Guidance Note



Leading Excellence in Fire Since 1916



**Guidance on Safe Investigation of Fire Alarm Signals in Scotland** 

# **Table of Contents**

1.		FIRE	EINDUSTRY ASSOCIATION FOREWORD	3
2.		ACK	NOWLEDGEMENTS	3
3.		BAC	KGROUND	. 4
	3.	1	Approach to avoidance of risk	. 6
4.		SAFI	E INVESTIGATION OF ALARM SIGNALS	7
	4.	1	Pre-determined number of nominated persons present (e.g. during normal working hours)	9
	4.	2	Health and safety of nominated persons	11
	<i>4.</i> .		Pre-determined number of nominated persons not present (e.g. outside normal working hours), cupants present in the building	
	4.	4	Single nominated person present (e.g. a lone security officer)	12
	4.	5	No nominated person present and no other occupants	14
5.		REA	SSURANCE OF STAFF	16
	5.	1	Checklist for dutyholders	18
6.		GLO	SSARY OF TERMINOLOGY	19

#### 1. FIRE INDUSTRY ASSOCIATION FOREWORD

As the largest fire protection trade association in the world with over 1,000 member companies, the Fire Industry Association (FIA) continues to promote, improve and perfect fire protection methods, devices, services and apparatus. We welcome the opportunity to work with the Scottish Fire & Rescue Service (SFRS) on this guidance on the Safe Investigation of Fire Alarm Signals.

By bringing cross industry experts together in a collaborative manner, the FIA can create farreaching guidance incorporating expertise from all aspects from those who help, improve and provide fire safety.

Van Hone.

Ian Moore CEO

Fire Industry Association

#### 2. **ACKNOWLEDGEMENTS**

This guidance document was produced thanks to the support, experience and expertise of the individuals, and representatives of FIA member organisations listed below:

C S Todd & Associates,

Metro Safety,

Ensure Safety & Compliance,

FCS-Live Ltd,

Stuart Hamilton.

Louise Hosking,

Martin Harvey,

Garry Marshall, Scottish Fire & Rescue Service,

Scottish Fire & Rescue Service.

#### 3. **BACKGROUND**

As a result of the continuing high rate of false alarms from fire detection and alarm systems, throughout Scotland, the Scottish Fire and Rescue Service (SFRS) now adopt a 'call challenge' policy in relation to calls arising from the operation of an automatic fire alarm system (whether received via an emergency 999 call or from an alarm receiving centre, (ARC)).

Accordingly, depending on circumstances, there will be situations in which the SFRS will not dispatch fire appliances on receipt of a call arising from operation of a fire alarm system unless it can be confirmed by the caller that there is a fire or signs indicative of a fire. In some circumstances, there will be an attendance, but the number of appliances dispatched may be reduced unless, or until, a fire is confirmed.

This has become necessary because the current level of unwanted fire alarm signals (UFAS) to which SFRS are summoned cannot be sustained. Equally, investigation of circumstances in which a fire alarm is activated must be carried out safely. The objective of this guidance document is to assist dutyholders to investigate fire alarm signals at the premises prior to summoning the SFRS.

It is necessary to draw distinction between a false alarm, which, by definition, is activation of a fire alarm system resulting from a cause other than fire, and an unwanted fire alarm signal, which, again by definition, is a false alarm from a fire alarm system that has been passed on to the SFRS.

This guidance has been prepared to assist dutyholders under the Fire (Scotland) Act with the new SFRS UFAS policy, which applies from the 1st of July 2023. In this connection, by land mass, the Scottish Fire and Rescue Service is the largest single fire and rescue service in Europe and the fourth largest in the world.

As in the case of other fire and rescue services throughout the UK, SFRS experience a major burden on resources as a result of the continued high level of calls resulting from fire alarm signals to which the Service is summoned. By way of example, in a typical year, SFRS attend approximately 30,000 calls, of which only 2% of these are caused by an actual fire; moreover, in around two thirds of the latter incidents, no action by firefighters is necessary.

These calls represent approximately 30% of all incidents attended by the SFRS, representing approximately 57,000 unnecessary 'blue light' journeys each year.

