). The nature of the measures specified needs to be such that they are likely to receive acceptance by management and other occupants who might be affected by them.

5.1 The fire risk assessment should only be carried out when a building is in normal use. If, in the case of a new or refurbished building, there is a need to carry out a fire risk assessment before the building is fully occupied and in normal use, a further fire risk assessment should be carried out once the building is in normal use.

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

5.2 Every documented fire risk assessment should explicitly set out information on the following matters:

- a) the height of the building, or part of the building, that is the subject of the fire risk assessment, or the number of storeys above and below ground;
- b) brief details of construction, with information about any aspects that make a significant contribution to risk;
- c) the activities and processes carried out in the building;
- d) approximate number of occupants;
- e) whether the building will be occupied by members of the public (as opposed to employees), and, if so, the approximate number of members of the public (if known);
- f) approximate floor area of the building, or a typical floor of the building, or part of the building, that is the subject of the fire risk assessment;
- g) in the case of a building in multiple occupation, the nature of the other occupancies (if known);
- h) occupants especially at risk (see 3.67) in the event of fire (e.g. sleeping occupants, disabled occupants, those working in remote areas and young persons);
- i) any fires that have occurred in recent years (if known);
- j) any further relevant information that has a bearing on fire risk (other than the information described in 5.3) or on the validity of the fire risk assessment;

- k) information on any alterations notice that apply to the premises.

NOTE An alteration notice is a notice that may be issued by an enforcing authority under the relevant fire safety legislation, requiring the enforcing authority to be notified of proposals to carry out alterations to the premises.

5.3 Within every documented fire risk assessment, it should be clear that appropriate consideration has been given to the following matters, regarding which there should be, at least, basic information and, where relevant, comment:

- a) fire hazards and means for their elimination or their control;
- b) fire protection measures;
- c) relevant aspects of fire safety management.

5.4 Every documented fire risk assessment should contain an expression of the level of fire risk, determined from the information recommended in **5.2** and **5.3**.

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

5.5 Every documented fire risk assessment should contain an action plan (see Clause **18**), unless it is expressly confirmed within the fire risk assessment that no additional fire precautions are necessary.

6 Responsibility for adequacy of the fire risk assessment

COMMENTARY ON CLAUSE 6

*Regardless of whether the fire risk assessment is carried out by, for example, staff of an organization, or by a third-party fire risk assessor (see **3.80**), the ultimate responsibility for the adequacy of the fire risk assessment rests with a dutyholder (see **3.17**), namely the person defined by legislation as responsible for ensuring that the fire risk assessment is carried out and that the fire precautions are adequate.*

In a workplace, this dutyholder will be the employer, but, in addition, other persons, such as those having control of the premises, might also be required to carry out a fire risk assessment. For example, in some buildings, such as commercial buildings in multiple occupation, the landlord or managing agent might also have responsibilities under legislation, and, in order to discharge their duty, they might also need to carry out a fire risk assessment to determine the adequacy of those fire precautions for which they are responsible (e.g. fire precautions in the common parts and fire protection systems that are building-wide, such as the building's fire alarm system).

It is important that any person on whom the duty to carry out a fire risk assessment is imposed understands and acknowledges their responsibility for the fire risk assessment, as this, again, is in contrast with traditional legislation, with which the person might be more familiar. Examples of legislation espousing the traditional approach include the Fire Precautions Act 1971 [1] and the Fire Services (Northern Ireland) Order 1984 [20].

Under traditional legislation, the principal responsibility for judging the adequacy of existing fire precautions, and for determining the requisite additional fire precautions, rested with the fire and rescue authority. This has led to an inappropriate attitude of reliance on the fire and rescue authority by those who own, operate or occupy buildings. This attitude is out of keeping with the modern principle in the health and safety field that those who create risks (e.g. by virtue of operating a building or processes in the building) have prime responsibility for taking action to mitigate them. Thus, application of prescriptive norms for fire precautions by the fire and rescue authority (e.g. as a prerequisite for issue of a fire certificate) has proved not to be conducive to proactive fire safety management, which is the key to effective control of fire risk. There has, for example, been a tendency for some building occupiers to perceive a fire certificate as an end in itself, rather than a vehicle for securing continuing safety of occupants from fire.

