Reducing Unwanted Fire Signals (UwFS) in Hereford & Worcester Fire and Rescue Service

Report prepared by HWFRS Protection Department

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HEREFORD & WORCESTER
HWFR
FIRE AND RESCUE SERVICE

Foreword

On 9th August 2022, an Automatic Fire Alarm (AFA) presentation[1] was delivered to SLB by the Protection Department which highlighted the response and change in approach towards unwanted fire signals (UwFS) across UK FRSs. False alarms over the past 3 years (2019-22) has accounted for 44.4% of all incidents attended. Data requested from UK FRS's demonstrated a significant change in approach towards UwFS in order to reduce their impact with various policy changes and use of a risk-based approach to drive down UwFS numbers.

A review by HWFRS was undertaken of HMICFRS Tranche 1 and 2 findings for each Service inspected[2] where the effectiveness of each Service was evaluated in terms of how well it addresses unwanted fire signals. Common areas of improvement were noted and an evaluation of current and adapting UK FRS approach was examined. Of the 28 Services inspected, regarding UwFS, 12 Services had unwanted fire signals as an area of improvement, including HWFRS.

Previous analysis and reviews of false alarm data has been extensively undertaken, in 2019 with 10-year review of Hereford & Worcester Fire and Rescue Service False Alarms Incident Data and in 2011 following the recommendations within the CRMP for that period. This document seeks to bring historical false alarm data up-to-date, whilst retaining much of the valuable analysis in order to clearly provide an evidence-based approach in understanding how to improve our response towards UwFSs.

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1. Introduction

It has been estimated that the total cost of response to false alarm incidents by Fire and Rescue Services (FRSs) in the UK exceeds £1 billion pounds a year.[3]

The fire false alarms due to apparatus category includes Automatic Fire Alarms (AFAs), which originate either from a fire alarm system within a premises (AFA from originator) or from a call centre or security company which monitors specific premises (AFA from call centre). Other false alarm incidents recorded by Fire Control may come from either a member of the public or other emergency Services.

In 2021-22 HWFRS responded to 3,429 false alarm incidents; fire false alarms due to apparatus were the largest category (74.6%) when compared to good intent (23.6%) and malicious (1.7%) false alarm incidents. Among all false alarms in that year, AFA calls received from remote call centres combined with those received from the premises accounted for 55% (1,889), some 25.4% of all incidents. Additionally, if other sources of calls are considered which give rise to a Control operator selecting an AFA incident type, these figures rise to 75.8% (2,604), some 35.1% of all incidents being false alarm AFAs. Of all AFAs received during 2021-22 that were selected by Control as being an AFA, 96.9% turned out to be false alarm incidents occurring in both domestic and commercial premises.

AFAs provide an effective means of giving early warning of a potential fire within a building and are especially effective and useful when the building is unoccupied. However, these systems are not fool proof and the vast majority of actuations from these systems require no action by the Fire Service. Automatic fire detection can be actuated by many common airborne materials, such as; dust, insects, steam, aerosol products, and also by faults with the system. When an actuation of a fire alarm is automatically sent to the Fire Service, and they mobilise their resources to the premises when they aren't needed, it is deemed to be an Unwanted Fire Signal (UwFS).

With the proliferation of automatic fire alarm systems, the number of UwFS continues to rise, along with other forms of false alarm incident. It follows that by reviewing HWFRS approach towards AFAs, this could have a significant impact and benefit towards addressing UwFS.

The purpose of this report is therefore;

a) to understand the impact of UwFS within HWFRS
b) to review existing policies, standards, regulations and legislation regarding all false alarm types and AFAs specifically (Service Policy Instructions, British Standards and guidance)
c) to analyse incident data available in the Government's Incident Recording System (IRS) from the 1st April 2009 to the 31st March 2022 (a 13-year period); the scope of analyses covered includes the types of false alarms recorded, the false alarm occurrence, the false alarm location, identification of repeat offenders, and whether any trends in data can be identified
d) to compare HWFRS data with national false alarm data published by the Home Office for England
e) to understand HWFRS current approach to UwFS within Prevention, Protection and Response
f) To define an evidenced risk-based series of proposals to reduce the numbers of UwFS in Herefordshire and Worcestershire

The Service published an updated risk review document "*HWFRS: CRMP 2021-2025*"[4]. It noted that on average over the last 10 years (2010-11 to 2019-20), we attended around 7,100 incidents each year and of these, the majority were False Alarms (47 per cent).

1.1 Impact of unwanted fire signals

An unwanted fire signal (UwFS) is defined as a signal transmitted by automatic fire detection (AFD) system reporting a fire where, upon arrival of the Fire and Rescue Service, it is found that a fire has not occurred. UwFS are entirely avoidable through good system design, management procedure, maintenance and the appropriate use of space within buildings.

The National Fire Chief's Council (NFCC), previously known as CFOA published in 2014 guidance for the reduction of false alarms and unwanted fire signal. This highlighted their impacts:

6. Impact of False Alarms

- Disruption of business (downtime, time wasted, loss of business and theft).
- Erode user's confidence in the value and reliability of AFA systems and discourage people from taking these systems seriously.
- False alarms unnecessarily transmitted to FAMOs impacts on their resources. Whilst dealing with false alarm alerts, operators are unavailable to deal with real emergencies.

7. Impact of Unwanted Fire Signals

- Diverting essential services from emergencies (putting life and property at risk).
- Cost to business of retained fire fighters being released.
- Unnecessary risk to crew & public whilst responding (accidents).
- Disruption to arson reduction, prevention, community safety (education, domestic smoke alarm fitting) & business support activities.
- Disruption to training of operational personnel.
- Impact on the environment of unnecessary appliance movements (noise, air and traffic pollution).
- Drain on public finances.
- The impact on Responsible Persons (RP) where persistent mismanagement of fire alarm signals has resulted in withdrawal of AFA attendance.
- Financial impact on premises where FRS apply charging for attending false alarms.

FAMO – (Fire Alarm Monitoring Organisation) a remote fire alarm monitoring organisations e.g. ARC

CFOA guidance for the reduction of false alarms and unwanted fire signals (2014). p8

However, it should be acknowledged that the current approach taken by HWFRS in response to AFAs with its 'Interim Mobilising to Automatic Fire Alarms' and 'Emergency driving - Graded Response' policies has observable benefits:

- Risk reduction – on average over a 13-year period from 2009/10 to 2021/22, AFA incidents that resulted in a reported fire accounted for 1.1% (approximately 75 incidents) of the total annual incidents HWFRS attended. Mobilisation of a single appliance to all AFAs ensures a timely response and intervention.
- Current emergency driving graded response policy mitigates risk to the safety of crews and members of the public when travelling under blue light conditions (accidents).
- There is some increased intelligence of premises and their risks resulting in familiarisation of crews with more premises assisting in risk identification.
- On average, around 8 premises a month have persistent (3 or more) false alarm AFAs, all of which are followed up by Protection Fire Safety Inspectors to improve compliance.
- Attendance at domestic premises enable crews to evaluate the need for Home Fire Safety Visits (HFSVs) and to assess whether there are any safeguarding concerns.
- Enhanced topography and visibility in supporting communities and business resilience.

As a snapshot, of 62 false alarm AFA incidents due to apparatus attended by operational crews at Malvern throughout 2022, crews were able to provide advice at 27 premises about cooking, smoking, testing and use of break glass call points.

1.2 HWFRS 2021-22 incident data overview

The Service attended **7,418** incidents in 2021-22 up by 400 incidents than the previous year, an increase of 5.3%. Although HWFRS expect fluctuations in the numbers up and down from year to year, the Service continue to analyse the underlying causes, with the aim of improving the performance of our response services and targeted prevention activities. This is currently reported to the Fire Authority each quarter. Despite this increase, the long-term trend continues to be downward, and this year's total is around 5.2% lower than 10 years ago.

Figure 1 below presents key 2021-22 incident data at a glance, and is taken from the recently published HWFA Annual Service Review 2021-22.[5]

The graphic shows that in 2020-21 the Service attended **3,429 false alarm incidents**, approximately **46.2% of all incidents attended** by HWFRS that year.

74.6% were due to apparatus, whilst 23.6% were good intent false alarm incidents, and only 1.7% of these calls were malicious.

Further to this, of all those incidents which were false alarms due to apparatus, 44.5% occurred in non-residential premises and 55.5% occurred in dwellings or other residential premises.

More detailed analysis of this annual data, and historical data is provided within this report.

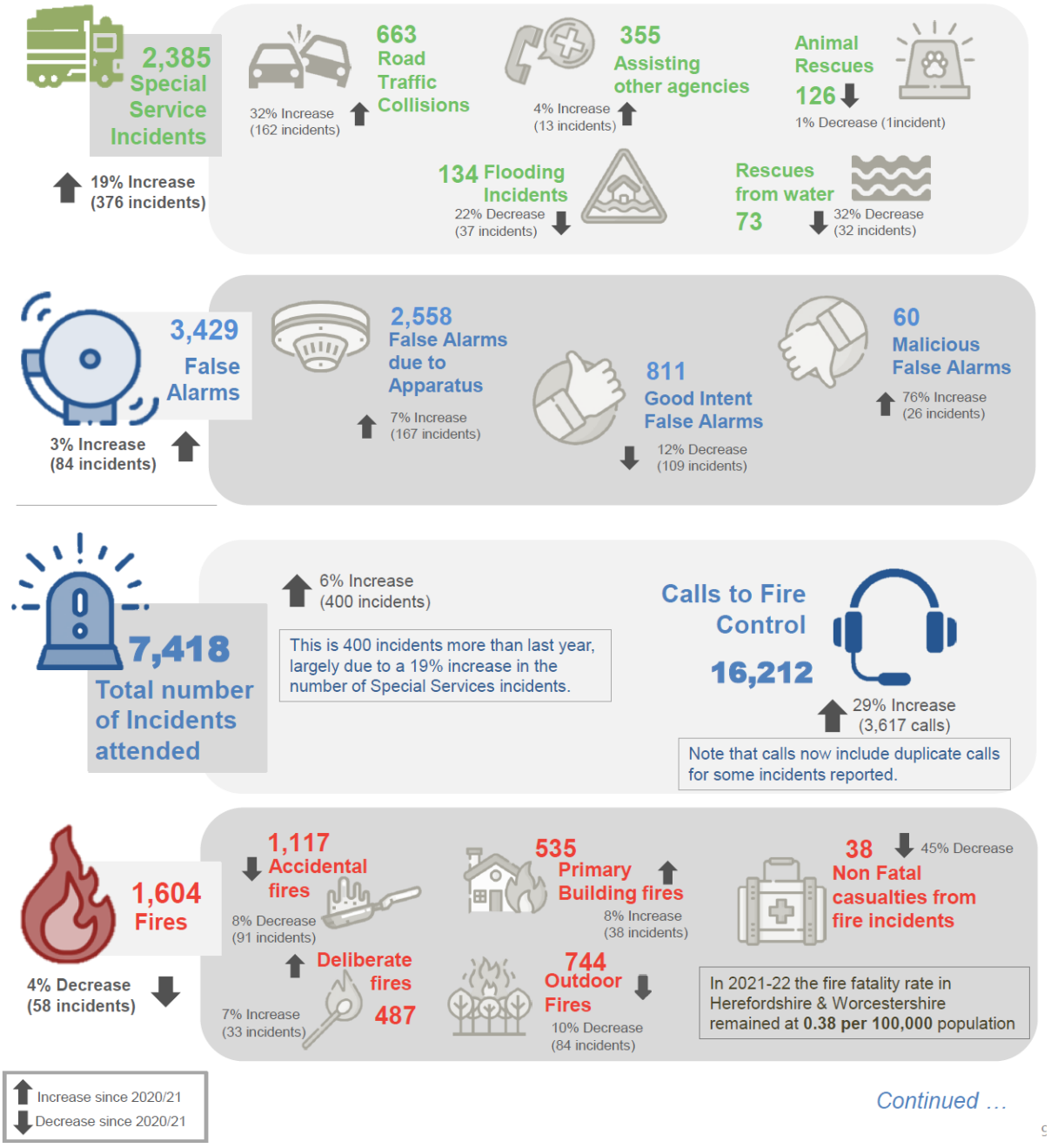


Figure 1: Overview of incidents attended in 2020-21, taken from the HWFA Annual Service Review 2021-22

1.3 HMICFRS – Tranche 1 Inspection of HWFRS December 2021

It was noted during the Tranche 1 inspection of HWFRS by HMICFRS in December 2021 that the Service was deemed 'Good' in its overall effectiveness at protecting the public through the regulation of Fire Safety. However, the following area for improvement (AFI) was highlighted: *'The Service should ensure it effectively addresses the burden of false alarms.'* More specifically it described that: *'Only limited action is being taken to reduce the number of unwanted fire signals (false alarms due to fire alarm systems) that are received. The number of calls to the Service that are unwanted fire signals has remained consistently high for more than five years. In 2019/20, there were 2,462 such calls. This is 31 percent of all calls that the Service received. (All false alarms equated to 42 percent of all calls).'*[6]

HMICFRS broadly highlighted the following as benefits in reducing the number of UwFS attended:

- Increased availability – Fire engines may be attending false alarms when a genuine call is received
- Increased public safety – responding to incidents creates a risk to the public with more fire engines travelling on roads

Whilst the Service's current 'Emergency Driving - Graded Response Policy'[7] goes a considerable way towards maintaining public safety, with the majority of AFA incidents being mobilised under 'Prompt Response' conditions, i.e. travelling at normal road speeds with discretion to use exemptions, other benefits may be found in reducing UwFS as described in section 1.1.