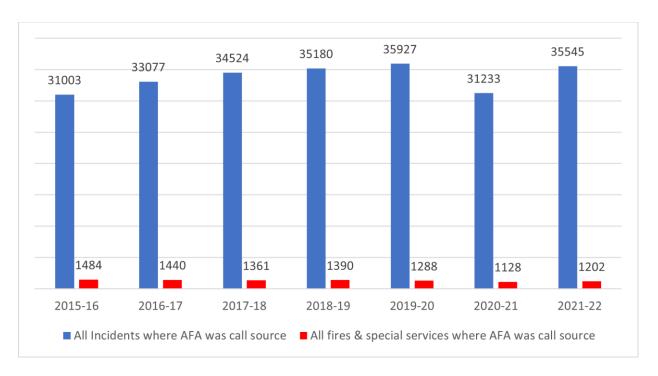


Figure 1 Calls arising from fire alarm signals in Scotland. (Source SFRS)

## These UFAS have many detrimental effects:

- They impact on resources available to attend real fires.
- They impact on time available for other valuable work, such as training and community safety activities. Where fire crews comprise on-call (retained) fire fighters, the crews may be unnecessarily taken away from their place of work.
- They impact on road safety, as a result of fire appliances travelling under emergency conditions.
- They impact on the environment from the number of appliance journeys.

More generally, false alarms impact on business continuity resulting in financial loss to businesses due to interruption of employees' work. Reducing false alarms not only reduces UFAS but reduces the detrimental effect on business continuity that can otherwise arise.

In view of the circumstances outlined above, from 1st July 2023, the UFAS policy of the SFRS will be such that:

All calls to actuation of a fire alarm system will be call challenged by fire control operators, other than calls to premises that are designed, or known, to incorporate sleeping accommodation (e.g. hotels, in-patient hospital buildings, care homes, etc). Call challenging is a procedure in which, unless the incident is deemed to be a confirmed fire, no fire appliances will be dispatched; it will be necessary for the dutyholder for the premises to

Guidance on Safe Investigation of Fire Alarm Signals in Scotland

investigate the alarm signal. For the purpose of this policy, an incident is deemed to be a confirmed fire if the caller can confirm that there is a fire or a sign of fire.

For the purpose of this policy, an incident is also deemed to be a confirmed fire if a caller can confirm that a fire alarm signal has been initiated by any signal, other than a signal from a single smoke detector (e.g. if it is known that the signal has been initiated by a break glass manual call point, a heat detector, more than one smoke detector, a multi-sensor fire detector, a sprinkler system, etc).

This is a matter that should be taken into account in the fire procedures for the premises, but will need a more specific risk assessment for investigation of fire alarm signals in certain premises on the part of the dutyholder.

This guidance cannot address every possible variation in operation of premises, but the intention of the guidance is to give generic advice on safe investigation and/or confirmation of fire when a fire alarm system operates.

#### 3.1 Approach to avoidance of risk

Any arrangement that involves investigation of fire alarm signals will, inherently, involve a small element of risk, which must be managed and mitigated. Accordingly, the most fundamental measure should be avoidance of false alarms as far as practicable. This should be an objective in the design of the fire alarm system and the management of the premises. Guidance on False Alarm Management of Fire Detection and Alarm Systems is published by the FIA and is available here.

As noted above, there are a number of circumstances in which it will be necessary for staff of a dutyholder to investigate a fire alarm signal before the fire and rescue service should be called or will be willing to attend even if called.

Such circumstances comprise the following:

- The fire procedures for the premises require investigation of alarm signals (or certain alarm signals) prior to calling the SFRS. For most premises, this is the ideal arrangement, which should have been formulated by the dutyholder, taking into account the SFRS UFAS policy, as well as any policy of the organisation to minimise disruption to business from false alarms.
- The call challenge policy of the SFRS is such that a caller is informed that there will not be an attendance unless it can be confirmed that there is a fire or a sign of fire.
- By virtue of a pre-determined procedure, an ARC contacts the premises to request confirmation of a fire before the ARC will summon the SFRS.
- An ARC is informed by SFRS Control that there will not be any attendance unless it can be confirmed that there is a fire or a sign of fire, resulting in a call from the ARC to the premises requesting further information.

 An ARC is informed by SFRS Control that there will not be any attendance unless it can be confirmed that there is a fire or a sign of fire, resulting in notification of a keyholder by the ARC because the premises are unoccupied.

#### 4. SAFE INVESTIGATION OF ALARM SIGNALS

It is essential that, where, as part of fire procedures, it will be necessary for persons on the premises to investigate a fire alarm signal prior to summoning the SFRS, there are safe procedures to carry this out.

This will necessitate adequate pre-planning to nominate those who are to carry out this task; ad hoc procedures when the fire alarm system operates are unlikely to be adequately safe. In commercial premises in multiple occupation, there needs to be cooperation between occupiers to pre-plan and coordinate the arrangements. Those nominated for the task should be suitably trained and physically capable for the task.

