# Fire Detection and Alarm Systems: In-depth

## Summary

The scale and complexity of a fire alarm and detection system will depend on the type of premises it is designed to protect and the type of fire risk present.

UK fire safety legislation contains a general requirement to provide premises, where necessary, with detectors and alarms. In support of this, there are many standards that cover the component parts of fire detection and alarm systems.

This topic outlines the types of fire detection and alarm systems that can be used, as well as information about testing regimes and false alarms.

## Employers' Duties

* Under the Health and Safety at Work, etc Act 1974, as amended, and the Management of Health and Safety at Work Regulations 1999, employers have a general duty of care to provide a safe working environment in relation to fire safety.
* Under the Regulatory Reform (Fire Safety) Order 2005, the responsible person must, where necessary (and whether due to the features of the premises, the activity carried out there, any hazard present or any other relevant circumstances), ensure that the premises are equipped with appropriate fire detectors and alarms in order to safeguard the safety of persons
* In Scotland, this duty applies to the duty holder under the Fire Safety (Scotland) Regulations 2006.
* In Northern Ireland, this requirement falls to the appropriate person under the Fire and Rescue Services (Northern Ireland) Order 2006/Fire Safety Regulations (Northern Ireland) 2010.

## Employees' Duties

* Under the Health and Safety at Work, etc Act 1974, employees have a duty to take reasonable care of their own health and safety and that of other people who may be affected by their activities at work.
* Under the relevant UK fire safety legislation, employees have a duty to co-operate with their employer to enable the employer to comply with health and safety duties and must bring to their employer's attention any defects or shortcomings in their employer's fire protection arrangements that they become aware of.

## In Practice

### The Need for Fire Detection and Alarms

The Regulatory Reform (Fire Safety) Order 2005, or its equivalent in Scotland and Northern Ireland, creates a duty for the responsible person/duty holder/appropriate person to ensure that, where necessary, premises are equipped with appropriate fire detectors and alarms.

If people are in a building, it is absolutely vital to know as soon as possible that a fire has started in order that they may be alerted and make their escape.

Automatic fire detection (AFD) is also commonly used to protect property by ensuring the early attendance of the fire service (summoned by occupants of the building or by transmission of fire alarm signals to an alarm-receiving centre).

The extent to which fire detection and fire alarms are required should be made on the basis of any building regulation requirements, insurer requirements, enforcing authority requirements and the findings of the [fire risk assessment](https://app.croneri.co.uk/topics/fire-risk-assessment/quickfacts?product=133).

The main standard for the installation of fire detection systems is [BS 5839–1:2017:](https://app.croneri.co.uk/topics/fire-detection-and-alarm-systems/indepth?product=133#DCAM-3026835)*Fire Detection and Fire Alarm Systems for Buildings. Code of Practice for the Design, Installation, Commissioning and Maintenance of Systems in Non-domestic Premises*.

### Fire Detection and Warning Systems

The “systems” required for detecting and warning people of fire can be considered in three broad categories, namely:

* simple systems that rely on visual observation/detection of a fire and use manual means of sounding an alarm
* systems that have manual call points connected to sounders
* systems that incorporate [automatic fire detection](https://app.croneri.co.uk/topics/fire-detection-and-alarm-systems/indepth?product=133#DCAM-3026783) (AFD), manual call points and sounders.

#### Determining the type of system required

The commonly used guide to selection of the appropriate level of fire detection and warning system is given in BS 5839–1. However, this is a complex area and the advice of a reputable, approved fire alarm contractor should always be sought.

The user or purchaser of the system (or an appointed representative of these parties, such as a consultant) should ensure that, to the extent appropriate, there is consultation at, or prior to, the system design stage with all relevant interested parties.

##### Simple systems

In a very small and uncomplicated workplace building, it may not be necessary and cost effective (considering the level of risk and what is reasonably practicable) to have an automated electrical fire detection and alarm system. If a fire is discovered, the alarm can be raised by shouting “fire”, or using a bell, whistle or air horn.

A simple system such as this will really only be adequate if:

* there is sufficient means of escape, taking into account number of exits and travel distance
* everyone can hear the warning
* the premises is open plan and single storey.