1.3.1 What does good look like?

In the analysis of Tranche 1 and 2 inspection reports across other Services the following activity was noteworthy:

1. The creation of a new policy to reduce UwFS
2. Consistent application of an UwFS policy
3. An effective risk-based approach towards UwFS reduction
4. Observable reduction in attendance figures at AFAs
5. Effective and consistent call challenging/filtering at Fire Control based on risk
6. Working with businesses and highlighting and the importance to managing their alarm systems to prevent unwanted calls
7. Working with Alarm Receiving Centres (ARC) and building owners to identify alarm causes and seeing what can be done to reduce further unwanted activations
8. Attendance where there is a reasonable belief a fire has broken out or where there is a risk to life
9. Ability to raise invoices and recovering of costs for attendance at sites unable or unwilling to reduce calls from UwFS

From this analysis it can be observed that a blended approach of the above is perceived as preferential, implementing a range of the above options rather than reliance on an individual aspect in isolation e.g. just call filtering.

FRS (with hyperlink to website)	Overall HMICFRS rating for 'Effectiveness - Q3 How effective is the FRS at protecting the public through the regulation of fire safety?'	Headline comments regarding Unwanted fire Signals (UwFS) (hover over to see full HMICFRS comments)	HMICFRS Improvements (exceptions list in comments)	Policy highlights (with hyperlink to policy)
Avon	Requires improvement	The number of unwanted fire signals attended has declined	New policy with an effective risk based approach, have stopped responding to some AFAs but continues to attend sleeping risks, care homes, hotels and high risk premises.	No longer automatically responds to AFAs from commercial, office, shops and factories. PDA 06:00-21:00 mobilise 1 pump to sleeping risk and high risk and 21:00-06:00 2 pump Call from ARC, no automatic response, attendance only where keyholder confirms fire Has an exceptions list where no response on site and for high risk premises
Bedfordshire	Requires improvement	The service takes action to reduce unwanted fire alarm signals	Effective risk based approach, call challenging, work with call centres and building owners to identfy causes. Attendance where reasonable belief that a fire has started. Attended just over half of all previous yearly AFAs.	Owners of AFD sytems in non single domestic private dwellings required to register their alarm systems and declare arrangments for reducing false alarms. Failure to do so will result in no response unless a fire is confirmed. Evaluation of numbers of detectors for acceptable level of UwFS
Buckinghamshire	Requires improvement	The service has made no progress in reducing its attendance at false alarms ('unwanted fire signals')	39% of calls attended as false alarms, no change in policy	Bucks Procedural note Apoint UwFS officer Send 1 pump to all AFAs 24/7
Cambridgeshire	Good	The service should do more to reduce the burden of unwanted fire signals	Inconsistent appliction of policy, insufficient action to reduce. Collects fire signal data but inconsistently.	Do not attend 09:00 -17:00 Monday to Friday with specified list and exemptions
Cheshire	Good	The service acts to reduce unwanted fire signals	Effective risk based approach, call challenging, only attends when a call is received from a person at the building and a fire is believed to have broken out/where risk to life, works with call centres	No longer respond to AFA in non-sleeping premises unless backed up by a call confirming a fire. Will respond to very high risk industrial or high-rise premises and sleeping premises such as hospitals, care homes, hotels, hostels, domestic homes and halls of residence
Cornwall	Requires improvement	More could be done to highlight the problem of unwanted fire alarms	Call challenging has reduced responding to 33% of AFAs, but needs to highlight to businesss the importance of managing false alarms	Call manage between 07:00 and 22:00 - no response unless on exceptions list which include sleeping risk, special risk or heritage 22:00 and 07:00 mobilise 1 appliance to residential care home or domestic dwelling Potential for cost recovery for commercial premises
Greater Manchester	Requires improvement	Unwanted fire signals have reduced	New policy, effective risk based approach, 25% reduction of type of incidents, 40% reduction in mobilisations	No response where there is no sleeping accomodation between 08:00 and 19:00 unless caller reasonably believes a fire. ARC to have this info, without which no daytime attendance is made
Hereford and Worcester	Good	The service hasn't taken enough action to reduce unwanted fire signals	Limited action taken, consistently high number of UwFs	Reduced attendance, returned on route for confirmed false alarms
Lincolnshire	Requires improvement	The service has reduced unwanted fire signals	Effective risk based approach, new policy of call challenging 999 calls, works with businesses to reduce	Call challenging procedure. ARC from lower risk commercial, on site confirmation required for attendance Policy not applicable to domestic, sleeping or complex hazards Charging proecdure for repeat false alarms
Merseyside	Good	The service's unwanted fire signal policy is effective	Effective risk based approach, consistent and robust approach with worst offenders	No reponse to AFA unless confirmation of fire, or premises is exempted, e.g. Dwellings and sleeping risks or exceptional circumstances (on application) 24hrs a day Double knock systems receives response
Northumberland	Good	Good at managing unwanted calls from automatic fire alarms	Effective risk based approach in stages. Reduced attandance, raised invoices against those unwilling/unable to reduce calls	In June 2018 a system of cost recovery and reduced attendance was introduced to recover costs associated with attending unnecessary alarm actuations at problematic premises.
Surrey	Good	The service acts to reduce unwanted fire signals	Reviewing AFA approaches by FRS, call challenging, considering cost recovery for excessive UwFS	During Covid - Control assesses response based on property type
Warwickshire	Requires improvement	Not enough action has been taken to reduce unwanted fire signals	Policy change was inffective and being reviewed	Attend Hospitals, residential care/ vulnerable sleeping risks Attend 20:00 to 07:00 HMO, Hotels B&B, Domestic. Will not attend commercial/non-sleeping unless signs of fire/confirmation of fire or more than one detector operating Consider requests for exemptions

Figure 2: HMICFRS Tranche 1 inspections findings for 'Effectiveness – Q3' in relation to UwFS, HMICFRS 2021-22

Figure 3: HMICFRS Tranche 2 inspections findings for 'Effectiveness – Q3' in relation to UwFS, HMICFRS 2021-22

FRS (with hyperlink to website)	Overall HMICFRS rating for 'Effectiveness - Q3 How effective is the FRS at protecting the public through the regulation of fire safety?'	Headline comments regarding Unwanted fire Signals (UwFS) (hover over to see full HMICFRS comments)	HMICFRS Improvements (exceptions list in comments)	Policy highlights (with hyperlink to policy)
Devon & Somerset	Good	The service has reduced its attendance to automatic fire alarms	Risk based approach, 4 stage approach, cost recovery Operational staff unsure what is required of them	Only attend certain building types at high risk. (No attendance to low risk no sleeping - No routine attendance between 8am -6pm Mon to Fri) May attend if listed/historic/library etc. Call challenge alarm calls - request keyholder to attend within 20min.
Essex	Requires Improvement	The service isn't doing enough to reduce unwanted fire signals	Limited action, attended 99% of false alarms in 20/21	Level 1 Premises – Immediate response to AFA calls and full PDA for risk will be maintained Level 2 Premises – Immediate response to AFA calls and full PDA for risk will be maintained Level 3 Premises – No immediate response is to be made to these premises unless a fire is confirmed via call challenge. A confirmation call will initiate a full PDA.
Gloucestershire	Requires Improvement	The service could do more to reduce unwanted fire alarms	Call challenges reduced AFA response by 54% Needs to highlight to businesses fire alarm management of UwFS	UWFS daily monitoring by FSO and jobs for 3 in 3 months DO not attend commercial unless on the exmeption list
Humberside	Good	The service's new unwanted fire signal policy is effective	Effective risk based approach, call challenging, charging repeat offenders	Between the daytime hours of 0800 – 1800 Monday to Friday dont attend non-sleeping premises, unless the caller at the premises is able to confirm that there is a fire. Outside of these hours at night 1800 – 0800 non-sleeping risk premises will continue to be subject to a call challenge however if no persons are deemed to be on site an attendance will be mobilised. Fire appliances will be mobilised at normal road speeds to reduce the risk to the public and our personnel.
Lancashire	Good	The service has been slow to reduce the number of false alarms it attends	Slow to implement policy since last inspection	All premises except single private dwelling subject to UwFS policy From 1 April 2022 based on evidence, have changed response to calls from automatic systems and from persons who have not investigated the source of a sounding fire alarm in non-sleeping risk buildings 7 days a week, between the hours of 8am and 7pm We are not changing the way we respond to automatic fire alarm systems after 7pm at night for any building type – we will continue to respond as we always have.
London	Requires Improvement	The brigade needs to do more to reduce unwanted fire signals	Attended 48.5% false alarms (of which 73.7% AFA) Established a UwFS team - little progress	May soon charge for UwFS
Norfolk	Good	The service is effective at reducing unwanted fire signals	Good progress, good UwFS policy mirrors call filtering NFCC guidance	Do not automatically respond to calls generated by automatic fire alarm (AFA) systems in these types of premises unless there is a confirmed report of fire at the premises. However premises where people sleep, or may be more vulnerable will be responded to unless a problem is highlighted with the fire alarm
Northhamptonshire	Good	The service takes action to reduce unwanted fire signals	Effective risk based approach, robust call challenging, clear policies for repeat generators of false alarms	If the ARC is unable to contact the premises for verification of cause of alarm, or the ARC deem the premises to be "unoccupied" no response will be made. If however the ARC is unable to confirm the premises type and Fire Control do not know the premises type, (i.e. potentially it may contain a sleeping risk) then the relevant PDA will be mobilised.
Nottinghamshire	Good	The service is proactive in monitoring and reducing unwanted fire signals	Business engagement team to educate and reduce	Call challenge 24/7 - exemptions apply
Oxfordshire	Good	The service could do more to reduce unwanted fire signals	Limited progress, attended 74% AFA in 20/21	Reduced PDA to high risk premises if unconfirmed Fire unconfirmed at unoccupied premises - reduced PDA, FAMO call back Fire unconfirmed at occupied premises - confirmation of FAMO call back
Shropshire	Good	The service hasn't done enough to reduce unwanted fire signals	Limited progress, UwFS due to appratus 30% of all incidents in 20/21	L1 - Letter at first UwFS in 12 months, followed by telephone call for >1 or L1 visit, further calls L2 full audit with consideration of non-attendance if reductions are not addressed.
Staffordshire	Requires Improvement	There is an effective strategy to reduce unwanted fire signals	Effective risk based approach, business engagement training and info, call challenging, no attendance to non sleeping risks if confirmed on site. 54% reduction to AFA	All calls from Domestic premises, Sheltered housing, Residential care premises and Hospitals will receive an attendance determined by the intelligence gained at the time of the call Calls received from ARCs (other than Domestic premises, Sheltered housing, Residential care premises and Hospitals) will receive a response determined by the intelligence gained at the time of the call

Tyne & Wear	Good	The service is active at reducing unwanted fire signals	Effective risk based approach. Certain premises will not attend during office hours. Exemptions reviewed frequently	Always respond to single private domestic dwellings and sheltered accommodation schemes, other residential premises such as hostels, hotels and care homes,registered Control of Major Accident Hazards (COMAH) sites, premises who have successfully applied to us for exemption. We will also respond to educational premises such as universities, colleges and schools including pre-schools on weekends, bank holidays and during school holidays. Since 1 June 2015 TWFRS have not automatically responded to investigate fire alarm activations in non-residential premises between the hours of 08:00 and 18:00. Since 1 October 2019 TWFRS have not automatically responded to investigate fire alarm activations in educational premises between 08:00 and 18:00, Monday to Friday, during term time (if applicable). Since 1 July 2021 TWFRS have not automatically responded to investigate fire alarm activations in healthcare premises between 08:00 and 18:00, Monday to Friday, excluding public holidays.
West Sussex	Requires Improvement	The service has been slow to reduce the number of false alarms it attends	Limited action, call challenging, targets on reduction. Options for reductions in its IRMP public consultation.	We will take a risk based approach where, in low risk commercial properties, we will no longer automatically respond to fire alarm actuations. This approach would be managed through our Joint Fire Control. We will develop and introduce a charging scheme for responding to false alarms to promote the appropriate management and maintenance of automatic fire alarm systems.
West Yorkshire	Requires Improvement	The service acts to reduce unwanted fire signals	Effective risk based approach. Will only attend where call is received at the builing and reasonably believes a fire has started	Cost recovery scheme. Reduced attendance bewteen 08:00 and 19:00 to unconfirmed AFA mon to fri. 1 pump attemdance between 19:00 and 08:00 including Sat/Sun and BHs. For all commercial premises without sleeping risks

From those Services which have been inspected by the HMICFRS which received acknowledgement for their activity to reduce UwFS, the following approaches were observed:

- Call challenging to establish the validity of the request for assistance (ARC to call site to confirm signs of fire)
- Revised pre-determined attendance for alarms operating
- No automatic attendance to AFAs received from ARCs to commercial premises unless a keyholder confirms signs of fire
- Exemptions for high risk sites e.g. COMAH, sleeping risks, care homes, heritage sites, places of education
- Attendance where there is no response from the premises and there is no key holder available or the key holder confirms there is a fire on their arrival.
- Registration of commercial AFDs
- Following call challenging, no response to non-sleeping accommodation from 08:00 to 19:00 unless caller reasonably believes a fire
- Charging for repeat UwFS occurrences
- Sleeping risk premises exempt from non-attendance between 19:30 to 07:30 including hospitals, hostels and hotels, and all single private dwellings including sheltered housing, HMO or multi storey accommodation exempt 24/7
- Exceptional exemptions from non-attendance on application to the FRS
- Assessment of risk based on property type
- No routine attendance to certain premises e.g. non-sleeping between 08:00 and 18:00, Monday to Friday.
- Other time frames where reduced attendance included 06:00-21:00, 09:00-17:00 Monday to Friday and 08:00 and 19:00.