Note: In Scotland, Regulation 20A of the Fire Safety (Scotland) Regulations 2006 requires that an employer with duties under section 53 of the Fire (Scotland) Act 2005 must, when entrusting tasks to an employee, take into consideration the employee's capabilities as regards health and safety, so far as those capabilities relate to fire and are relevant to those tasks.

Training should ensure that the persons nominated are fully familiar with:

- the roles and responsibilities of those nominated to investigate fire alarm signals;
- the layout of the premises and any special arrangements for access to specific areas;
- the fire protection measures in the premises, including any active fire protection measures that may come into effect on operation of the fire alarm system;
- any special fire hazards within the premises (e.g. presence of gas cylinders);
- any hazards associated with fire suppression systems in the building;
- interpretation and use of the fire alarm control and indicating equipment (CIE). In this connection, it is important that the nominated persons can, in an addressable fire alarm system, determine the type of device that triggered the fire alarm signal (e.g. manual call point, heat detector, smoke detector or sprinkler head). If fire detectors are of the multisensor type, it is important that the nominated persons are aware of this, because, as previously noted, in Scotland, this will have a bearing on the response of the SFRS;
- identification of the location of a potential fire, including interpretation of the zone plan and any addressable text on the CIE display;
- the relevant cause and effect of the fire alarm system (e.g. whether there is an investigation period and, if so, its length of time);

whether lifts can be used during the investigation;

use of any communications equipment;

safe movement through the building, including an understanding of, for example, any

electronic access control systems;

available means of escape (including any restricted means of escape outside working hours);

typical signs of fire;

a broad understanding of fire behaviour;

action on discovery of a fire, particularly the method of summoning the SFRS and ensuring

that an evacuation signal has been given;

• identification of any fire detector that has triggered a false alarm (i.e. awareness of detector

LEDs, visual evidence of manual call point operation);

• action on verification of a false alarm, including the method of resetting the CIE, any necessary

arrangements for resetting other critical equipment, and arrangements for calling a fire alarm

maintenance contractor if necessary;

circumstances in which silencing of the audible alarm is acceptable if audible alarms are

sounding during the investigation period (e.g. to enable radio communication and avoidance of undue exposure to high noise levels), though it should be noted that a fire alarm system

must never be silenced before it is ensured that all occupants have evacuated to the extent

appropriate;

• arrangements for coordination between those investigating fire alarm signals and any fire

wardens in the premises;

arrangements for recording the incident in the relevant log book and, if necessary, initiating

further investigation of the cause.

The number of persons required to investigate fire alarm signals at any point in time needs to be determined by the dutyholder by practical trials. Ideally, this number should not be less than three;

this enables an arrangement whereby two people proceed to the location of the alarm signal, while

one remains at the CIE.

It is acknowledged that this will not always be possible and a lesser number is not necessarily unsafe.

However, the investigation arrangements may differ according to whether the normal minimum number of persons determined by the dutyholder are present or the number of persons is less than

this (e.g. outside normal working hours).

Accordingly, in the following sub-sections of this Guide, four scenarios are addressed, namely:

- the pre-determined number of nominated persons are present;
- the pre-determined number of nominated persons are not present (e.g. because it is outside normal working hours);
- a single nominated person is present (e.g. a lone security officer);
- circumstances in which there are no nominated persons to respond to alarm signals (e.g. because the building is unoccupied).

It is acknowledged that there may be areas of a building, with fire detectors therein, that are difficult to access (e.g. locked plant rooms, service risers and ceiling/floor voids). However, for avoidance of doubt, it is the responsibility of dutyholders to plan for safe access to all areas in which fire detectors are located (whether by those investigating the alarm signals or other persons with requisite facilities for access) in order to investigate alarm signals; it is not the role of SFRS to act on behalf of the dutyholder in this respect.

If an alarm signal has been determined to be a false alarm, the CIE should be reset as soon as it can be ensured that the cause of the false alarm is no longer present. This action should be taken as soon as practicable so that the fire alarm system is then capable of responding to any real fire. Even if SFRS have attended, it is not the role of the SFRS to reset the CIE. If those on the premises cannot reset the system (whether through lack of knowledge or a fault in the system), there should be an arrangement in place to summon appropriate assistance (e.g. from the fire alarm maintenance contractor).