The fire risk assessment constitutes an underpinning for an organization's self-compliance with fire safety legislation and the organization's fire safety policy. It is essential that the organization does not treat the fire

risk assessment as a mere formality, or treat the documented fire risk assessment as a formal document that is an end in itself and that is simply stored away until the fire and rescue authority request sight of it.

Such an attitude was sometimes adopted towards a fire certificate, and might arise, in particular, if the fire risk assessment is carried out by an external fire risk assessor, such as a consultant. Since a third party can only make recommendations, but cannot enforce requirements, the fire risk assessment process would then suffer from the disadvantages of the fire certification process, without the advantage of certification, namely unambiguous enforceable requirements. Self-compliance would then simply provide a framework for prosecuting organizations when shortcomings in fire precautions were identified by the fire and rescue authority, or, even worse, after serious injury or loss of life occurred as a result of a fire.

Where, within an organization, there is a competent person (see 3.14 and Clause 7), able to carry out the fire risk assessment, it is appropriate for that person to carry out, or oversee any third party that carries out, the organization's fire risk assessments. If fire risk assessments are carried out by a third party, such as a consultant, it is essential that the organization for whom the fire risk assessment is carried out understands the role of the third party; the role is to facilitate the fire risk assessment and to advise on fire precautions, but the responsibility for the adequacy of the fire risk assessment and adequacy of fire precautions rests with the organization. It is the responsibility of the organization to ensure that whoever carries out the fire risk assessment is competent (see Clause 7), as its "ownership" remains with the organization.

Where the fire risk assessment is carried out for an organization by a third party, it is essential that the organization buys into the fire risk assessment from the outset. This means that the organization will need to provide information and support for whoever carries out the fire risk assessment, as much of the essential information required in order to carry out the fire risk assessment will reside within the organization and cannot be obtained by a third party without the organization's co-operation. The organization will also need to give practical support to the fire risk assessor (see 3.43) 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 building.

Where practicable, to ensure acceptance of the action plan, the recommendations in the action plan need, in the course of the fire risk assessment, to be discussed with the management of the building in question to ensure that the documented fire risk assessment is 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 fire risk assessment will then continue throughout the life of the building, so that, for example, the fire risk assessment is subject to review at an appropriate frequency and when changes take place (see Clause 19).

6.1 Where legislation imposes a requirement on any organization for a fire risk assessment to be carried out, it needs to be clearly understood by the organization that the responsibility for the adequacy and accuracy of the fire risk assessment, and of the information contained therein, rests with that organization, rather than with the fire risk assessor, regardless of whether the fire risk assessor is an employee of the organization or a third party (e.g. a consultant). However, there is also a legal responsibility on the part of the fire risk assessor in contract law; criminal responsibility may also arise on the part of the fire risk assessor under the relevant fire safety legislation if the fire risk assessor is deemed to be a "person having control" as a result of a responsibility under a contract for the safety of the premises.

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

6.3 The organization should take all reasonable steps to ensure that every fire risk assessor who carries out fire risk assessments on behalf of the organization is competent to carry out this task, regardless of whether the fire risk assessor is an employee of the organization or a third party, such as a consultant (see Clause 7).

NOTE Certain professional bodies maintain a register of people who have demonstrated, to the satisfaction of the professional body, competence in carrying out fire risk assessments. Registration is available to those who only carry out fire risk assessments within their own organization, as well as to those who offer this as a commercial service. Use of a person who is listed, by name, on such a register is deemed to meet the recommendation given in 6.3 and might constitute evidence that the organization took reasonable steps to ensure the competence of the fire risk assessor.

6.4 The organization should ensure that the fire risk assessor has access to appropriate people and relevant documentation, is provided with all relevant information and has access to all areas of the relevant building, or part of the building, at the time of the fire risk assessment, particularly if the fire risk assessment is carried out by a third party.

6.5 The documented fire risk assessment should be studied carefully by appropriate people in the organization to confirm the accuracy of documented information, to understand the contents, particularly the fire hazards and any shortcomings in fire protection measures or fire safety management, and to implement the action plan.

6.6 After the fire risk assessment has been carried out, it should be subject to periodic review, particularly when changes that could affect fire risk occur or when there is any other reason to suspect that the fire risk assessment is no longer valid (see Clause 19).