Although it is often assumed that people are quite good at detecting fire by sight and smell, this cannot be relied upon. Even in small buildings the means of detecting and responding to fire should be carefully considered. Fire procedures should be rehearsed and people made familiar with [emergency scenarios and means of escape](https://app.croneri.co.uk/topics/fire-emergency-procedures-and-means-escape/quickfacts?product=133#DCAM-13719).

##### Systems without fire detection

Larger workplace buildings are likely to require an electrical fire warning system, consisting of manual (break glass) call points that operate electro-mechanical bells, or electronic sounders. This type of system provides that the operation of any single call point will raise the alarm simultaneously all over the building, so that a prompt evacuation can be initiated. These are what are known as Category M systems.

##### Premises where there is sleeping accommodation

Buildings in which people sleep — such as hotels, boarding houses, hospitals and care homes — have special difficulties with respect to fire. In these premises, some form of AFD will be required to initiate the alarm. This compensates for the poor response that sleeping people can have to fire and smoke, ie if they are overcome by the effects of smoke before being roused sufficiently to escape the fire.

#### Automatic fire detection systems

For larger and more complex buildings, it is likely that an automatic fire detection and alarm (AFDA) system will be provided. The level of sophistication of an AFDA system varies considerably and design and choice of system requires specialist advice.

There are two basic types of AFDA system.

##### Zoned systems

In conventional zoned systems the building is divided into a number of separate fire zones. Each fire zone is served by its own detection circuit and the approximate location of the fire within a zone is indicated by the illumination of a numbered zone lamp displayed on the indicating panel.

Reference to a zone chart, showing the areas of the building covered by each numbered zone, is necessary to assist in locating the fire.

The effectiveness of zone systems is limited by the choice and size of zones at the design and installation phase. This may mean that identification of the actual seat of the fire may involve search of some extensive areas.

##### Addressable systems

Addressable systems are often referred to as analogue addressable systems because they use numbers to represent (or, as an analogy for) levels of signal received by the detector.

With an addressable system, each detector connected to the system literally has its own “address” on the system, enabling it to be pinpointed with accuracy by reference to the control panel. As a result, it is not necessary to search the premises in order to know which device has activated to find the location of the fire.

The technology associated with addressable systems has also enabled various advantages, such as:

* more sophisticated fire detectors being developed and used
* a pre-alarm warning being raised at a very early stage, allowing investigation and reducing the occurrence of unwanted evacuation signals
* providing a means for the detector to self-monitor contamination of its sensing device and report when maintenance is required.

##### Control panels

The control and indicating panel is the hub of a fire detection and alarm system. It is also the user interface, enabling an operator to read and understand what the system is doing and to control the actions performed by the system. Fire and fault warnings are displayed on the panel and a number of controls are provided. Simple controls are available for the user, so that an evacuation signal can be sounded or the alarms silenced, and the panel can be reset by the user once the incident is investigated and controlled.

Fire control panels should be designed and manufactured in accordance with [BS EN 54–2:1997+A1:2006:](https://app.croneri.co.uk/topics/fire-detection-and-alarm-systems/indepth?product=133#DCAM-3026835)*Fire Detection and Alarm Systems. Control and Indicating Equipment*.

##### Power supply

The power supply requirements for fire detection systems are set out in [BS EN 54–4:1998:](https://app.croneri.co.uk/topics/fire-detection-and-alarm-systems/indepth?product=133#DCAM-3026835)*Fire Detection and Alarm Systems. Power Supply Equipment*.

It is extremely important that fire detection and alarm systems should continue to operate during periods of power failure. The standby power supply system should be fault monitored. Control panels are usually fitted with a “power healthy” lamp, which should remain lit at all times.

When a new AFDA system is installed, it is important that the standby power requirements are correctly calculated to ensure that the required standby period will be available. Contractors should always supply these calculations for their client's inspection and the calculations should be reworked whenever the system is modified.

BS 5839–1:2017: *Fire Detection and Alarm Systems in Buildings* states that a standby power supply should be available, to operate the fire detection and alarm system, in full monitoring mode for a period of 24 hours after a general power failure. Even at the end of this period there should still be enough power left in the system to operate the evacuation warning system for a further 30 minutes.

It is normal for the standby power to be supplied by a trickle charged battery system. In a modern fire control system, the battery and charger is found either inside the panel casing or in an adjacent casing containing only standby power equipment.

Standby power equipment should not be remote from the panel it serves and any cable running between the two units must be fire-resisting and protected from mechanical damage.