All false alarms must be recorded in the system log book, with provision of as much relevant information as possible. A suitable format for this record can be found in Annex F of BS 5839-1: 2017. This is important because this log will be examined by maintenance technicians as part of routine maintenance of the fire alarm system. The log will enable maintenance technicians to assist the dutyholder in identifying trends and common causes in relation to false alarms, so that appropriate action can be taken to minimise re-occurrence.

### Pre-determined number of nominated persons present (e.g. during 4.1 normal working hours)

The first part of any investigation should be to examine the CIE to identify the location from which a fire alarm signal has been initiated. It should be noted that, in the case of an addressable system, the location and type of the specific detector that initiated the alarm signal can be identified.

For the purpose of this policy, it is important that, in the case of premises that are not designed, nor are currently being used, for sleeping accommodation, a caller can confirm whether a fire alarm signal has been initiated by anything other than a single smoke detector, as this will be treated by SFRS as a confirmed fire (e.g. if the signal has been initiated by a break glass manual call point, a heat detector or sprinkler head, a multi-sensor fire detector, or if more than one smoke detector has operated).

Where, in the case of these "non-sleeping" premises, a signal has not been initiated by any of the above, an investigation should be started.

The purpose of the investigation is to confirm whether there is a genuine fire or the signal is a false alarm. The number of people required safely to carry out the investigation should be determined by the dutyholder by practical trials and risk assessment. The persons investigating should have a method of communication that allows two-way speech between them.

One person should remain at the CIE, while the other people should be in pairs during the investigation. If another detector or zone activates, this should be treated as a signal in which more than one smoke detector has operated. It can, therefore, be treated as a confirmed fire, the SFRS should be called and the investigation should be abandoned.

The investigation team should proceed to the zone/detector that has activated, using protected escape routes where possible, while reporting their progress and location. Such reports could advise on the change of floor level within the building and/or be given at set time intervals. The aim is to ascertain whether the activation is genuine. Signs that an activation is genuine can be:

- Smoke
- Heat
- The smell of burning
- Visual sight of flame
- Sound of burning (crackling, popping, etc).

If any one of these signs is discovered (either by those investigating or other occupants of the building), then this should be communicated to the person at the CIE, so that a call can be made to the SFRS.

The objective of a fire detection system is to give a warning of fire when the fire is still in its early stages. As previously noted, even in the case of the 2% of alarm signals resulting from real fires, in two-thirds of these cases, no firefighting action by SFRS is required. This reflects research, which shows that, nationally throughout the UK, 93% of fires are extinguished by building occupants using portable fire extinguishers.

In this connection, Regulation 12 of the Fire Safety (Scotland) Regulations 2006 requires that, where necessary, in order to ensure the safety of relevant persons in respect of harm caused by fire, dutyholders must ensure that the relevant premises are, to the extent that is appropriate, equipped with appropriate means for fighting fire. Furthermore, Regulation 12 also requires that dutyholders nominate competent persons to use the fire extinguishers.

Accordingly, in some cases, it will be appropriate for those investigating fire alarm signals to take action to extinguish a small fire with the portable fire extinguishers provided, but only after it is ensured that action is being taken to evacuate the building and summon SFRS. An important part of the training given to persons nominated to investigate alarm signals is use of portable fire extinguishers and, very importantly, to recognise circumstances in which, for their own safety, no attempt should be made to fight a fire.

## 4.2 Health and safety of nominated persons

There is a risk that the nominated persons investigating the fire signal are proceeding towards a real fire. However, it should be borne in mind that 98% of alarm activations to which the SFRS are summoned transpire to be false alarms. The organisation should produce a health and safety risk assessment to address this. As shown in figure 1, the risk that a fire signal is, in fact, a real fire is low.

Before opening any doors, the door should be felt with the back of the hand, as high up the door as can be reached, for signs of heat. If it is hot, the door should not be opened. This heat can be considered a sign of fire and SFRS can be summoned without any further investigation needed.

Remember that staff are looking for signs of a fire, not necessarily a fire itself. In addition, <u>safe</u> use of portable fire extinguishers is stressed again.

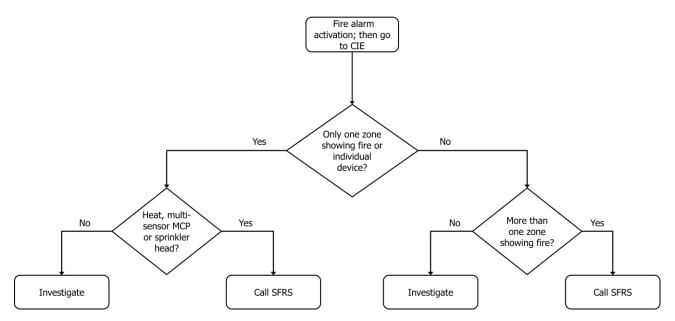


Figure 2 Process for premises in which no one sleeps.