Outside of the English FRSs, the Scottish FRS has recently undergone an evaluation of options for responding to AFAs including public consultation.[8] This approved the following procedure to be implemented in April 2023:

- Call challenge all AFAs from non-domestic premises, unless exempt.
- No response is mobilised, if questioning confirms there is no fire, or signs of fire.
- Automatic exemption applied to hospitals, is increased to a PDA of two appliances regardless time of day and shall be subject to periodic review.
    - Sleeping risk premises are exempt from call challenging and will receive the following immediate response:
    - Residential Care Homes receive a PDA of two fire appliances regardless time of day.
- All other sleeping risks receive a PDA of one fire appliance between 0700-1800hrs and two fire appliances out-with these hours

They predict that adopting this procedure will reduce their volume of UwFS by 57%.

1.4 NFCC Approach towards Unwanted Fire Signals

The National Fire Chiefs Council (NFCC) guidance on the reduction of false alarms and unwanted fire signals follows previous CFOA guides and protocols. It is supported by the NFCC AFA/UwFS working group producing a range of guidance documents to assist Fire and Rescue Services. The most current documents are found on the NFCC Unwanted fire signals website[9] and refers to:

- Guidance for the Reduction of False Alarms & Unwanted Fire Signals (CFOA, 2014),[10] and
- Code of Practice: Best Practice for Summoning a Fire Response via Fire Alarm Monitoring Organisations (CFOA, 2014a).[11]

The previous document, '*CFOA Protocol for the Reduction of False Alarms and Unwanted Fire Signals, 2010*', aimed to ensure improvements across the sector, including the design of fire alarm systems, a consistency in approach across FRSs, promoting industry awareness leading to better servicing and maintenance, and greater compliance with fire safety legislation. The protocol formed the basis for many FRSs policies on this issue and has led to many examples of notable practice with industry partners.

Individual FRSs have to now consider new response strategies to AFA systems to reduce the overall cost of such calls and to meet the requirements of locally determined Integrated Risk Management Plans. In addition, the Localism Act has provided Fire and Rescue Authorities with the power to put in place a charging policy in support of its strategy to deal with unwanted fire signals from automatic fire detection systems.

The 2014 guidance has been produced in recognition of these changes and it continues to advocate a partnership approach as being the best way to deal with the problem of UwFS from AFA systems. Clear responsibilities and expectations exist between all of the stakeholders, namely; the responsible person at the premises, the alarm receiving and monitoring centres, the industry sector responsible for the design, installation, servicing and maintenance of the system and the FRS.

The guidance provides a toolkit approach for FRSs to formulate their local strategies and policies. It is designed to provide a step-by-step process with a holistic approach from the design stage through to installation, commissioning, management, filtering and the FRS response, performance monitoring and follow-up visits.

The toolkit comprises six key components;

- Highlighting the problem of unwanted calls and false alarms from AFA systems,
- Prevention of false alarms,
- Confirmation of the cause of alarm before calling the Fire and Rescue Service,
- Call handling by the Fire and Rescue Service,
- Investigation and follow up of false alarm calls, and
- Stakeholder engagement.

It has been recognised that each FRS must determine which of the tools they wish to use in accordance with their respective arrangements for managing risk. There are also clear guidelines for dealing with poor performance. The scale of the problem caused by unwanted calls is such that an FRS would want to take a strategic approach to reducing the calls, combining measures to engage with, influence and, where necessary, regulate those who are responsible for managing buildings with AFA systems. This guidance directs FRS towards options for reducing these calls including;

- Supporting the Responsible Person,
- FRS interventions,
- Stakeholder engagement,
- Call Filtering by FRS Control operators, and
- Reducing attendance

A key area where false alarms and unwanted fire signals can be reduced is through the Fire Alarm Monitoring Organisations. Appendix B of this guidance contains a Code of Practice for Summoning a Fire Response via Fire Alarm Monitoring Organisations. The Guidance details how this Code of Practice aligns with a recommended approach and should be referred to for further information.

The Code of Practice (CFOA, 2014a) has been produced to establish an agreed best practice between FRSs and representatives from the industry of Fire Alarm Monitoring Organisations. It outlines best practice in improving the emergency response arrangements for fire alarm and fire detection systems, which are remotely monitored. It also outlines how to reduce the number of unwanted fire signals passed to the FRS.

CFOA and the Fire Alarm Monitoring Industry have agreed to work together to meet four principal aims to improve management of fire alarm systems, false alarms and unwanted fire signals. These comprise;

- Agree and implement fire alarm monitoring protocols,
- Agree and implement false alarm filtering protocols,
- Agree and implement connection protocols between FRS and fire alarm monitoring centres, and
- Reduce unwanted fire signals.

The Code of Practice sets out the recommended expectations of the actions of both Fire Alarm Monitoring Organisations and the FRS. It concludes with a CFOA and FAMO (Fire Alarm Monitoring Organisations) Commitment Declaration, completion of which demonstrates the

commitment shown by the organisations that have agreed to operate in accordance with this Code of Practice.

The following templated engagement letters are available on the NFCC website[12] to adapt as per the relevant Fire Service's policy:

- Registration of Automated Fire Alarm System (Thu, 06 Jan 2011)

  This (RFUFS1) letter highlights to a business premises that the Service has attended a number of false alarms at their premises. It describes their duty under the Regulatory Reform (Fire Safety) Order 2005 and the disruption caused by UwFS. It reminds them of the importance of liaising with their alarm receiving centre (ARC) to minimise the number of false alarm calls. It optionally allows for premises to register their automatic fire detection system with the FRS (which may be chargeable), the failure of which may necessitate the need to change attendance levels. It subsequently describes 3 attendance levels (normal, non-emergency or no-attendance) based on the performance level at which the number of unwanted fire signals is set against the number of automatic detector heads and manual call points. It indicates that the Service will monitor their progress over the next 3 months and that confirmed reports of fire via 999 will always receive a full emergency response.

- Letter to the Responsible Person: number of false alarms is within the performance level 1 threshold. Reflects an improvement in management of false alarms at the premises. (Thu, 06 Jan 2011)

This letter (RFUFS2) confirms a 3-month review has taken place, and that there will be no reduction to the emergency response based on meeting the performance level 1 threshold. It describes their need to keep making progress to reduce UwFS.

- No Reduction unwanted) fire signals performance Improved Jan 2018

This letter (RFUFS2) confirms a 3-month review has taken place, and that there will be no reduction to the emergency response based on meeting the performance level 1 threshold. It describes their need to keep making progress to reduce UwFS.

- Letter to inform the Responsible Person that the level of false alarms over the last 3 months has continued to exceed the performance level 1 threshold. (Thu, 06 Jan 2011)

Following the 3-month review, where the performance level 1 threshold has still been exceeded, this letter (RFAUFS3) allows for an agreed 3-month extension to monitor effectiveness of any changes made.

- Letter to state that whilst the number of false alarms exceeds the performance level 1 threshold, investigations have concluded that this is acceptable for the existing circumstances. (Thu, 06 Jan 2011)

This letter (RFAUFS4) allows for mitigating factors for exceeding the performance level 1 threshold, but it reserves the right to review this decision.

- Letter to state that the level of false alarms exceeds the threshold for receiving an Attendance Level 1 emergency response. After 14 days from the date of this letter, a single appliance will be sent at road speed when responding to calls based solely on the activation of your fire alarm and fire detection system. (Thu, 06 Jan 2011)

This letter (RFAUFS5) outlines that the performance level was reviewed and that no improvement has been identified. The premises are required to apply in writing to reimpose a level 1 attendance following a 3-month period of activity at performance level 1.

- Letter to state that, 14 days from the date of this letter, we will no longer attend your premises when responding to calls based solely on the activation of your fire alarm and fire detection system. If your system is connected to a remote monitoring service, your service provider will be instructed not to pass calls to the local FRS (Thu, 06 Jan 2011)

This letter (RFAUFS6) outlines the decision that following a 3 month review it has been determined that due to the performance level exceeding level 1, that the Service will no longer attend their premises for alarm activations. In order to receive attendance at level 1, they need to demonstrate over 3 months a reduction in unwanted fire signals to performance level 1. This application should be done in writing.

- Letter to state that, following improvements in reducing the number of false alarms transmitted to the FRS, we are re-instating the Attendance Level 1 emergency response to an automatic fire alarm actuating at your premises. (Thu, 06 Jan 2011)

  This letter (RFAUFS7) is intended to be used where attendance level 1 (emergency) can be re-instated following successful UwFS reduction on application.

1.5 HWFRS current approach towards Unwanted Fire Signals

1.5.1 HWFRS policies

HWFRS have a number of policies and procedures that concern response to false alarms, these currently include;

- Interim Mobilising to Automatic Fire Alarms policy – May 2012,[13]
- Mobilising – March 2013,[14] and
- Addendum 2, Emergency Driving Graded Response v1.2 – July 2020.[15]
- Operational Procedures During Extreme (Spate) Conditions, v02.01 February 2020[32]

Interim Mobilising to Automatic Fire Alarms, May 2012

The executive summary explains that pending the implementation of a fully revised policy for attendances at Automatic Fire Alarms (AFA's), this policy will be adopted with immediate effect.

This policy reduces the level of attendances at calls to all AFAs operating, to one appliance only, except at those premises highlighted through risk assessment of the Intel system, which will continue to attract an amended Pre-Determined Attendance (PDA).

Mobilising, March 2013

The aim of this Service policy and instruction is to ensure compliance with the Fire and Rescue Service Act 2004, in stating the arrangements for the receipt of emergency calls to the Fire and Rescue Service, and for mobilising to incidents. This policy states organisational and individual responsibilities in respect of these arrangements and the general principles behind

mobilising. Information with regard to mobilising to specific incidents is found in the '*mobilising policy supplementary information document'.*

The policy states that "decisions on mobilising are to be made using this policy and the application of professional judgement by Fire Control staff and other officers involved".

Addendum 2, Emergency Driving Graded Response, v1.2 July 2020

This policy provides guidance to HWFRS employees on a system of graded response to emergency and non-emergency incidents. It outlines how the Service seeks to reduce road risk, whilst it delivers an efficient and proportionate response to incidents, and how this approach should be interpreted and applied.

Regarding AFAs, within Appendix A of this policy these are graded as attracting an 'emergency prompt' response, allowing emergency exemptions to be used at any time as required. It may be appropriate to opt to drive under non-emergency conditions e.g. to an office building during the day, however life risk and operational intelligence may be used to evaluate the appropriate response.

Operational Procedures During Extreme (Spate) Conditions, v02.01 February 2020

This policy is invoked during spate conditions and authorised by the duty Principle Officer to, for example, mobilise to fires and rescues only or to restrict attendances during extreme weather events. For AFAs, a decision could be made not to attend, unless call filtering by Fire Control determines that a fire is confirmed or that it is affecting a high-risk premises.

1.5.2 Prevention, Protection and Response activity

Response Activity

When a call is received into Fire Control, the operator will gather as much detail about the nature of the incident, its location, persons affected and risk to determine the appropriate response and initiate mobilisation of nearest Fire Service assets. For AFAs, the origin of the call will either be from a dedicated call centre (AFA – Call centre) also known as an 'Alarm Receiving Centre' (ARC), or the call taken from the premises itself (AFA - From Originator). Few AFA calls are activated by 'auto diallers', whereby the AFA signal generates an automated call/signal to the Fire Service without human interaction – i.e. no one to interrogate.

All AFA calls are normally challenged to ascertain further details:

- Has the caller/call centre contacted the premises? – from which they may give confirmation that there is no response from the premises, or that contact has been made and, for example, that people are evacuating. Often the experience from Fire Control operators suggests that the ARC will not have contacted the premises prior to the call to the Fire Service
- Is the incident occurring at night or during weekends? consideration is given to ask whether the premises is open or closed – i.e. likelihood of occupancy
- Details may be taken of key holder attendance or security on site
- Details are taken of whether there are signs of any smoke, burning or fire and likely occupancy involved

Fire Control follow the protocol that for known false alarms, e.g. where a caller from the premises confirms that they were testing the system or it was accidently activated, they will take contact details of the caller and a response will not be sent, or be returned for redeployment. Where there is uncertainty as to what set the alarm off, Fire Control will assess and send a response.