#### Requirements for call points

Manual call points, often called break glass call points, are an essential part of every fire alarm system. They are the means by which anyone discovering a fire is able to raise the alarm quickly throughout the protected premises. To achieve this end efficiently, call points must be instantly recognisable and people seeking them should ideally have a clear idea of where they may be found and how they operate, even in unfamiliar buildings.

All call points should be red and should not be fully recessed into the wall. The method of operation should be clearly marked on the call point. The location of call points is also strictly required by the standard and the time delay between operating the call point and sounding the alarm is limited to a few seconds.

Manual call points should be designed and installed in accordance with BS 5839–1. Call points are required to be located:

* adjacent to every final exit from the building
* adjacent to every exit from each floor level and in corridors and circulation routes throughout the building
* so that anyone discovering a fire would not have to travel more than 45m in any direction before finding one to operate
* in clearly visible locations, at a height of 1.4m above finished floor level.

These requirements are arbitrary and based on standard good practice. They can be varied on the basis of risk assessment by a competent person. Manual call points testing information is also contained in [BS EN 54–11: 2001:](https://app.croneri.co.uk/topics/fire-detection-and-alarm-systems/indepth?product=133#DCAM-3026835)*Fire Detection and Alarm Systems. Manual Call Points*.

It should be noted that the revised BS 5839-1 recommends that manual call points should now be fitted with protective covers. This requirement is not retrospective, but the standard suggests that in systems already installed where there is a high incidence of unwanted alarms, covers can be considered.

#### Fire detection

The type of detection used depends on the nature of the fire and the way it starts. It is important that the detector matches the type of fire anticipated in the given circumstances. A variety of detectors are available, including:

* smoke detectors:
  + ionisation detectors
  + photoelectric detectors.
* heat detectors:
  + fixed temperature heat detectors
  + rate of rise heat detectors.
* multi-sensor detectors
* flame detectors
* carbon monoxide detectors
* special fire detection systems:
  + aspirating smoke detection systems
  + beam type smoke detection systems
  + linear heat detection systems.

**Note:**

Combined alarms with multiple sensors contain two separate sensing elements — optical and heat allowing them to monitor two different by-products of fire.

### Alarms

There are several types of sounders used for actually raising the alarm.

#### Fire alarm — sounder systems

Unless a manual alarm such as a bell or whistle is used, then some form of sounder system linked to the fire detection system will be required.

A sounder system is the control equipment, circuits and sound generating devices. These are connected to the Fire Control Panel as system outputs, in order to raise the alarm in the event of a fire. Sounder systems may also include visual warning devices, which are usually located where the background noise level is high, or in areas where hearing-impaired persons may be on their own.

The evacuation signal may be transmitted by electromechanical bells, electronic sounding devices, or by a public address voice message. Whichever mechanism is used, it must meet a rigid standard of audibility in all parts of the building.

##### Sound levels

In most areas, a minimum sound level of 65dB(A) (decibels — “A” weighted to closely approximate the human hearing curve) should be achieved, although this can be reduced to 60dB(A) in, for example, small rooms. However, if there is background noise (greater than 60dB(A)) then the alarm level must be at least 5dB(A) above the background level.

In areas where sleeping accommodation is provided, the level should be at least 75dB(A) when measured at the bed head. Variations may also need to be made to cover the needs of people with disabilities.

##### Location of sounders

Different sounder mechanisms give different levels of sound output, so the characteristics of the actual device must be known before making judgments on sounder location. The sound levels should be measured with all fire doors closed, but for design purposes it is unwise to assume that a sufficient level of sound generation will be achieved through more than one closed door. Where sleeping risk is to be covered it is usually necessary to locate a sounder in every room.

#### Voice alarm or public address systems

Voice systems that use a human voice, either recorded or live, are intended to help with the swift evacuation of areas that contain large numbers of people.

A voice alarm system uses speech to warn people of a fire and provide instructions for escape, instead of relying on bells or sirens. This type of system automatically transmits messages in response to signals from associated fire detection systems.

Voice alarm systems make use of the principle that people respond faster and more appropriately to an emergency situation if they are given accurate information.

To be effective, a voice alarm message must be clearly audible and intelligible. To achieve intelligibility, it is normally necessary to space speakers at more frequent intervals than would be strictly necessary for audibility alone, so far more field equipment is required than would be used in a conventional sounder system.