During investigation of an alarm signal, subject to certainty that evacuation of the building is complete to the extent necessary, consideration can be given to silencing the audible alarm signal if the relevant risk assessment determines that this would be appropriate to avoid exposing people to high noise levels. This will also facilitate better vocal communication between investigation team members.

If it has been determined, as part of the relevant risk assessment, that those investigating alarm signals are permitted to use a lift to reach the relevant floor (which may not be acceptable in all circumstances), the lift should be taken to a floor below that from which the fire alarm signal originated, from whence access should be made by means of a protected stairway.

## 4.3 Pre-determined number of nominated persons not present (e.g. outside normal working hours), but occupants present in the building

In the case of "non-sleeping" premises with no nominated persons present, but occupants in the building, the normal evacuation procedures for the building should be followed; only those trained in investigation should investigate any alarm activations.

In these circumstances, SFRS will not attend the premises unless it can be confirmed that there is a sign of fire. As part of their risk assessments and fire safety arrangements, the dutyholder should ensure that any occupants of the building (e.g. outside normal working hours) are aware of the procedures to follow if the fire alarm system operates. This may include arrangements for summoning suitable personnel to deal with the fire alarm signal.

It should be noted that in, for example, certain relevant premises in which people sleep, there may, at certain times, be no nominated persons to investigate fire alarm signals. Examples include certain apartment blocks with simultaneous evacuation arrangements, certain student residences, small hotels with no night staff, etc.

It is the responsibility of the dutyholder to make arrangements in these premises for summoning of the fire and rescue service in the event of fire; this is a requirement of Regulation 12 of the Fire Safety (Scotland) Regulations. Given that persons sleep on the premises, it is important that any call to SFRS to alert them to operation of the fire alarm system makes it clear to SFRS that the premises are those in which people sleep, so that SFRS attend without further call challenge. The need to highlight that a property is being used for sleeping purposes would also apply to those buildings being used as temporary accommodations, e.g., emergency rest centres, youth group halls and museum "sleep over" events etc.

In this connection, it is sometimes the case that an alarm receiving centre (ARC) to which fire alarm signals from premises are relayed is not aware as to the nature of the premises and whether they include sleeping accommodation. Clearly, it is essential that, in Scotland, alarm receiving centres to which fire alarm signals are relayed from premises in which people sleep are made aware of the sleeping accommodation and are instructed to pass this information on to SFRS when a fire alarm signal is received.

#### 4.4 Single nominated person present (e.g. a lone security officer)

This case is distinct from the previous category, in that the lone worker has a designated responsibility for building safety and security. In this case, it is particularly important that the lone worker is suitably trained to interpret the fire alarm CIE, so that they are able, as far as practicable, to provide relevant information to SFRS.

Similarly, as in the case of all nominated persons, the lone worker must be fully familiar with the layout of the building, circulation routes within the building, any hazards present, etc. Particular care should be taken in this respect in the case of, for example, a new security officer, who has not previously been allocated to work at the building in question. The capability of the lone worker for the tasks required must be considered (e.g. mobility).

The first step to be taken is to check the CIE. If the indication at the CIE comprises a confirmed sign of fire (as previously defined), an immediate emergency call should be made to SFRS; under these circumstances, there should be no attempt to investigate the fire alarm signal.

However, if the indication does not comprise a confirmed sign of fire, the pre-planned investigation procedure should be carried out. This will be the situation if the indication at the CIE shows that the alarm has been triggered by a single smoke detector, or if, in the case of a non-addressable fire alarm system, the only indication is the zone of alarm origin, without any information as to the type of device that triggered the alarm signal; an obvious exception would be a case in which there is no smoke detection within the building, and, therefore, the alarm signal, by definition, would be regarded as a sign of fire (e.g. in sprinklered premises).

It is stressed that the investigation procedure **must** be pre-planned; ad hoc investigation procedures instigated purely on the initiative of the lone worker are unacceptable.

It is not possible to specify a unique, generic procedure that will be appropriate for every building. On the one hand, in the case of open plan office accommodation approached by multiple protected stairways, it might be acceptable for the lone worker to investigate the alarm signal, provided they have, first, informed an appropriate person (e.g. at a control room) of the circumstances. Where possible, the lone worker should remain in continuous communication, or at least in periodic communication, with this appropriate person.