Following the interim mobilising policy, certain higher risk premises have been graded with an enhanced pre-determined attendance (PDA); an AFA with a 2/3/4 pump attendance, rather than the standard of 1 appliance. For example, certain high-rise premises being higher risk attract a PDA of 4 appliances:

South District

URN	Premises	Location	PDA
	Station 21		
13	Bishops Bosel building	Worcester	3P
7	Worcester Cathedral	Worcester	3P
18	YMCA	Worcester	3P
2046	Severn House	Worcester	3P
2047	Cripplegate House	Worcester	3P
2048	Henwick House	Worcester	3P
46	St Pauls Hostel	Worcester	3P
	Warmstry Court	Worcester	2P
1282	Pirton Grange	Worcester	2P
1213	Bridgewater House	Worcester	4P
URN	Premises	Location	PDA
	Station 29		
404	H M P Long Lartin	Evesham	2P
2133	Marshalls Transport	Pershore	2P
	Station 41		
450	Madresfield Court	Malvern	3P
2691	Abbey House	Malvern	2P
	Station 53		
1997	Fairfield House	Ludlow	2P

North District

URN	Premises	Location	PDA
Station 24			
145	Roxel (UK Rocket Motors)	Kidderminster	3P
2045	Champney	Kidderminster	4P
2043	Coniston House	Kidderminster	3P
2041	Derwent House	Kidderminster	3P
2044	Courtney	Kidderminster	4P
2042	Windermere House	Kidderminster	3P
	Station 26		
268	Hanbury Hall	Hanbury	3P
263	WH Bowker Ltd	Droitwich	2P
Station 27			
299	H M P Hewell Block 8	Redditch	3P

West District

URN	Premises	Location	PDA
Station 46			
555	Avara Foods	Hereford	2P
561	Hereford Cathedral	Hereford	3P

Figure 4: Premises with amended Pre-Determined Attendance to AFAs

Fire Control have the discretion to enhance the PDA, based on the information and intelligence gathered during the call, or subsequent to the call e.g. repeat calls.

Currently the Service responds to AFA's within the framework of the Graded Response, mobilising and interim mobilising to automatic fire alarms policies. Attendance at AFA's may identify fire safety concerns which are forwarded to the Protection-TFS department to follow up. Additionally, attendance at an AFA allows access at a premises for the purposes of familiarisation or risk evaluation as to whether the premises should be escalated through the Intel process.

Response will capture false alarm and AFA data primarily through the Incident Reporting System (IRS). This may include describing the premises type, location of the detector or manual control point (floor, zone room) and the detector/manual call point number concerned.

Prevention Department activity

In 2021-22, of all false alarms, 49.9% (1,715 incidents) occurred in domestic/residential properties (categorised by dwellings and other residential premises with IRS). On a daily basis, Prevention Engagement Officers identify those incidents which have occurred in domestic premises. Opportunity exists to follow up these premises to determine their needs and vulnerabilities and to offer Safe and Well visits or potential signposting requirements. Operational crews are encouraged to obtain contact names and numbers for individual occupiers, or warden contacts to follow these activities up.

In terms of repeat AFAs occurring in domestic properties, from April 2022 monthly Prevention reports capture the relevant data from the incident reporting System, in order to progress targeted prevention work e.g. within sheltered accommodation.

Protection (Technical Fire Safety) Department activity

Where premises within Herefordshire and Worcestershire fall under the scope of the Regulatory Reform (Fire Safety) Order 2005, i.e. non-domestic premises, they are regulated by HWFRS as the enforcing authority or another defined regulator. HWFRSs Protection-TFS Department undertakes an annual risk-based inspection program of these premises to ensure compliance with the Fire Safety Order. As such, AFAs under the Fire Safety Order are monitored by the Protection-TFS department on a monthly basis. This allows the Service to highlight repeat activations and identify potential trends of concerns in compliance with the management of fire detection and warning systems.

From the 13 June 2022, the Protection-TFS Department implemented using an AFA trend questionnaire during follow ups on all appropriate premises where an AFA had occurred 3 or more times within a given month. This AFA trend questionnaire[4] is completed by the appointed Fire Safety Inspector to record the cause of the activation, to question whether the management procedures are in place and what action the responsible person is taking to prevent and reduce further false activations. The aim of this questionnaire is not only record what activity is being undertaken at the premises, but also a tool whereby the responsible person is encouraged to re-assess their procedure and practice towards alarm activations. The questionnaire examined whether there is an out of hours procedure in place, whether they had a valid Fire Risk Assessment or whether the premises required a full risk inspection. The AFA trend questionnaire is found in Appendix 1.

Due to the higher frequency of false alarms within healthcare premises, i.e. hospitals, it is deemed appropriate that these premises would be asked to review their AFA arrangements within the context of ongoing regular Hospital review meetings.

As a snapshot, the below tables provide a break-down per district from April 2022 to November 2022 of commercial premises (where the Fire Safety Order applies) that were identified as having repeat (3 or more) UwFSs.

On average over this period, North District receives 2.8 premises which give rise to repeat AFAs per month, South District 3.75 premises and West District 1.75 premises.

The total number of occasions where a different/same premise had 3 or more false alarm AFAs from April 2022 to November 2022 was 67.

North District repeat AFAs

MONTH	STATION	ADDRESS	AFA REASON	#AFAs
Nov-22	Wyre Forest	BERRINGTON COURT FELIX BAXTER DRIVE KIDDERMINSTER DY11 7FH	x1 Testing, x1 Cooking/burnt toast, x1 Faulty	3
Nov-22	Redditch	THE ALEXANDRA HOSPITAL WOODROW DRIVE REDDITCH B98 7UB	x1 Unknown, x3 Other	4
Oct-22	Wyre Forest	BERRINGTON COURT FELIX BAXTER DRIVE KIDDERMINSTER DY11 7FH	x2 Cooking/burnt toast, x1 Unknown, x1 Not required	4
Oct-22	Bromsgrove	CRABTREE COURT SHELTERED HOUSING PARKWOOD ROAD BROMSGROVE B61 8UG	x3 Cooking/burnt toast, x1 Other cooking	4
Oct-22	Droitwich Spa	ROWAN COURT FLAT 8 WORCESTER ROAD DROITWICH WR9 8AH	x3 Faulty	3
Sep-22	Bromsgrove	57 MONKEYS WORCESTER ROAD BROMSGROVE B61 7DN	x2 Unknown, 1 Testing	3
Sep-22	Wyre Forest	GEORGE LAW COURT ANCHORFIELDS KIDDERMINSTER DY10 1PZ	x1 Smoking, x1 Cooking/burnt toast, x1 Faulty	3
Sep-22	Droitwich Spa	NORBURY HOUSE (& THEATRE) FRIAR STREET DROITWICH WR9 8EB	x2 Faulty, x1 Unknown	3
Sep-22	Redditch	THE ALEXANDRA HOSPITAL WOODROW DRIVE REDDITCH B98 7UB	x1 Accidentally/carelessly set off, x1 Cooking/burnt toast, x1 Chemicals/aerosols, x1 Faulty	4
Sep-22	Droitwich Spa	WORCESTER RUGBY FOOTBAL CLUB SIXWAYS STADIUM WARRIORS WAY HINDLIP WORCESTER WR3 8ZE	x2 Unknown, x1 Poor maintenance	3
Aug-22	Redditch	MACHINE ALUMINIUM PROFILES UNIT 86 HEMING ROAD REDDITCH B98 0EA	x3 Unknown	3
Aug-22	Redditch	MALVERN HOUSE SHELTERED HOUSING FORDBRIDGE CLOSE REDDITCH B97 5AU	x2 Unknown, x1 Cooking/burnt toast	3
Aug-22	Redditch	MORRISONS CLEARWELL ROAD REDDITCH B98 0SW	x1 Faulty, x1 Cooking/burnt toast, x1 Other	3
Aug-22	Redditch	VUE CINEMA APOLLO CINEMA KINGFISHER SQUARE KINGFISHER SHOPPING CENTRE REDDITCH B97 4EQ	x1 Steam, x1 Faulty, x2 Testing	4
Jul-22	Wyre Forest	BERRINGTON COURT FELIX BAXTER DRIVE KIDDERMINSTER DY11 7FH	x3 Faulty, x1 Unknown	4
Jul-22	Wyre Forest	KIDDERMINSTER GENERAL HOSPITAL BEWDLEY ROAD KIDDERMINSTER DY11 6RJ	x2 Steam, x12 Unknown	3
Jul-22	Redditch	VUE CINEMA APOLLO CINEMA KINGFISHER SQUARE KINGFISHER SHOPPING CENTRE REDDITCH B97 4EQ	x1 Faulty, x1 Accidental, x1 Testing	3
Jun-22	Bromsgrove	L G HARRIS & CO LTD HARRIS BRUSH HANBURY ROAD STOKE PRIOR BROMSGROVE B60 4AE	x2 Unknown, x1 Dust	3
May-22	Redditch	THE ALEXANDRA HOSPITAL WOODROW DRIVE REDDITCH B98 7UB	x1 Dust, x2 Faulty	3
May-22	Redditch	VUE CINEMA APOLLO CINEMA KINGFISHER SQUARE KINGFISHER SHOPPING CENTRE REDDITCH B97 4EQ	x1 Faulty, x3 Testing	4
Apr-22	Redditch	DENNIS POTTER COURT 20 TO 39 HADLEY CLOSE WYTHALL BIRMINGHAM B47 6LT	x1 Toast, x1 Faulty, x1 Unknown	3
Apr-22	Bromsgrove	ELGAR MEWS FLATS 1 TO 31 EDNALL LANE BROMSGROVE B60 2DB	x1 Toast, x1 Other, x1 Unknown	3
Apr-22	Redditch	VUE CINEMA APOLLO CINEMA KINGFISHER SQUARE KINGFISHER SHOPPING CENTRE REDDITCH B97 4EQ	x2 Testing, x1 Unknown	3

West District repeat AFAs

MONTH	STATION	ADDRESS	AFA REASON	#AFAs
Nov-22	Hereford	BALLINGER COURT DEWPOND CLOSE HEREFORD HR4 9UL	x1 Cooking/burnt toast, x1 Faulty, x1 Smoking	3
Oct-22	Hereford	BALLINGER COURT DEWPOND CLOSE HEREFORD HR4 9UL	x3 Cooking/burnt toast, x1 Smoking	4
Oct-22	Hereford	HEREFORD COUNTY HOSPITAL STONEBOW ROAD HEREFORD HR1 2BN	x1 Cooking/burnt toast, x1 Accidentally/carel	3
Oct-22	Hereford	KYRLE POPE COURT SUDBURY AVENUE HEREFORD HR1 1XZ	x 2Faulty, x1 Accidentally/carelessly set off	3
Sep-22	Hereford	BALLINGER COURT DEWPOND CLOSE HEREFORD HR4 9UL	x4 Faulty, x2 Cooking/burnt toast, x1 Unknow	8
Sep-22	Hereford	HEREFORD COUNTY HOSPITAL STONEBOW ROAD HEREFORD HR1 2BN	x1 Other, x2 Steam, x1 Faulty, x1 Cooking/bur	5
Aug-22	Hereford	BALLINGER COURT DEWPOND CLOSE HEREFORD HR4 9UL	x3 Cooking/Burnt Toast	3
Aug-22	Hereford	HEREFORD COUNTY HOSPITAL STONEBOW ROAD HEREFORD HR1 2BN	x4 Accidental, x1 Testing, x1 Poor Maintenanc	6
Jul-22	Hereford	HEREFORD COUNTY HOSPITAL STONEBOW ROAD HEREFORD HR1 2BN	x1 Cooking, x1 Other, x! Accidental	3
Jul-22	Leominster	NORFOLK HOUSE SHELTERED HOUSING ETNAM STREET LEOMINSTER HR6 8AQ	x1 Faulty, x1Toaster/Toast, x1 Cooking/burnt	3
Jul-22	Hereford	THE MAGISTRATES COURT HEREFORD MAGISTRATES COURT BATH STREET HEREFORD HR1 2HE	x1 Unknown, x2 Faulty, x1 Dust	4
Jun-22	Hereford	HEREFORD COUNTY HOSPITAL STONEBOW ROAD HEREFORD HR1 2BN	x2 Accidental, x 1 Cooking, x 1 Faulty	4
May-22	Ledbury	DAVANT LOWER ROAD TRADING ESTATE LEDBURY HR8 2DJ	x2 Other, x2 Faulty	4
Apr-22	Hereford	HEREFORD COUNTY HOSPITAL STONEBOW ROAD HEREFORD HR1 2BN	x1 Faulty, x1 Other, x1 Accidental, x1 Cooking	4