The key document for voice alarm systems is BS5839-8:2013 *Fire Detection and Alarm Systems for Buildings. Code of Practice for the Design, Installation, Commissioning and Maintenance of Voice Alarm Systems*.

#### Visual alarm devices

In many buildings, the audible message needs to be supplemented by a visual alarm device (VAD) controlled by a fire detection and alarm system. There are a number of situations in which visual alarm signals are appropriate, including:

* as a means of giving warning to deaf and hard of hearing people
* in areas of high ambient noise
* in buildings in which the initial warning of fire may be restricted to staff.

[BS EN 54–23:2010:](https://app.croneri.co.uk/topics/fire-detection-and-alarm-systems/indepth?product=133#DCAM-3026835)*Fire Detection and Alarm Systems. Fire Alarm Devices. Visual Alarm Devices* specifies the requirements, test methods and performance criteria for VADs in fire detection and fire alarm systems. The Loss Prevention Certification Board’s *Code of Practice for Visual Alarm Devices Used for Fire Warning* also provides additional information on the selection, installation and use of VADs.

#### Cabling requirements — cables and wiring

The full requirements for the selection and installation of cables and wiring for use in [AFDA systems](https://app.croneri.co.uk/topics/fire-detection-and-alarm-systems/indepth?product=133#DCAM-3026783) are set out in BS 5839–1. This standard permits a wide range of cable and wiring types to be used, but the circumstances under which each type is recommended for use is also set out and the selection of cable types for any particular application must be carefully considered.

#### Testing and maintenance

Alarm systems, whether fully automated or not, must be maintained and tested. Fire safety regulations require that, where necessary, the responsible person ensures that all facilities, equipment and devices provided for fire safety are maintained and that a maintenance system is in place.

It is clearly important that, in the event of a fire, detection and alarm systems work. This is generally achieved by an approach that involves both:

* local testing by people on the premises nominated by the responsible person
* testing and maintenance by qualified engineers at regular intervals.

High quality maintenance is also important to prevent [false alarms](https://app.croneri.co.uk/topics/fire-detection-and-alarm-systems/indepth?product=133#DCAM-3026832).

BS 5839–1 recommends that the user carries out certain checks on a daily, weekly and monthly basis, as described below.

##### Daily tests

It should be ensured that the panel indicates normal operation, or that faults are recorded and receive attention. Any previously recorded fault should have received attention. Any unmonitored remote link should be tested.

##### Weekly tests by nominated employees or managers

Tests by nominated employees or managers should be done weekly. They tend to be very simple and include testing that:

* break glass call points to activate the alarm
* the alarm sounders operate
* control panel functioning is checked
* remote alarm centre transmission checked.

A test key is provided for this purpose. Call points should be tested in rotation to ensure that they are all covered.

Where an AFDA is installed, the test should also include:

* ensuring the FCP responds when a break glass call point is tested, showing the correct zone of operation and address
* operating a different call point every week to ensure that each zone is tested at least once during each year (with large systems this may mean testing more than one call point)
* the panel resets after test and the power supply is indicated as healthy
* all lamps illuminate when the lamp test switch is operated
* the printer (where fitted) operates correctly and has sufficient paper and ink for at least two weeks.

Details of the weekly test should always be recorded in the system logbook. Any faults discovered either during the test, or at any other time should be recorded and reported to the maintenance contractor as a matter of urgency.

##### Monthly tests

BS 5839–1 requires that systems which rely on standby generators should be tested every month. The generator should be run according to manufacturer's instructions and left ready to operate. Any defects should be attended to.

Systems which rely on vented batteries for their standby power should be visually inspected on a monthly basis.

##### Maintenance by contractors

In accordance with BS 5839–1, the system should be serviced, tested and inspected at regular intervals, by a competent person — usually a contractor. The frequency of servicing and testing should be on the basis of risk assessment, but to comply with BS 5839–1 not less frequently than every six months.

All manufacturers' servicing instructions must be followed and the system logbook should be completed with details of the testing carried out. The records should be kept in a suitable place and the work of the contractor should be checked to ensure that it has in fact been carried out.

Every smoke detector, heat detector and every other input device should be tested annually and it should be confirmed that the correct responses (outputs) are generated.