7 Competence of fire risk assessors

COMMENTARY ON CLAUSE 7

The fire risk assessment, and its periodic review (see Clause 19), is a form of underpinning for continued adequacy of fire precautions on an ongoing basis, after compliance with building regulations. It is, therefore, essential that fire risk assessments are only carried out by a competent person (see 3.14). Legal liability may arise on the part of the dutyholder and the fire risk assessor if a fire risk assessment is not suitable and sufficient. If the inadequacy of the fire risk assessment puts one or more relevant persons at risk of serious injury or death in the event of fire, an offence is committed by the dutyholder. The same offence could also be committed by the fire risk assessor.

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 buildings, where the fire risk assessor might, for example, be an employee of the occupier, 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 buildings of the type in question;*
- b) an awareness of the limitations of the fire risk assessor's own experience and knowledge;*
- 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 will require a higher level of knowledge and experience on the part of the fire risk assessor. For complex buildings, there will be 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 enable competence to be demonstrated.

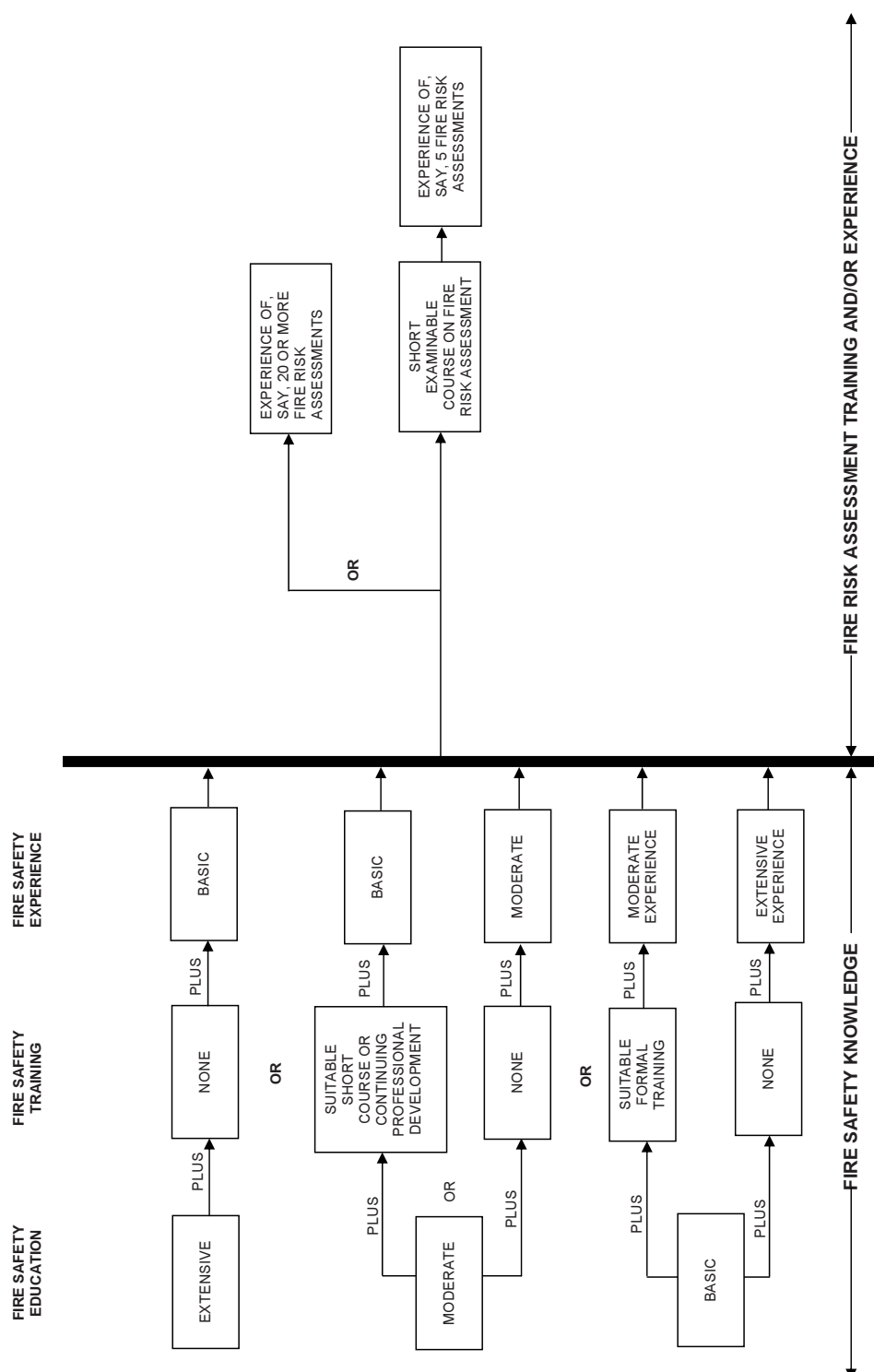
In general, other than in the case of simple, low risk buildings, fire risk assessors, particularly those offering their services on a commercial basis (e.g. consultants), need:

- 1) a good understanding of the legislation under which the fire risk assessment is required;*
- 2) a sound underpinning combination of education, training, knowledge and experience in the principles of fire safety;*
- 3) an understanding of fire development and the manner in which people behave when exposed to fire;*
- 4) training and/or experience in carrying out fire risk assessments;*
- 5) an understanding of the fire hazards, fire risks and occupants especially at risk from fire that are likely to occur in the building, or part of the building, for which the fire risk assessment is carried out.*

In the context of the above list, 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.

It is not implied that education, training and experience in the principles of fire safety need each be extensive, provided that the combination of each results in adequate knowledge. Moreover, a high level in respect of any one of these might compensate for a lower level in another. This is shown diagrammatically in Figure 2.

Figure 2 – Schematic example of appropriate education, training and experience of fire risk assessors



In Figure 2, fire safety education that is extensive might, for example, comprise education to HNC level or above, while moderate education might comprise a formal course carried out over several weeks, or in several modules. Basic fire safety education might comprise a course of just a few days' duration, or education given as part of academic education in a relevant discipline (e.g. a degree in building surveying). Basic experience might involve the practice of fire safety for a period of at least six months, while moderate experience might be experience of, say, three years' duration. Extensive experience might be no fewer than, say, eight years.

Often, fire risk assessors' education, training and, particularly, experience has related to relatively rigid application of prescriptive codes of practice, with only minimal opportunity to exercise professional judgement that would result in risk-proportionate fire precautions, above or below the standards of those prescribed in the relevant code of practice. A minor amount of training and/or experience might then be necessary to convert their competence in the principles of fire safety to competence in fire risk assessment (see Figure 2). For example, successful completion of a short, examinable course, plus experience of carrying out, say, five fire risk assessments over a period of, say, three months might be sufficient. Alternatively, experience of carrying out a greater number of fire risk assessments (say, 20 or more) over a longer period of time (say, six months) might be equally sufficient.

7.1 All fire risk assessments should be carried out by a competent person (see 3.14).

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 the Government guidance document 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 and the behaviour of people in fire;
- e) understand the fire hazards, fire risks and relevant factors associated with occupants especially at risk within buildings of the type in question;
- f) understand the causes of fire and means for their prevention;
- g) understand the design principles of fire protection measures;
- h) have appropriate training and/or experience in carrying out fire risk assessments.

8 Benchmark standards for assessment of fire precautions

COMMENTARY ON CLAUSE 8

The assessment of fire precautions in the fire risk assessment does not normally merely involve rigid comparison of existing fire precautions with standards set out in prescriptive codes of practice. Similarly, the action plan is not based on rigid adherence to prescriptive norms found in codes of practice. To adopt such an approach would not necessarily result in risk-proportionate fire precautions.

Nevertheless, in assessing or formulating measures to eliminate or control fire hazards, it will often be appropriate, in the case of certain fire hazards, such as potential electrical faults, to adopt guidance in recognized codes of practice. This will particularly be 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).

Thus, for example, in considering the fire hazard created by defective electrical wiring, it will normally be appropriate to control the hazard by inspection and testing of the fixed electrical installation in accordance with BS 7671 and with guidance produced on this subject by the Institution of Electrical Engineers. It would normally be inappropriate for the fire risk assessor to advocate control measures that conflict with such guidance.