South District repeat AFAs

MONTH	STATION	ADDRESS	AFA REASON	#AFAs
Nov-22	Worcester	CRIPPLEGATE HOUSE ST. CLEMENTS CLOSE WORCESTER WR2 5BG	x2 Cooking/burnt toast, x1 Accidental, x1 Faulty, x1 Unknown	5
Nov-22	Worcester	HENWICK HOUSE ST. CLEMENTS CLOSE WORCESTER WR2 5BQ	x1 Accidentally/carelessly set off, x2 Cooking/burnt toast	3
Nov-22	Evesham	SEWARD CLOSE SHELTERED HOUSING COWL STREET EVESHAM WR11 4PN	x2 Cooking/burnt toast, x1 Faulty	3
Nov-22	Worcester	WORCESTERSHIRE ROYAL HOSPITAL CHARLES HASTINGS WAY WORCESTER WR5 1DD	x1 Dust, x1 Other, x1 Faulty	3
Nov-22	Worcester	WORCESTERSHIRE ROYAL HOSPITAL ELGAR UNIT NEWTOWN ROAD WORCESTER WR5 1JG	x1 Accidentally/carelessly set off, x1 Other, x1 Smoking, x1 Unknown	4
Oct-22	Worcester	CHELMSFORD COURT SHELTERED HOUSING CHELMSFORD DRIVE WORCESTER WR5 1RD	x1 Unknown, x1 Minute animals, x1 Faulty	3
Oct-22	Malvern	VISCOUNT COBHAM COURT SHELTERED HOUSING PICKERSLEIGH ROAD MALVERN WR14 2RJ	x3 Unknown	3
Oct-22	Worcester	WORCESTERSHIRE ROYAL HOSPITAL CHARLES HASTINGS WAY WORCESTER WR5 1DD	x1 Steam, x3 Accidentally/carelessly set off, x1 Dust, x1 Unknown, x1 Othe	7
Oct-22	Worcester	WORCESTERSHIRE ROYAL HOSPITAL ELGAR UNIT NEWTOWN ROAD WORCESTER WR5 1JG	x3 Steam, x2 Smoking, x1 Dust, x1 Faulty	7
Sep-22	Worcester	BROOKTHORPE CLOSE, SHELTERED HOUSING BROOKTHORPE CLOSE WORCESTER WR4 9YB	x3 Cooking/burnt toast	3
Sep-22	Evesham	HOMESMITH HOUSE SHELTERED HOUSING ST. MARYS ROAD EVESHAM WR11 4EH	x4 Faulty	4
Sep-22	Evesham	MEADE COURT SHELTERED HOUSING MERSTOW PLACE EVESHAM WR11 4AZ	x 2Cooking/burnt toast, x1 Other cooking	3
Sep-22	Worcester	WORCESTERSHIRE ROYAL HOSPITAL CHARLES HASTINGS WAY WORCESTER WR5 1DD	x1 Chemicals/aerosols, x1 Cooking/burnt toast, x1 Water intrusion	3
Aug-22	Worcester	CHELMSFORD COURT SHELTERED HOUSING CHELMSFORD DRIVE WORCESTER WR5 1RD	x2 Faulty, x1 Unknown	3
Aug-22	Evesham	SEWARD CLOSE SHELTERED HOUSING COWL STREET EVESHAM WR11 4PN	x2 Dust, x1 Cooking/burnt toast	3
Aug-22	Worcester	WESTHAVEN PLACE SHELTERED HOUSING MARTLEY ROAD ST. JOHNS WORCESTER WR2 6EY	x1 Other cooking, x2 Fumes/heat haze, x1 Cooking/burnt toast	3
Aug-22	Worcester	WORCESTERSHIRE ROYAL HOSPITAL CHARLES HASTINGS WAY WORCESTER WR5 1DD	x2 Accidental, x2 Smoking, x2 Dust	6
Jul-22	Worcester	WORCESTERSHIRE ROYAL HOSPITAL CHARLES HASTINGS WAY WORCESTER WR5 1DD	x1 Accidental, x1 By Phone, x2 Chemicals, x1 Cooking/burnt toast, x1 Not	10
Jun-22	Wyre Forest	WH BOWKER LTD POTTER LOGISTICS LTD KIDDERMINSTER ROAD SITE 7 TRADING ESTATE DROITWICH WR9	x1 Poor Maintenance, x1 Other, x1 Unknown	3
Jun-22	Evesham	AGROVISTA UK LTD WORCESTER ROAD EVESHAM WR11 4XD	x2 Unknown, x 1 Faulty	3
Jun-22	Worcester	DANCOX HOUSE FLAT 22 ST. CLEMENTS GARDENS WORCESTER WR2 5DZ	x3 Cooking/burnt toast, x1 Unknown	4
Jun-22	Evesham	MEADE COURT SHELTERED HOUSING MERSTOW PLACE EVESHAM WR11 4AZ	x1 Unknown, x 2 Cooking/burnt toast	3
Jun-22	Worcester	WORCESTERSHIRE ROYAL HOSPITAL CHARLES HASTINGS WAY WORCESTER WR5 1DD	x3 Accidental, x1 Cooking/burnt toast, x2 Other, x1 Reported/Not Found,	13
May-22	Worcester	HENWICK HOUSE ST. CLEMENTS CLOSE WORCESTER WR2 5BQ	x1 Cooking, x1 Smoking, x1 Not Required	3
May-22	Worcester	JAMES CLOSE SHELTERED HOUSING JAMES CLOSE WORCESTER WR1 2BG	x3 Cooking/burnt toast	3
May-22	Worcester	THE CEDARS SHELTERED HOUSING PINE CLOSE FERNHILL HEATH WORCESTER WR3 8RU	x3 Dust	3
May-22	Worcester	WORCESTERSHIRE ROYAL HOSPITAL CHARLES HASTINGS WAY WORCESTER WR5 1DD	x2 Other, x1 Dust, x1 Testing, x1 Steam	5
May-22	Worcester	WORCESTERSHIRE ROYAL HOSPITAL, ACONBURY UNIT CHARLES HASTINGS WAY WORCESTER WR5 1JP	x2 Dust	2
Apr-22	Evesham	HOMESMITH HOUSE SHELTERED HOUSING ST. MARYS ROAD EVESHAM WR11 4EH	x2 Faulty, x1 Cooking/burnt toast	3
Apr-22	Worcester	WORCESTERSHIRE ROYAL HOSPITAL CHARLES HASTINGS WAY WORCESTER WR5 1DD	x1 Unknown, x2 Accidental, x2 Dust, x1 Faulty	6

Table 1: Monthly reports per District for premises which have persistent AFAs (3 or more), April - November 2022.

1.5.3 Fire Authority decisions

In 2013 and 2014 papers were presented to the Fire Authority in respect of reducing the attendance at automatic fire alarm incidents. The papers and decisions of the Fire Authority meetings can be accessed via the downloadable reports.

Fire Authority Paper: Automatic Fire Alarms (AFA) Reduction Policy, Sep 2013[16]

This Fire Authority paper was presented on the 4th September 2013 by Assistant Chief Fire Officer and recommended that the Fire and rescue Authority adopted the following in relation to Automatic Fire Alarms;

1. all pre-determined attendances to Automatic Fire Alarm calls to be one pumping appliance only, except where risk factors and Intel (intelligence) information indicate otherwise,
2. robust call filtering in the Service's Command and Control Centre be implemented,
3. return en-route to be implemented when a caller confirms any previous call as now a false alarm,
4. all responses to Automatic Fire Alarms to be at normal road speeds unless the Officer in Charge of the appliance deems otherwise,
5. attendance will be made to Automatic Fire Alarms received to dwellings (includes houses in multiple occupation, flats), schools, residential care and other residential (includes special units, sheltered housing, hotels, hostels),
6. hospitals to receive one appliance attendance to calls from Automatic Fire Alarms, except where risk factors and Intel (intelligence) information indicate otherwise,
7. the Authority will not adopt a 'charging for Automatic Fire Alarms' policy at this time, and
8. implement a "full" call filter procedure to Automatic Fire Alarms from non-residential premises and hospitals and a "light" call filter procedure to Automatic Fire Alarms from dwellings, schools, residential care and other residential dwellings.

At the Fire Authority meeting it was resolved that all eight recommendations were adopted from the report, which proposed the formal adoption of the existing Interim Automatic Fire Alarm Reduction (AFA) Policy into a new policy.

Fire Authority Paper: Reduction in Attendance at Automatic Fire Alarms, Consultation Feedback, December 2011[17]

This Fire Authority paper was presented on the 14th December 2011 by the Head of Service Delivery and concerned the responses to consultation regarding the proposed reduction of attendances at Automatic Fire Alarms (AFAs), and sought permission to implement the recommendations contained in the paper, namely;

1. all Pre-Determined Attendances to Automatic Fire Alarm calls to be one pumping appliance only, except where risk factors and Intel (intelligence) information indicate otherwise,
2. robust call filtering in the Service's Command and Control Centre be implemented,
3. return en-route be implemented when a caller confirms any previous calls as now a false alarm,
4. all responses to Automatic Fire Alarms to be at normal road speeds unless the Officer in Charge of the appliance deems otherwise,
5. attendance be made to Automatic Fire Alarms received to dwellings (includes houses in multiple occupation, flats), schools, residential care and other residential (includes special units, sheltered housing, hotels, hostels),

6. hospitals to receive one appliance attendance to calls from Automatic Fire Alarms for a period of 12 months, during these 12 months a full assessment of each hospital be made to establish if a single fire appliance or a non-attendance is appropriate,
7. attendance will not be made to non-residential premises (includes offices, shops, factories, warehouses, other buildings),
8. all restricted attendances be implemented at all times of day and night, this will be specifically reviewed after 12 months,
9. Automatic Fire Alarms to unoccupied premises will not receive attendance,
10. The Service's Command and Control Centre will apply a "full" filter procedure to Automatic Fire Alarm calls from non-residential premises and hospitals. This complements Recommendation 5. They will apply a "light" filter procedure to Automatic Fire Alarms from dwellings, schools, residential care and other residential properties),
11. The Service may implement a non-attendance policy to repeat offenders, following Technical Fire Safety intervention, unless a confirmed fire is reported, and
12. The Authority will not adopt a 'Charging for Automatic Fire Alarms' policy at this time.

The meeting considered each recommendation in turn and questions were taken from Members by the Chief Fire Officer. With regard to Recommendation 6; attendance at hospitals, the Chief Fire Officer advised for the next 12 months the Authority would continue to send an appliance but after that period an individual assessment would be made of each incident. Furthermore, the Localism Bill allowed the Authority to charge repeat AFA offenders but the Authority wished to educate them rather than charge them.

Councillor J Campion declared a personal interest due to his involvement in museums. He expressed concern about heritage buildings and the associated risks of not attending an AFA out of hours. Members were particularly reminded of the incident at Hartlebury Museum recently and the Chief Fire Officer confirmed that any decisions made at the meeting would be implemented within a period of six to seven months following specific consideration of heritage buildings.

A Member queried whether Fire Control staff had the appropriate training to deal with borderline cases. The Chief Fire Officer responded that Fire Control always had qualified professional staff on duty that took the calls. The Chief Fire Officer clarified that many buildings had a fire alarm system which operated whether the building was occupied or not and the alarm went to a collector station which could be anywhere in the country. The Collector Station then contacted Fire Control with details of the AFA.

Members made the following points;

- Whilst the Authority should be congratulated on the way it had consulted on this matter it was disappointing to see such a poor response.
- In response to a query about the storage of industrial chemicals it was clarified that the Service were informed where such chemicals were stored as were other relevant agencies.
- A member was concerned whether the Service would attend an AFA at a school during school holidays. It was confirmed that they would.
- It was confirmed that a fire appliance would turn back from its journey if the call was confirmed to be a false alarm. Conversely, if the AFA call proved to be a real fire more appliances could be sent.
- It was confirmed that the Service worked closely with Worcestershire Regulatory Services.
- Fire Control Operators tended to be aware when a call was vexatious.

In view of some of the above comments made by Members the Clerk suggested that recommendations 7 and 9 be amended to state that "*the Chief Fire officer has discretion to adjust any attendance based upon a risk assessment".*

At the Fire Authority meeting it was resolved that all twelve recommendations were adopted from the report. The paper and decisions of the Fire Authority meeting can be accessed via downloadable reports.

Service Bulletin article published on the 7th June 2019

This Service Bulletin included an item relating to heat alarms. The National Fire Chiefs Council had recently released a position statement on the recommendation that heat alarms are fitted in the kitchen of all properties.

As a result of the Senior Management Board agreed that the Service will adopt this recommendation, heat alarms will now be fitted in the kitchen of all properties where a Home Fire Safety Check is carried out. Heat alarms are currently fitted on a risk assessed basis.

Any increase in false alarm calls to domestic properties could reflect this decision to install additional detectors in the coming months.

2. Methodology for UwFS analysis

2.1 Incident data

The Incident Recording System (IRS) collects detailed information on every incident attended by Fire and Rescue Services (FRSs). In addition to fire incidents it contains records of false alarms, and non-fire incidents, which cover a wide range of activity including flooding, lift releases and, increasingly co-responding to medical incidents and assisting other agencies. There are nearly 200 questions within the IRS. Whilst no individual incident would require answering all of the questions, in general the more serious the incident the more questions will be automatically prompted. The information is entered by FRSs, using information collected by automatic systems and those present at the time of the incident. The Home Office maintains the system and publishes reports on national incident statistics.[18] At present, HWFRS uses IRS v.2018.1.2

Within the previous version of IRS, the recording of '*fire false alarm incidents triggered by the activation of break-glass call points*', requires the incident commander to select '*Other*' in Question 3.4 False alarm reason, followed by them typing '*activation call point*' in a free text box. Current versions of IRS allow for the selection of '*Accidentally/carelessly set off*'. It is worth noting that previous to this option being available via a drop list within the system, the activation by break-glass call points have been listed in numerous formats.

2.2 Incident data timeframe and quality control

In this report, 'financial year' is a period from the 1st of April until the 31st of March of the following year. Previous reports on false alarm data produced by HWFRS, detailed a period

from the 20th of April until the 19th of April of the following year. Therefore, a direct comparison of data presented in previous reports should not be compared to the following sections.

2.3 Classification of properties

The classification of properties according to premises use, occupation, construction etc. feeds into the determination of risk posed by an incident occurring at the premises. Any decision to amend the future attendance of appliances for instance at Automatic Fire Alarm (AFA) activations at these premises should consider the related risks.

2.3.1 Commercial and domestic properties within IRS

In section 3.2 in IRS, all properties are categorised as either Dwellings, Other residential, Non-residential, Road vehicles, Other transport vehicle, Grassland, woodland and crops, Outdoor structures, Outdoor equipment and machinery, Other outdoors (including land) and Not known.

Dwellings include residential homes and HMOs (houses of multiple occupation). Other Residential (institutional) includes hostels, hotels and residential institutions B&Bs, Nursing/care homes, student halls of residence etc. Non-residential buildings include offices, shops, factories, warehouses, restaurants, cinemas, public buildings, religious buildings, agricultural buildings, railway stations, sheds etc.