### False Alarms

The correct and efficient operation of AFD and alarm systems is of paramount importance. Each year, the fire services are called to thousands of false alarm activations. These create significant problems and cost time and money for all concerned.

False alarms from fire detection alarm systems can arise from various different causes. Typical causes include:

* pollutants in the air setting off smoke detectors (eg dust, aerosols and insects)
* extremely high temperatures setting off heat detectors (eg from hot work activities)
* vandalism or malicious acts
* mistakes occurring in the use of the system
* the equipment being faulty or not being maintained properly
* fire detectors or red “break glass” boxes being in the wrong place and being accidentally set off.

BS 5839–1 suggests that in clean, well-managed environments, a rate of 1 false alarm per 100 detectors should be achievable, whereas in more industrial applications, a rate of 1 per 75 detectors is more realistic.

BS 5839–1 recommends that at least “a preliminary investigation should be carried out as part of the service work” if any of the following apply.

* The rate of false alarms over the previous 12 months has exceeded 1 false alarm per 25 detectors per annum.
* Eleven or more false alarms have occurred since the time of the previous service visit (ie typically within the previous six months).
* Two or more false alarms (other than false alarms with good intent) have arisen from any single manual call point or fire detector (or detector location) since the time of the last service visit.
* Any persistent cause of false alarms is identified.

In systems that incorporate more than 40 automatic fire detectors, BS 5839–1 recommends that the user should “instigate an in-depth investigation by suitable specialists” if, in any rolling period of 12 months, either:

* the average rate of false alarms exceeds 1 false alarm per 20 detectors per annum
* three or more false alarms are initiated by any single manual call point or automatic fire detector (or detector location).

#### The URN registration scheme

As a result of these false alarms, a joint initiative has been put in place with the National Fire Chiefs Association, the Fire Protection Association and the British Security Industry Association, supported by fire authorities and the Home Office.

The aim is to reduce false alarms by focusing on those systems that are poorly maintained or are frequent “offenders”. To this end, a registration scheme has been introduced whereby premises are issued with a Unique Reference Number (URN) linking their alarm performance with the requirements of BS 5839–1.

The fire authorities will then monitor fire service response to alarm activations and, where there are unwanted calls being attended, may decide to modify their response to a fire alarm. This is particularly so of those alarms which are monitored remotely by an Alarm Receiving Company (ARC). This approach means that a fire alarm is first activated to the ARC, which has systems in place to identify if the fire is real and then forwards the call onto the fire service.

Further information on preventing and/or reducing false alarms can be found in the National Fire Chiefs Association publication [*Guidance for the Reduction of False Alarms and Unwanted Fire Signals*](http://www.cfoa.org.uk/10863).

The revised BS5839 now also makes recommendations in the use of “staff alarm” procedures where there is a delay in calling the fire and rescue service to enable an on-site investigation to be held.

However, to implement such a system certain criteria must be met including staff competency to investigate and it does not apply in high-risk premises such as care homes.

### Certification and Records

BS 5839–1 makes recommendations as to what documents should be handed over when the system has been designed, installed and commissioned. These include:

* certificates for design, installation, commissioning and verification of the system
* an adequate operation and maintenance manual for the system
* a log book in which all events, including fire alarm signals, faults signals, system tests and maintenance visits, can be recorded.

Once a system is in use, the rate of false alarms during the previous 12 months should be recorded. On completion of any system maintenance and inspection:

* any outstanding defects should be reported to the responsible person
* the system log book should be completed
* a servicing certificate should be issued recording the inspection and any tests carried out
* systems may also be subject to some form of modification over its lifetime.

When changes are made to the system, the responsible person should ensure that record drawings and operating instructions, supplied in accordance with the recommendations are updated. On completion of any modifications, all “as-fitted” drawings and other relevant system records should be updated as appropriate and made available with the system documentation.

## Training

In general, no special fire detection training is required other than that needed by all staff in respect to raising the alarm on the discovery of a fire, and the special training by fire wardens on ensuring the [evacuation of the site](https://app.croneri.co.uk/topics/fire-emergency-procedures-and-means-escape/quickfacts?product=133#DCAM-13719).