On the other hand, there will be circumstances in which, because of the location of a possible fire or hazards likely to be present at that location, investigation by the lone worker is not a safe procedure. In these circumstances, the pre-planned arrangement, based on a current risk assessment, should be that the lone worker summons further assistance (e.g. via a control room, from remote colleagues, from building management or maintenance personnel, etc.).

It should be noted that the pre-planned investigation arrangement may be different, according to the zone of origin of the fire alarm signal. It should also be noted that the risk assessment, on which the pre-planned investigation arrangement is based, is not the fire risk assessment carried out for compliance with the Fire (Scotland) Act.

In the pre-planning for investigation, account needs to be taken of the potential development of a real fire in the period between summoning remote assistance and arrival of such assistance on site. This will impact on action to be taken by the lone worker in the interim.

In general, in the case of a lone worker, no attempt should be made to tackle a fire; on discovery of a fire, regardless of how small, the lone worker should withdraw, ensure that SFRS are summoned without delay, and then await their arrival. Firefighting action should only be taken when there is more than one nominated person on the premises.

Where practicable, consideration should be given to the use of technology to confirm the presence of a real fire during the investigation period. For example, in many fire alarm systems, it could be arranged that the initial fire alarm signal gives a warning only at the CIE (provided the CIE is continuously monitored by the lone worker). A further fire alarm signal from a second device could

then operate sounders throughout the building, so indicating to the lone worker that there is now, by definition, a sign of fire; the lone worker would then abort the investigation and ensure that SFRS is summoned without delay and informed that two devices have operated.

This is known as a coincidence arrangement within the fire alarm system (sometimes, incorrectly, described as "double knock"). It should be noted that this is, sometimes, possible even in a nonaddressable fire alarm system; the coincidence arrangement in this case would comprise operation of two independent zones of the fire alarm system.

### No nominated person present and no other occupants 4.5

This is, arguably, the most difficult of circumstances described in this guidance. Since the building is totally unoccupied, indication of a fire alarm signal could only be received at a remote location. The alarm is normally transmitted to operators at an alarm receiving centre (ARC), but may be transmitted (e.g. by mobile telephone) to key personnel of the dutyholder.

In the vast majority of circumstances, current practice is that a single "fire" signal is transmitted, precluding any possibility that those receiving the signal could confirm to SFRS as to the type of device that triggered the fire alarm signal (and, hence, whether the signal would be regarded as a "sign of fire").

It is important to note that, under these circumstances, there will be no attendance by SFRS. Action to be taken by the ARC and the dutyholder under these circumstances is solely a matter for the contract between the dutyholder and the ARC operator.

Typically, in these circumstances, the contract will require that the ARC notifies the keyholder. Ideally, there should be at least two keyholders available for contact, so that, if no response is received from the first keyholder, the ARC can cascade attempts to contact a further keyholder(s).

As in the case of occupied buildings with persons nominated to carry out an investigation, it is the responsibility of the dutyholder to pre-plan for safe investigation of alarm signals by keyholders, based on a risk assessment that is specific to the premises. Accordingly, only general advice can be given in this guidance document.

On arrival at the building, the keyholder should normally make a visual inspection of the perimeter of the building to check for any sign of fire, before entering the building. If there is any sign of fire, SFRS should be summoned without delay; the keyholder should not enter the building, but should simply await arrival of the SFRS.

If this inspection reveals no sign of fire, it will normally be safe for the keyholder to enter the building to reach the fire alarm CIE (assuming that the CIE is, for example, located in the entrance area of the building).

Thereafter, the procedure to be followed will be very similar to that described above for investigation of alarms in which there is only a single nominated person present and no other occupants in the building (see above).

However, in the case of a lone keyholder, certain points should be stressed, namely:

- Training of keyholders who are to investigate fire alarm signals, and knowledge of the building arising therefrom, should be of an equivalent standard to that required for a lone security officer.
- The risk assessment for the lone keyholder should take into account that, during the time required for summoning of the keyholder and their travel to the building, any real fire is likely to be larger than that investigated by persons on site when the fire alarm system operates. This might preclude investigation of alarm signals from high hazard rooms, in which rapid fire development is anticipated within the risk assessment.
- Again, it is strongly recommended that technological solutions that would assist in identifying a real fire should be considered.
- On arrival at the premises, the keyholder should make contact with an appropriate person (e.g. at a control room or similar, or, for example, a line manager) to alert them to their presence on the premises. As in the case of, for example, a lone security officer, the keyholder should, where possible, remain in continuous communication, or at least in periodic communication, with this appropriate person.