From a generic perspective, as a determination for a non-sleeping commercial premises an evaluation may be undertaken of data for 'non-residential' premises. For premises which include a sleeping risk (domestic premises), evaluation of data relating to 'Dwellings' along with 'Other residential' may be taken.

However further to this, the type of property is broken down into more specific subcategories, for example Building / Dwelling / Houseboat (permanent dwelling).

Since there is no direct classification of all listed properties in IRS as either domestic or commercial, sleeping accommodation or non-sleeping accommodation, a breakdown used by HWFRS has been provided in Appendix 2.

2.3.2 Classification of properties by building occupancy

Table 2 below shows the types of premises and their associated risk groups based upon their attributes from the CFOA – Fire Safety Guidance Notes and Audit – Version 4.3 (November 2015).[19]

In general, the requirements of the Regulatory Reform (Fire Safety) Order 2005 and provisions contained within DCLG guidance for these premises will be enhanced according to its occupancy type, whether there is a sleeping risk, or where occupants are likely to be unfamiliar with the premises. The DCLG Fire Risk Assessment for Sleeping Accommodation [20] p24-25 outlines this:

Sleeping premises such as hotels, motels, guest and boarding houses will consist of members of the public, who may only be present over a short period of time, and staff. Members of the public (including contractors) are unlikely to have advance knowledge of the premises and so

will be unfamiliar with the escape routes. They may also be slow to respond for a number of reasons such as:

- an unfamiliar alarm or inability to hear the alarm (due to hearing impairment);
- belief that the alarm may be false and waiting for further direction from staff;
- attempting to get fully dressed, gathering other family members together and collecting personal belongings;
- or being under the influence of alcohol, drugs or medication

Risk Groups (derived from the IRMP Note 4 and 17 FSEC categories)				
Groups	Group A	Group B	Group C	Group D
FSEC Code	Sleeping Unfamiliar	Sleeping Familiar and Licensed Premises	Public Unfamiliar	Workplace Familiar
A	Hospitals			
B	Care Homes			
C	HMO			
D		Flat		
E	Hostel			
F	Hotel			
G		Converted Flat		
H	Other Sleeping			
J			Further Education	
K			Public Building	
L		Licenced premises		
M			School	
N			Shop	
P			Other Public Building	
R				Factory
S				Office
T				Other Workplace

Table 2: FSEC categories of premises, CFOA – Fire Safety Guidance Notes and Audit – Version 4.3 (November 2015).[19]

2.3.3 Classification of risk premises identified internally through the Intel process

The Service gathers operational risk information through its Intel process of premises which pose a significant risk to firefighters and /or the community/environment during operations to assist operational decision making. Premises may be identified through:

- Local knowledge and initiatives
- Technical Fire Safety involvement with new/existing premises, or partner agencies involved with new buildings.
- Other enforcing authorities, such as the Health and Safety Executive (HSE)
- History of operational incidents at the premises
- Notification by members of the public
- National incidents or new developments

- Buildings with high numbers of occupants and those who will require assistance to evacuate

Identified premises have a regular programmed inspection, based on its perceived hazards and risk. More specifically a risk rating, as per the Service Addendum - Risk Rating Mechanism[21] will be applied based on the likelihood of an incident and the impact to:

- FRS personnel
- other people in or around an incident,
- the environment
- the Economy and Society
- Damage to the Property (Not applicable to all sites)

This risk rating mechanism will determine the site inspection review frequency, ranging from Very high (at least every 6 months) to Very low (every 10 years).

The Service currently holds intel information for approximately **2,210** premises, 1,871 across Herefordshire and Worcestershire accessible to Fire Control and operational crews upon mobilisation to an incident.

2.3.4 Classification and determination of risk by the Protection-TFS department

Each year, HWFRS Fire Safety Inspectors within the Protection-TFS department undertake a risk-based inspection programme (RBIP) of premises within Herefordshire and Worcestershire as well as an intelligence led inspection program (ILIP) auditing their compliance with the Regulatory Reform (Fire Safety) Order 2005. As the regulatory body for Fire Safety as defined in the Order, HWFRS has a duty to ensure premises falling under the scope of the Order are compliant. Where a premises is non-compliant, it may be given a notice of improvement, be enforced upon with a requirement to undertake certain fire safety improvements within a set time frame, or be issued a prohibition. Failure of a premises to comply with the Order is prosecutable offence. Premises identified within the Order include all non-domestic premises, workplaces and the common parts of multi occupied residential buildings.

For the purposes of targeting the premises most at risk, HWFRS uses the scoring system as defined within the CFOA – Fire Safety Guidance Notes and Audit – Version 4.3. This algorithm evaluates each relevant article with the Fire Safety Order to determine a compliance level and an initial enforcement expectation. HWFRS uses CFRMIS (Community Fire Risk Management Information System) software, a nationally recognised risk management solution to record and evaluate compliance and to determine the life risk score within the premises and a relative risk rating. The determination of risk will automatically generate a review frequency when a reinspection will be suggested.

With the focus on continued improvement, the RBIP for 2022-3 onwards has been significantly enhanced through the acquisition of a complementary data-set (Experian data) of known commercial premises which provides an evaluation of likelihood of fire at a given premises. Using this likelihood of fire, together with the life risk score as evaluated by CFRMIS has re-defined the understanding of risk, increased the number of known premises from around 18,000 to 42,000 and has been noted as an example of best practice and partnership working with Shropshire Fire and Rescue, by the NFCC and Fire Safety Unit within the Home Office.

2.4 Definitions of false alarms

The following definitions are taken from the Department for Communities and Local Government (DCLG) *'IRS Help and Guidance document'* (version 2.4) (DCLG, 2012).[22]

2.4.1 Fire false alarm due to apparatus (FADA)

Calls initiated by fire alarm and fire-fighting equipment operating (including accidental initiation of alarm apparatus by persons or where an alarm operates and a person then routinely calls the Fire and Rescue Service as part of a standing arrangement, i.e. with no 'judgment' involved, for example from a Security Call Centre or a nominated person in an organisation (DCLG, 2012, p.54) [22].

Automatic Fire Alarms (AFAs) constitute a sub-category of '*Fire false alarm due to apparatus*' in IRS. There are two types of AFAs, namely;

AFA from originator (premises) – Automatic Fire Alarm from the premises where the incident occurred. NOT from a call centre (DCLG, 2012, p.49) [22].

AFA from call centre – Automatic Fire Alarm forwarded from a call centre, i.e. NOT the premises where the incident occurred (DCLG, 2012, p.49) [22].

Additionally, the origin of the call may be determined at the point of origin as having come from a person via a landline, mobile phone or running call (as described in section 5.2). This may be from an individual associated with the premises or for instance a concerned member of the public passing by who becomes aware of an alarm (AFA) actuating in a premises to which a response is dispatched.

2.4.2 Good intent false alarms

Calls made in good faith in the belief that the Fire and Rescue Service really would attend an incident. Note: if a person's mental condition means they do not understand the consequences of their actions then False Alarm Good Intent (FAGI) should be used, rather than False Alarm Malicious (FAM) (DCLG, 2012, p.54) [22].

2.4.3 Malicious false alarms

Calls made with the intention of getting the Fire and Rescue Service to attend a non-existent incident, including deliberate and suspected malicious intentions. Note: if a person's mental condition is unrelated to their ability to understand the consequences of their actions then False Alarm Malicious (FAM) is appropriate (DCLG, 2012, p.54) [22].

3. Policies, regulations and guidance notes

3.1 British Standard BS 5839 - Part 1: Fire detection and fire alarm systems for buildings, 2017

The UK government recommends that all fire alarm and detection systems should be installed and maintained in accordance with the relevant British Standard, BS 5839:1 (BSI, 2017)[23]. As noted in the foreword; "*national building regulations require fire detection and fire alarm systems to be installed in many buildings at the time of construction*". In addition, legislation requires that; where necessary to safeguard relevant persons in case of fire, existing premises are equipped with "*appropriate fire detection and fire alarm systems*" (BSI, 2017, p.v) [23].

Annex A gives a table of various types of non-domestic premises including, *inter alia*, common places of work (e.g. shops, offices, factories and warehouses), hotels, schools, hospitals, places of assembly (e.g. cinemas, theatres and churches), residential care homes, shopping centres, etc. (BSI, 2017, p.130-131) [23]. This is for guidance only, however, and it is important to note that the list is not exhaustive and that any reference to particular types of premises in Annex A does not necessarily mean that all such premises are required by law to have such systems installed.

Section 3 of the British Standard provides detail on the 'Limitation of false alarms and unwanted fire alarm signals'. Within this section; paragraph 30 concerns the 'Responsibility for limitation of false alarms and unwanted fire alarm signals' (BSI, 2017, p.91-93) [23], and paragraph 32 concerns 'Acceptable rate of false alarms' (BSI, 2017, p.94-95) [23].

Paragraph 30.2 (a) clearly states that;

"When imposing requirements for automatic fire detection, enforcing authorities and property insurers should take the guidance contained in this section into account, so that, subject to the overriding need for adequate protection of life and/or property, the form of detection specified does not have the potential to create an unacceptable rate of false alarms and unwanted fire alarm signals" (BSI, 2017, p.912) [23].

Paragraph 32.1 clearly states; "from the point of view of the user and the Fire and Rescue Service, any false alarm is undesirable". However, it states that "complete elimination of false alarms is impossible" where large numbers of automatic fire detectors are installed (BSI, 2017, p.94) [23].

It recommends that, at the time of the alarm system service (commonly six monthly), the servicing organisation should determine the rate of false alarms in the previous 12 months. If the false alarm rate has exceeded '***one false alarm per 25 detectors per annum***', the user should instigate an in-depth investigation with the servicing organisation, the manufacturer of the system, or a suitably qualified third-party consultant (BSI, 2017, p.94) [23].

3.2 NHS Health Technical Memorandum, 2013

Health Technical Memoranda (HTMs) give comprehensive advice and guidance on the design, installation and operation of specialised building and engineering technology used in the delivery healthcare. The focus of HTMs guidance remains on healthcare-specific elements of standards, policies and up-to-date established best practice. They are applicable to new and existing sites, and are for use at various stages during the whole building lifecycle (Department of Health, 2013, p.iii)[24].

The HTM provide a suite of nine core subjects, including; Policies and principles (00), Decontamination (01), Medical gases (02), Heating and ventilation systems (03), Water systems (04), Fire safety (05), Electrical systems (06), Environment and sustainability (07), and Specialist services (08).

Health Technical Memorandum 05-03, Part A, provides general fire safety and operational provisions for healthcare premises. This document should be read in conjunction with other HTM in the firecode guidance, namely;

- Part B - Fire detection and alarm systems,
  - Part C - Textiles and furnishings,
  - Part D - Commercial enterprises on hospital premises,
  - Part E - Escape lifts in healthcare premises,
  - Part F - Arson prevention in NHS premises,
  - Part G - Laboratories on healthcare premises,
  - Part H - Reducing false alarms in hospital premises,
  - Part J - Guidance on fire engineering of healthcare premises,
  - Part K - Guidance on fire risk assessments in complex healthcare premises, and
  - Part M - Fire Safety in Atria.

Part H provides guidance on reducing false alarms in healthcare premises (Department of Health, 2013) [24].. The document provides details on what is considered as a reasonable level of false alarms, and clearly states that any occurrence is detrimental to the operation of any healthcare facility. Suggesting that false alarms lead to disruption of service and impact upon patient care, increased costs, and unnecessary risk to those required to respond to the alarm raised (p.3).

HTM 05:03 Part H recognises that elimination of false alarms is impossible, however it suggests that an organisation should understand what a reasonable level of false alarms should be so that it can measure its performance, and respond accordingly to its '*false-alarm rate*'.

The main influence on the rate of false alarms generated by a system is likely to be the number of automatic detectors connected to that system. However, with large complex sites, it is possible that more than one system may be installed. Also, many sites are operated by more than one organisation (management entity). It is therefore appropriate to determine a reasonable ratio of false alarms to the number of automatic detectors installed per unit, regardless of the number of systems utilised.

The guidance provides a calculation to ascertain an organisation current performance levels, and suggests a grading criteria, which can be assessed annually to determine appropriate goals for annual continuous improvement (see Table below). The unit's performance should be calculated using the following formula;

$$x = \frac{\mathrm{D}}{\mathrm{A}}$$

where x = performance, D = number of automatic detectors and manual call points utilised by the unit, and A = number of false alarms generated by the unit in the last 12 months.

A reference chart enabling organisations to assess their grading is provided in chapter 6 of the guidance (Department of Health, 2013, p.20), which allows you to calculate performance in '*detector years*'. Guidance contained within the Chief Fire Officers Association (CFOA) policy suggests that "*where the number of unwanted fire signals generated by a system is other than level 1 (A grading), the Fire and Rescue Service may seek to reduce their attendance levels in response to calls of an automatic fire alarm system activation following a process of consultation*" (Department of Health, 2013, p.4) [24].. It should be noted that the CFOA policy refers to unwanted fire signals as opposed to false alarms (see CFOA, 2014).

Grading	Unit's Performance	Annual continuous improvement goal
A	≥ 100	Performance should be maintained
B	100 > x < 50	10% reduction in false alarms
C	< 50	40% reduction in false alarms

Table 3: Performance criteria in respect of unwanted fire signals in healthcare premises (Department of Health, 2013)

Section 5.11 details the calculated performance rate for Worcester Royal Hospital, Hereford County Hospital, The Alexandra Hospital Redditch, and Kidderminster General Hospital based on the grading criteria provided in the HTM guidance.