## List of Relevant Legislation

* Localism Act 2011
* Fire (Scotland) Act 2005
* Fire and Rescue Services Act 2004
* [Health and Safety at Work, etc Act 1974](https://app.croneri.co.uk/reference-articles/law-and-guidance/legislation-tracker/health-and-safety-work-etc-act-1974-5?product=133#DCAM-234835)
* [Building Regulations (Northern Ireland) 2012](https://app.croneri.co.uk/reference-articles/law-and-guidance/legislation-tracker/building-regulations-northern-ireland-2012-0?product=133#WKID-201205281158160371-80417866)
* [Fire (Scotland) Act 2005 (Relevant Premises) Regulations 2012](https://app.croneri.co.uk/reference-articles/law-and-guidance/legislation-tracker/fire-scotland-act-2005-relevant-premises?product=133#WKID-201212061213210821-83739042)
* [Building Regulations 2010](https://app.croneri.co.uk/reference-articles/law-and-guidance/legislation-tracker/building-regulations-2010?product=133#DCAM-4867084)
* Fire Safety (Employee Capabilities) Regulations 2010
* [Fire Safety Regulations (Northern Ireland) 2010](https://app.croneri.co.uk/reference-articles/law-and-guidance/legislation-tracker/fire-safety-regulations-northern-ireland?product=133#DCAM-4930203)
* [Fire Safety (Scotland) Amendment Regulations 2010](https://app.croneri.co.uk/reference-articles/law-and-guidance/legislation-tracker/fire-safety-scotland-amendment-regulations?product=133#DCAM-4969302)
* Fire Safety (Scotland) Regulations 2006
* Building (Scotland) Regulations 2004
* [Management of Health and Safety at Work Regulations 1999](https://app.croneri.co.uk/reference-articles/law-and-guidance/legislation-tracker/management-health-and-safety-work?product=133#DCAM-234814)
* Fire and Rescue Services (Northern Ireland) Order 2006
* [Regulatory Reform (Fire Safety) Order 2005](https://app.croneri.co.uk/reference-articles/law-and-guidance/legislation-tracker/regulatory-reform-fire-safety-order-2005?product=133#DCAM-944502)

## Further Information

### Publications

### British Standards

The following standards are available from the [BSI Shop](http://shop.bsigroup.com).

* BS 5839-1:2017 *Fire Detection and Fire Alarm Systems for Buildings. Code of Practice for the Design, Installation, Commissioning and Maintenance of Systems in Non-domestic Premises*
* BS 5839-6:2013 *Fire Detection and Fire Alarm Systems for Buildings. Code of Practice for the Design, Installation, Commissioning and Maintenance of Systems in Domestic Properties*
* BS 5839-8:2013 *Fire Detection and Fire Alarm Systems for Buildings. Code of Practice for the Design, Installation, Commissioning and Maintenance of Voice Alarm Systems*
* BS 9999:2017 *Fire Safety in the Design, Management and Use of Buildings. Code of Practice*
* BS 16763:2017 *Services for Fire Safety Systems and Security Systems*
* BS EN 54-2:1997+A1:2006 *Fire Detection and Fire Alarm Systems. Control and Indicating Equipment*
* BS EN 54-3:2001 *Fire Detection and Fire Alarm Systems. Fire Alarm Devices. Sounders*
* BS EN 54-4:1998 *Fire Detection and Fire Alarm Systems. Power Supply Equipment*
* BS EN 54-5:2001 *Fire Detection and Fire Alarm Systems. Heat Detectors. Point Detectors*
* BS EN 54-10:2002 *Fire Detection and Fire Alarm Systems. Flame Detectors. Point Detectors*
* BS EN 54-11:2001 *Fire Detection and Fire Alarm Systems. Manual Call Points*
* BS EN 54-23:2010 *Fire Detection and Fire Alarm Systems. Fire Alarm Devices. Visual Alarm Devices*

### Home Office Publications

The following are available from [www.gov.uk](https://www.gov.uk/government/organisations/department-for-communities-and-local-government).