As noted, current practice in transmission of fire signals to ARCs is that, on operation of a fire alarm system at a building, a single, general fire signal is transmitted to the ARC, Given the new UFAS policy in Scotland, dutyholders for premises in which people do not sleep should discuss, with their alarm system provider or maintainer and/or any company monitoring their fire alarm system at an ARC, more technologically advanced arrangements.

For example, in many systems, it would be possible to transmit a signal triggered by a single smoke detector that would be identified at the ARC as an "unconfirmed fire" (to which, for example, a keyholder could then be summoned). It would then often be possible to transmit a second signal to an ARC, identifiable as a "confirmed fire", if a second smoke detector operated. (Such an arrangement has existed for many years in the intruder alarm industry and has resulted in a significant reduction in the number of intruder system false alarms attended by the Police.)

Similarly, in some systems, it is possible to use different channels of the "alarm routing equipment" (which transmits signals to the ARC) for transmission of signals from, say, manual call points or sprinkler systems and smoke detectors, so that the ARC could advise SFRS as to whether a signal represented a sign of fire.

Furthermore, where signals from the premises can be triggered only by, for example, multi-sensor fire detectors or sprinkler systems, it is important that the ARC is aware of this, so that SFRS can be advised accordingly.

## 5. REASSURANCE OF STAFF

In communicating the SFRS Unwanted Fire Alarm Signals policy to employees of the dutyholder, it is important to convey to employees:

- the background to, and justification for, the policy;
- the benefits of the policy to the safety of the public (e.g. by ensuring that firefighters are available to attend real fires, carry out fire prevention activities, work in ensuring the safety of vulnerable people, and to minimise the risk of road accidents);
- the liaison with the business community on the part of SFRS, prior to bringing the policy into force;
- the broader, extensive consultation with the public in 2021, prior to bringing the policy into force.

Understandably, some employees may feel concern that they are being asked to carry out tasks that might place them at risk and that may seem to be a reversal of traditional policies, under which the public were instructed to summon the fire and rescue service in the event of fire and evacuate the premises.

Accordingly, it is important for employees to understand that there has been no reversal of advice to the public to avoid placing themselves at risk from an actual fire. All that is required of employees is that, under certain defined and low risk circumstances, the presence of a fire is confirmed before summoning the fire and rescue service.

It is not, for example, suggested that there is an expectation that the public fulfil the role traditionally performed by firefighters (which was never really investigation of fire alarm signals, but firefighting action in the event of a fire).

In this connection, staff should be reassured as to the very minimal risk to employees as a result of the new UFAS policy, which is considerably outweighed by the benefits, including benefits to the safety of the public, described above.

This reassurance should include explanation to the effect that (by way of summary of previous information):

- the policy does not affect premises in which people sleep, including dwellings, hotels, hospitals, sheltered housing, care homes, hostels, self-catering accommodation, all of which represent the premises in which the risk to life is highest in the event of fire;
- the policy does not apply to alarm signals triggered by manual call points, operation of which generally results from a real fire;

- the reason that the policy does not apply to devices other than smoke detectors is that heat detectors and sprinklers produce very few false alarms, and only operate when there is a significant fire;
- the policy takes advances in technology into account (e.g. it recognises the benefits of multisensor fire detection and the scope for modern systems to identify the occurrence of fire signals from two or more smoke detectors);
- smoke detectors are able to detect a fire when it is very small (which is the reason for their propensity to produce false alarms). Accordingly, it is something of a truism that investigation of an alarm signal from a single smoke detector is carried out when a fire is still small, presents minimal danger and can often be extinguished by portable fire extinguishers.
- employees should be reassured that there is a legal duty on the part of employers to ensure, so far as is reasonably practicable, their safety and also their capability to perform any tasks required of them. Accordingly, arrangements for investigation of fire alarm signals are subject to a risk assessment.

The FIA are cognisant of the excellent working relationship between SFRS and the Scottish business community. In that connection, SFRS are keen to support the business community through the changes that will be necessary following the introduction of the UFAS policy. <u>Local area offices</u> of SFRS can be contacted in the event of a need for assistance.

The FIA also strongly recommend that dutyholders discuss the optimum solutions to address the UFAS policy with their fire alarm installer, maintenance company and any company operating an ARC to which fire signals are transmitted.