3.3 Building Regulations: Approved Document B, 2010

The Building Regulations 2010 (HM Government, 2010) sets out requirements for the construction of buildings. Approved Document B; Fire Safety Volume 2 - Buildings Other than Dwelling Houses[25], provides the requirements for the means of warning.

The requirement under section B1 states that;

"The building shall be designed and constructed so that there are appropriate provisions for the early warning of fire, and appropriate means of escape in case of fire from the building to a place of safety outside the building capable of being safely and effectively used at all material times" (p.14).

The requirement B1 does not apply to any prison provided under Section 33 of the Prison Act 1952 (power to provide prisons, etc.) (HM Government, 1952 and HM Government, 2010, p.14).

Full details of fire alarm and fire detection system requirements are provided in pages 17 to 20 (HM Government, 2010).[25]

3.4 Regulatory Reform (Fire Safety) Order, 2005

The Regulatory Reform (Fire Safety) Order 2005 (HM Government, 2005) was made under the Regulatory Reform Act 2001 by Government, and extends to England and Wales only (p.4). It replaces most fire safety legislation with one simple order. It means that any person who has some level of control in premises must take reasonable steps to reduce the risk from fire and make sure people can safely escape if there is a fire (HM Government, 2006).

This legislation generally applies to all buildings other than single private dwellings (see Articles 6(1) - Application to premises, and 31(10) - Prohibition notices) (HM Government, 2005, p.8 and p.22)[26].

When considering false alarms, action taken under the Regulatory Reform (Fire Safety) Order (FSO) can be taken. FRSs may consider the use of regulatory enforcement powers as Fire and Rescue Authorities have a statutory duty to enforce fire safety legislation and, where appropriate, should respond with regulatory fire safety intervention under the FSO where poor performance of the automatic fire alarm system is detrimental to the safety of occupants.

The level of response will be determined by the level of risk and the contraventions found during an audit of the relevant premises. If the offending premises are covered by the provision of the FSO the enforcing authority may;

- Undertake an audit of the premises under the FSO,
- Provide advice in accordance with the Regulators Code,
- Issue non-statutory advice (notice of deficiencies), or
- Commence enforcement, i.e. enforcement notice, prosecution etc.

4. Comparison of false alarm data in England with HWFRS

Fire false alarms are broadly categorised by motive into ‘due to apparatus’, ‘good intent’ and ‘malicious’. Since the year 2000, there has been a general trend in the reduction of all types of false alarms in England to the year ending March 2022, where Services attended 229,844 fire false alarms [27]. 40% of total incidents were fire false alarms.

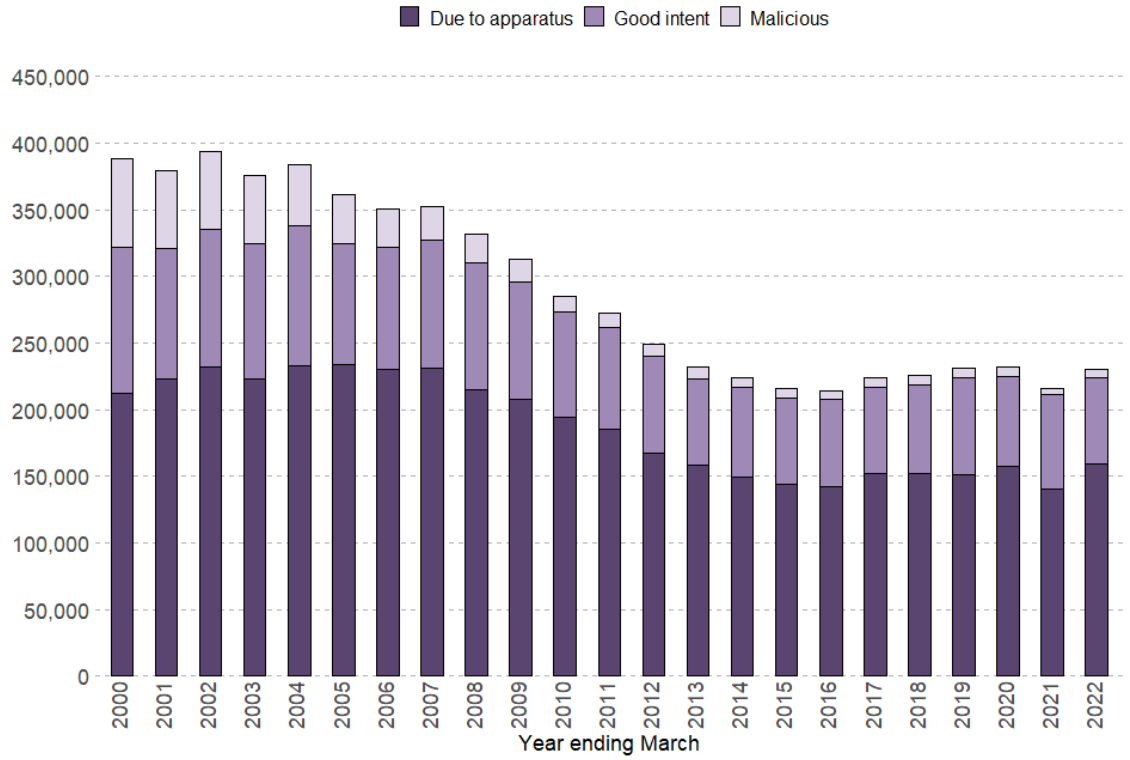


Figure 5: Total fire false alarms by type of false alarm, England; the year ending March 2000 to the year ending March 2022 [27]

Of the fire false alarms in 2021-22, these were broken down into false alarms due to apparatus (159,720 or 69%), false alarms due to good intent (63,857 or 28%) and false alarms due to malicious calls (6,267 or 3%).

The variation in changes over the past 3 years are suspected to be in part due to the result of three national lockdowns, various local lockdowns and restrictions to day-to-day life. Significant impact has been due to more employees working from home, with less time spent in the office environment. The mixed effect of this would be to have fewer individuals in an office environment to be able to identify a false alarm and subsequently confirm this, but also less opportunity to create a false alarm, e.g. due to cooking fumes or other human activity.

If this national picture is set against incidents attended by HWFRS the following can be seen:

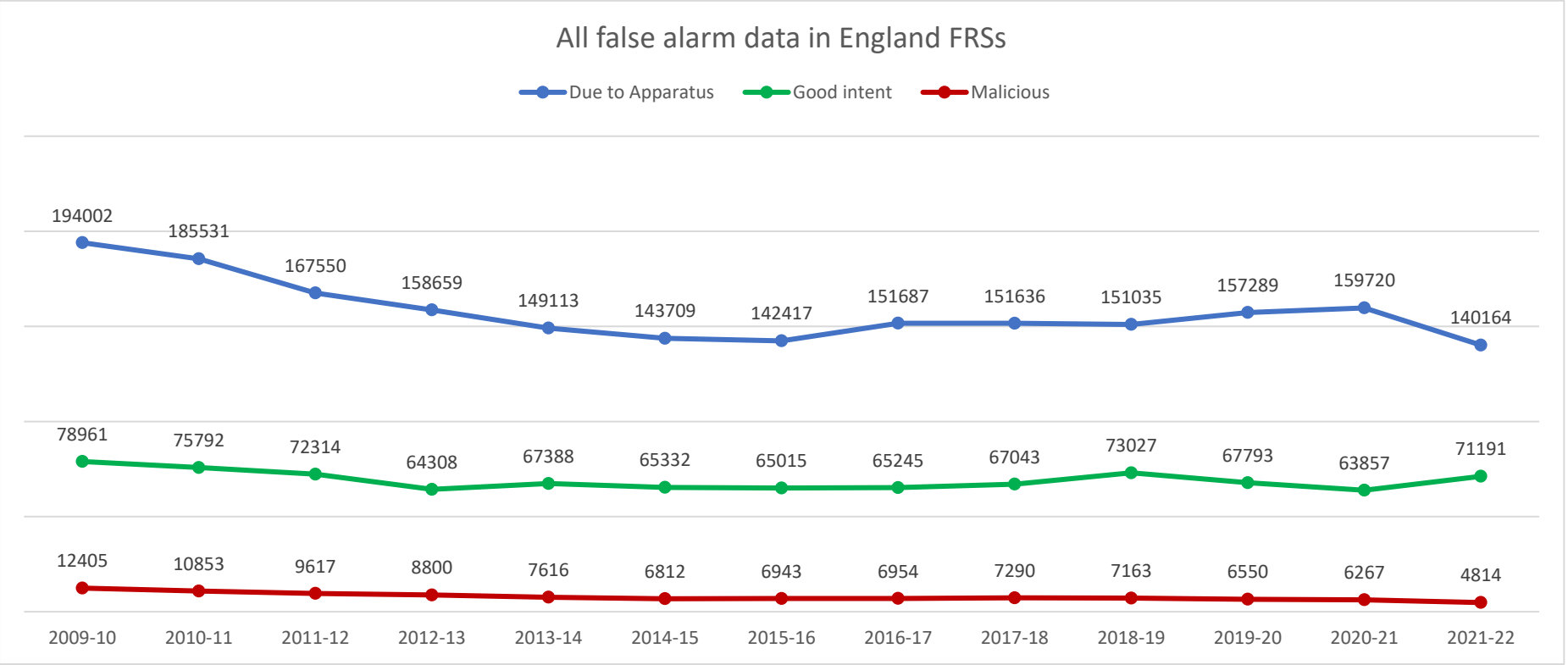


Figure 6: All fire false alarms in England from 2009-10 to 2021-22 (HM Government, 2022)[28]

Figure 6 above shows national statistics for fire false alarms recorded in England from 2009-10 to 2021-22, with a breakdown for alarms due to apparatus, good intent and malicious. Among all fire false alarm incidents attended by FRSs, the vast majority were caused by smoke detectors. The graph shows an observable downwards trend of false alarm reduction across each category, with predicted further reductions as Services adapt their approach towards attendance at false alarms.

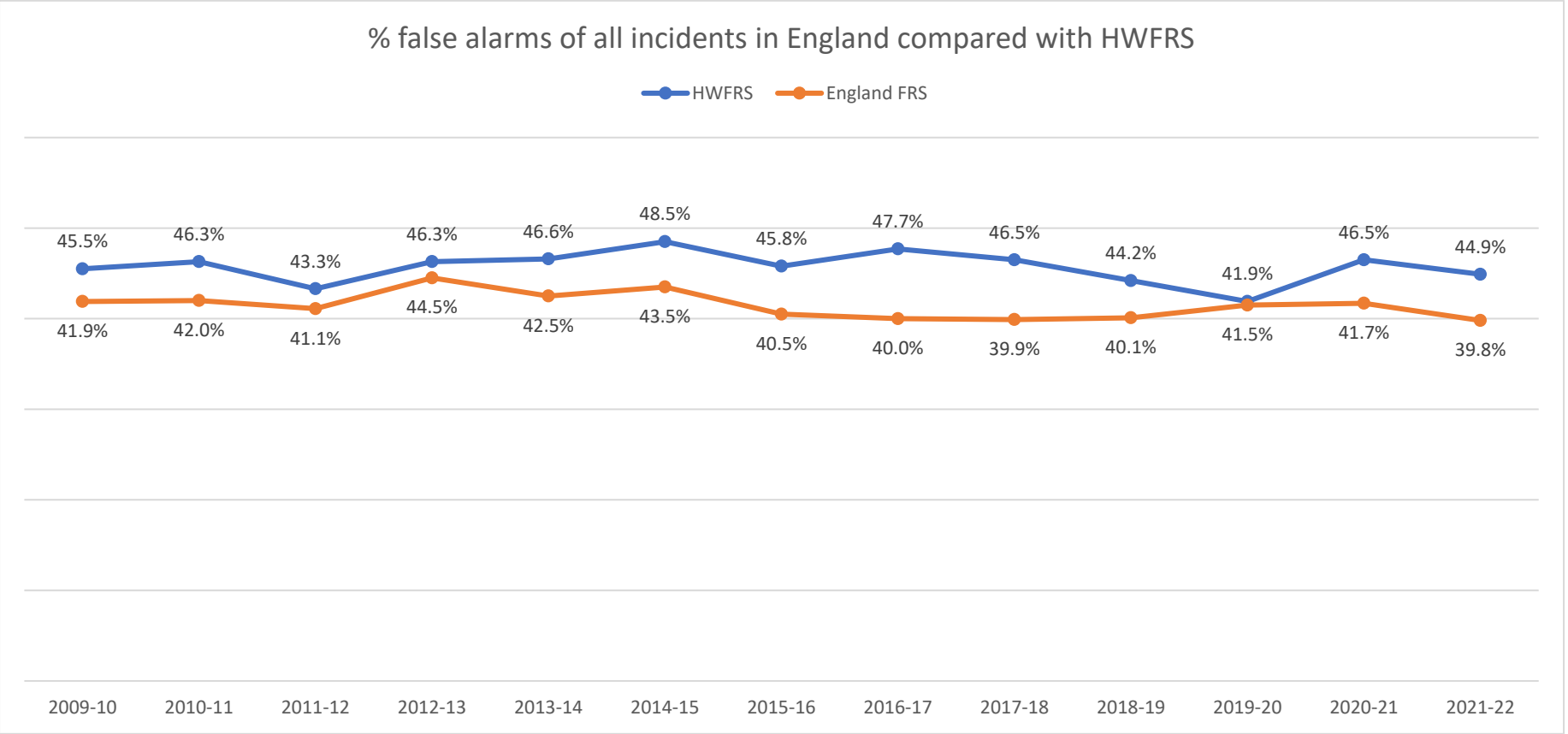


Figure 7: All false alarms in England and HWFRS compared to all incidents attended from 2009/10 to 2021/22 (HM Government, 2022) [28]

Overall, the percentage of false alarms recorded by Hereford and Worcester Fire and Rescue Service was higher than the average percentage of false alarms registered by all Fire and Rescues Services in England (hereafter, referred to as England) each year during the 13-year period examined. Over this period, an average of 45.6% of HWFRSs total incidents were fire false alarms, varying from a maximum of 48.5% to 41.9%. This compares to the average of 41.4% of England total incidents being false alarms with its maximum of 44.5% in 2012-13, and a minimum of 39.8% in 2021-22. From 2019-20 to 2021/22 HWFRS had on average 44.4% false alarms, 3.4% higher than the national average.