* [*A Short Guide to Making Your Premises Safe from Fire*](https://app.croneri.co.uk/file/13904/download?product=133&product=133)
* [*Fire Safety Risk Assessment — Animal Premises and Stables*](https://app.croneri.co.uk/file/13880/download?product=133&product=133)
* [*Fire Safety Risk Assessment — Educational Premises*](https://app.croneri.co.uk/file/13881/download?product=133&product=133)
* [*Fire Safety Risk Assessment — Factories and Warehouses*](https://app.croneri.co.uk/file/13882/download?product=133&product=133)
* [*Fire Safety Risk Assessment — Healthcare Premises*](https://app.croneri.co.uk/file/13883/download?product=133&product=133)
* [*Fire Safety Risk Assessment — Large Places of Assembly*](https://app.croneri.co.uk/file/13884/download?product=133&product=133)
* [*Fire Safety Risk Assessment — Means of Escape for Disabled People*](https://app.croneri.co.uk/file/13890/download?product=133&product=133)
* [*Fire Safety Risk Assessment — Offices and Shops*](https://app.croneri.co.uk/file/13885/download?product=133&product=133)
* [*Fire Safety Risk Assessment — Open Air Events and Venues*](https://app.croneri.co.uk/file/13886/download?product=133&product=133)
* [*Fire Safety Risk Assessment — Residential Care Premises*](https://app.croneri.co.uk/file/13887/download?product=133&product=133)
* [*Fire Safety Risk Assessment — Sleeping Accommodation*](https://app.croneri.co.uk/file/13888/download?product=133&product=133)
* [*Fire Safety Risk Assessment — Small and Medium Places of Assembly*](https://app.croneri.co.uk/file/13889/download?product=133&product=133)
* [*Fire Safety Risk Assessment — Theatres, Cinemas and Similar Premises*](https://app.croneri.co.uk/file/13891/download?product=133&product=133)
* [*Fire Safety Risk Assessment — Transport Premises and Facilities*](https://app.croneri.co.uk/file/13892/download?product=133&product=133)

### Scottish Government

The following publications are available from the FireLaw section of [www.scotland.gov.uk](http://www.scotland.gov.uk).

* *Practical Fire Safety Guidance for Existing Non-Residential Premises*
* *Practical Fire Safety Guidance for Care Homes*
* *Practical Fire Safety Guidance for Healthcare Premises*
* *Practical Fire Safety Guidance for Medium and Large Premises Providing Sleeping Accommodation*
* *Practical Fire Safety Guidance for Small Bed & Breakfast and Self-Catering Premises*
* *Practical Fire Safety Guidance for Small Premises Providing Sleeping Accommodation*
* *The Evacuation of Disabled Persons from Buildings*
* *Technical Standards for Compliance with the Building Standards (Scotland) Regulations 1990*

### Northern Ireland Publications

Publications for Northern Ireland are available from [www.nifrs.org/firesafe](http://www.nifrs.org/firesafe).

### Organisations

* **BRE Global**
* <http://www.bre.co.uk/global>
* BRE Global Limited (part of the BRE Group) is an independent third party approvals body offering certification of fire, security and sustainability products and services to an international market.
* **Fire Industry Association (FIA)**
* <http://www.fia.uk.com>
* The FIA is a trade association formed by the merger of two leading associations within the fire protection industry — Fire Extinguishing Trades Association, the trade association of companies responsible for the manufacture and maintenance of portable fire-fighting equipment, and British Fire Protection Systems Association established, the co-ordinating body for the UK fire systems industry.
* **Fire Protection Association (FPA)**
* <http://www.thefpa.co.uk>
* The FPA is the UK’s national fire safety organisation. It provides a range of fire safety audit and fire risk assessment services.
* **Institution of Fire Engineers (IFE)**
* <http://www.ife.org.uk>
* The IFE is the international qualifying organisation for fire engineering and fire safety professionals. It was founded in 1918 to promote, encourage and improve the science and practice of fire extinction, fire prevention and fire engineering. The IFE maintains a register of fire risk assessors.
* **Northern Ireland Fire & Rescue Service (NIFRS)**
* <http://www.nifrs.org/firesafe/>
* Offers guidance on how to keep premises safe from fire, as well as information about fire safety legislation and duties under the law.
* **Red Book Live**
* http://www.redbooklive.com
* Publishes specifications, codes, rules and standards and a useful reference source for those responsible for the design, specification and purchase and certification of fire and security products. Incorporates the Loss Prevention Certification Board (LPCB), a certification brand of BRE Global.
* **Security Systems and Alarms Inspection Board (SSAIB)**
* <http://www.ssaib.org>
* The SSAIB is a non-profit making company, governed by an independent board representing various organisations with an interest in the security industry.