## 5.1 Checklist for dutyholders

The following checklist is intended to assist dutyholders in taking appropriate action to address the SFRS UFAS policy from 1 July 2023.

- 1. Are you and relevant staff fully aware of the SFRS UFAS policy?
- 2. Are you aware of the circumstances in which, when your fire alarm system operates, SFRS will, and will not, attend if summoned?
- 3. Have you notified your insurers of the SFRS UFAS policy, particularly if insurers have taken into account any facility for automatic transmission of fire signals to an ARC?
- 4. Have you nominated a sufficient number of employees to investigate fire alarm signals from a single smoke detector? Have you confirmed that these employees are capable of performing the tasks required of them?
- 5. Have you carried out a risk assessment in relation to investigation of fire alarm signals by the nominated employees?
- 6. Have you formulated investigation procedures, based on the risk assessment to which 5. refers?
- 7. Do the investigation procedures address each of the following scenarios (where relevant):
  - investigation of alarm signals when a sufficient number of nominated employees are present;
  - investigation of alarm signals when an insufficient number of nominated employees are present, but the building is occupied by others;
  - investigation of alarm signals when only a sole nominated person is present in the building, which is, otherwise, unoccupied;
  - investigation of alarm signals when no-one is present in the building, but fire alarm signals are transmitted to an ARC.
- 8. Have appropriate communication facilities been provided for use during investigation of fire alarm signals and are they regularly checked and tested?
- 9. Have you fully considered, within your risk assessment, safe investigation by lone workers and any technological facilities to support their safety?
- 10. Have all employees nominated to investigate alarm signals been given relevant training? This includes any keyholders who will be required to investigate fire alarm signals outside normal working hours.

11. Have any third parties who will be required to investigate fire alarm signals (e.g. contract security officers) been suitably trained?

12. Does the training include interpretation of fire alarm control and indicating equipment, and information required by the SFRS, as well as procedures for safe investigation of fire alarm

signals?

13. Are staff familiar with the correct means of resetting the fire alarm control and indicating

equipment?

14. Do all relevant staff know the arrangements for calling out a fire alarm maintenance company

if required?

15. Do all staff working outside normal working hours know procedures to follow if the fire alarm

system operates when no-one is present to investigate fire alarm signals?

6. GLOSSARY OF TERMINOLOGY

Addressable fire alarm system

A fire alarm system in which signals from detectors, manual call points or any other devices are individually identified at the fire alarm control and indicating equipment (in contrast with

a non-addressable fire alarm system, in which only the zone of alarm origin is indicated).

AFA

Automatic Fire Alarm

Alarm receiving centre (ARC)

Continuously manned premises, remote from those in which the fire alarm system is fitted, where the information concerning the state of the fire alarm system (e.g. a fire alarm signal)

is displayed and/or recorded, so that the fire and rescue service can be summoned.

Control and indicating equipment (CIE)(also described as "the control panel")

The equipment from which fire detectors, etc are supplied with power and which indicates a

fire alarm signal audibly and visually

Coincidence operation (sometimes, wrongly, described as "double knock")

An arrangement designed so that a specific output is obtained only when signals from at least

two independent fire detection devices are present at the same time

## False alarm

A fire signal resulting from a cause other than fire

### Multi-sensor fire detector

A fire detector that monitors more than one physical and/or chemical phenomenon associated with fire (e.g. heat and smoke)

## "Sign of fire"

For the purposes of the SFRS Unwanted Fire Alarm Signals policy, situation in which a person has identified circumstances indicative of a fire (e.g. smell of burning, smoke, flames, sound of crackling flames, etc) or a fire alarm system has operated in response to a device that is known to be any device other than a single smoke detector (e.g. a manual call point, heat detector, multi-sensor fire detector, sprinkler head or more than one smoke detector)

## Unwanted Fire Alarm Signal (UFAS)

False alarm from a fire alarm system that has resulted in summoning of the fire and rescue service

### DISCLAIMER

The information set out in this document is believed to be correct in the light of information currently available but it is not guaranteed and neither the Fire Industry Association nor its officers can accept any responsibility in respect of the contents or any events arising from use of the information contained within this document.



Tudor House, Kingsway Business Park, Oldfield Road, Hampton, Middlesex TW12 2HD

Tel: +44 (0)20 3166 5002 • www.fia.uk.com

Guidance on Safe Investigation of Fire Alarm Signals in Scotland
• Version 1 • June 2023 •
Tel: +44 (0)20 3166 5002 • www.fia.uk.com