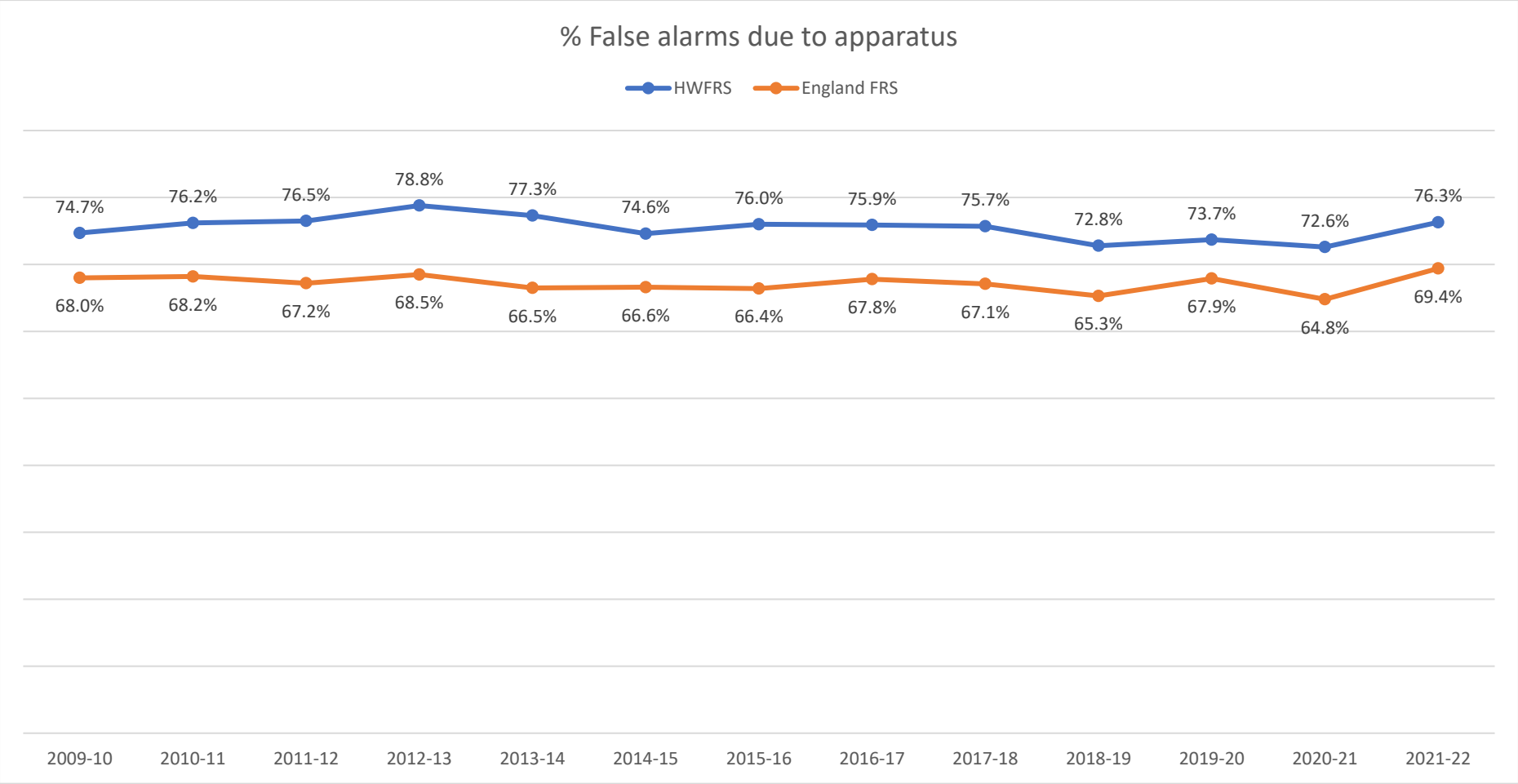


Figure 8: False alarms due to apparatus in England and HWFRS from 2009/10 to 2021/22 (HM Government, 2022) [28]

Fire false alarms due to apparatus constituted the largest category among all false alarms recorded locally by HWFRS, and nationally in England. However, the contribution of fire false alarms due to apparatus in Hereford & Worcester was on average 8.2% higher when compared to England. Both datasets revealed a peak in numbers of unwanted fire signals in 2021/22.

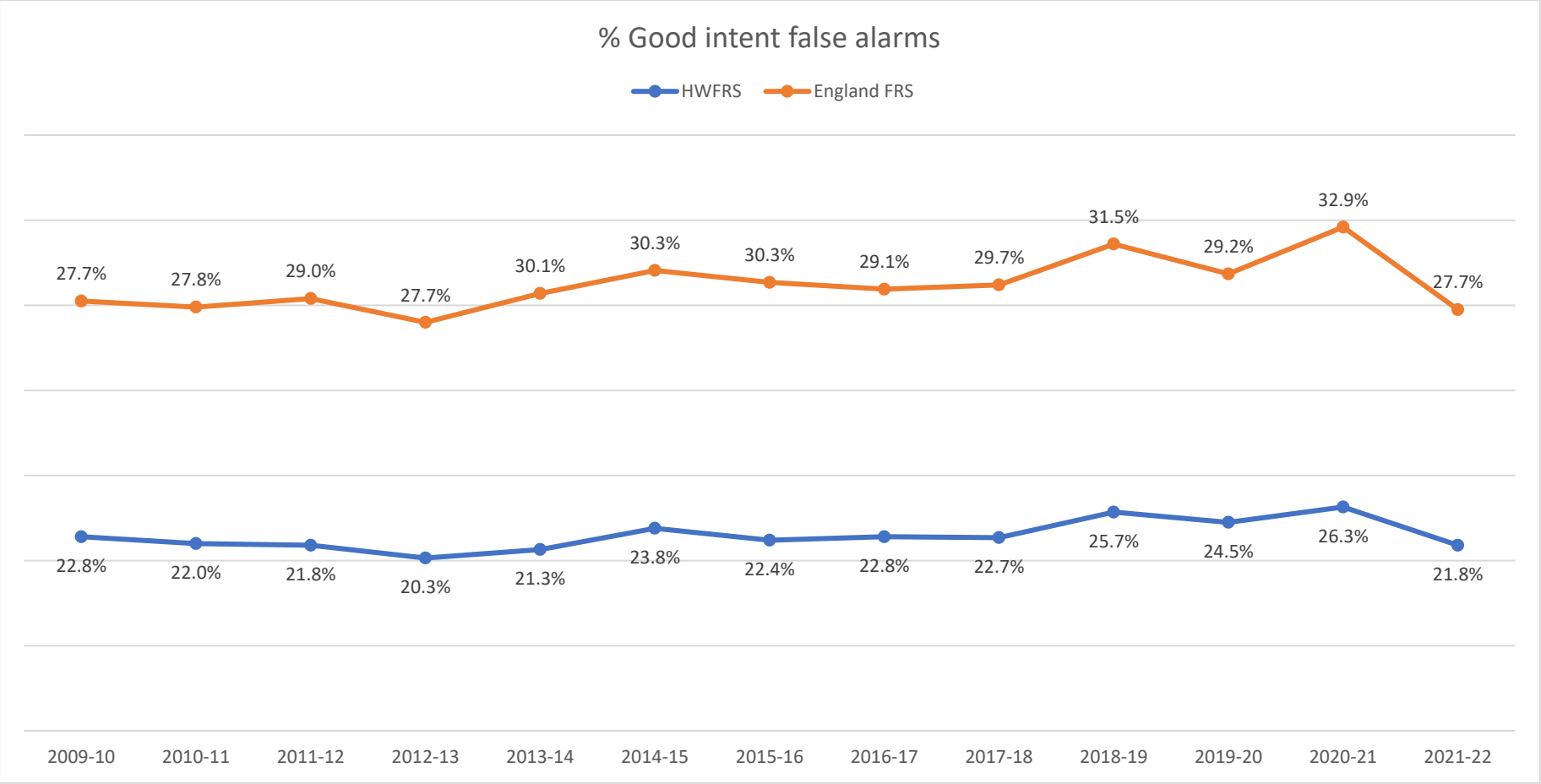


Figure 9: Good intent fire false alarms due to apparatus in England and HWFRS from 2009/10 to 2021/22 (HM Government, 2022) [28]

Good intent false alarms constituted the second largest category among all false alarms recorded locally by HWFRS, and nationally in England. The contribution of good intent false alarms in Hereford & Worcester was on average 6.5% lower when compared to England.

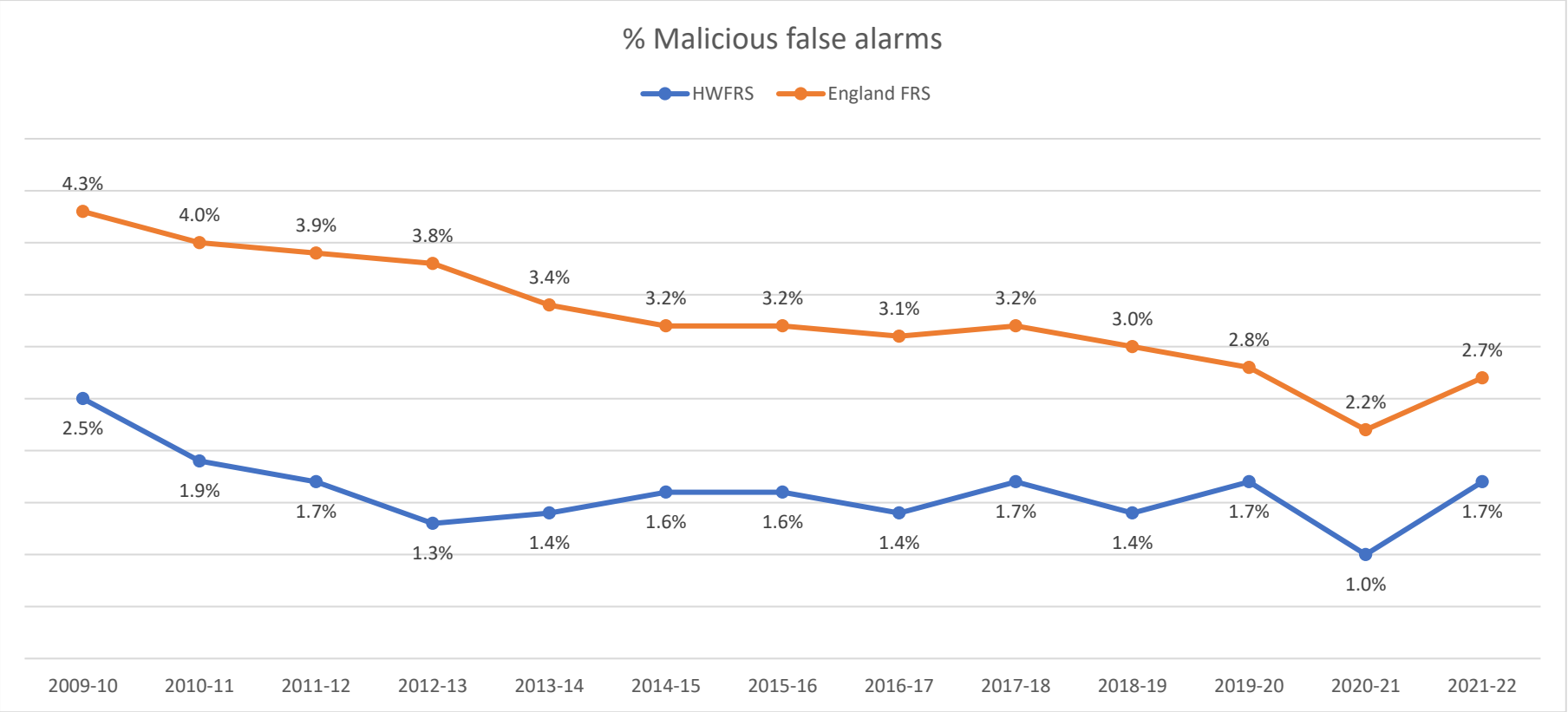


Figure 10: Malicious fire false alarms in England and HWFRS from 2009/10 to 2021/22 (HM Government, 2022) [28]

Malicious false alarms constituted the third and the smallest category among all false alarms recorded locally by HWFRS, and nationally in England. The national dataset showed a downward trend; a total decrease of 1.6% over the 13-year period. On average, the contribution of malicious false alarms in Hereford & Worcester was 1.7% lower when compared to England.

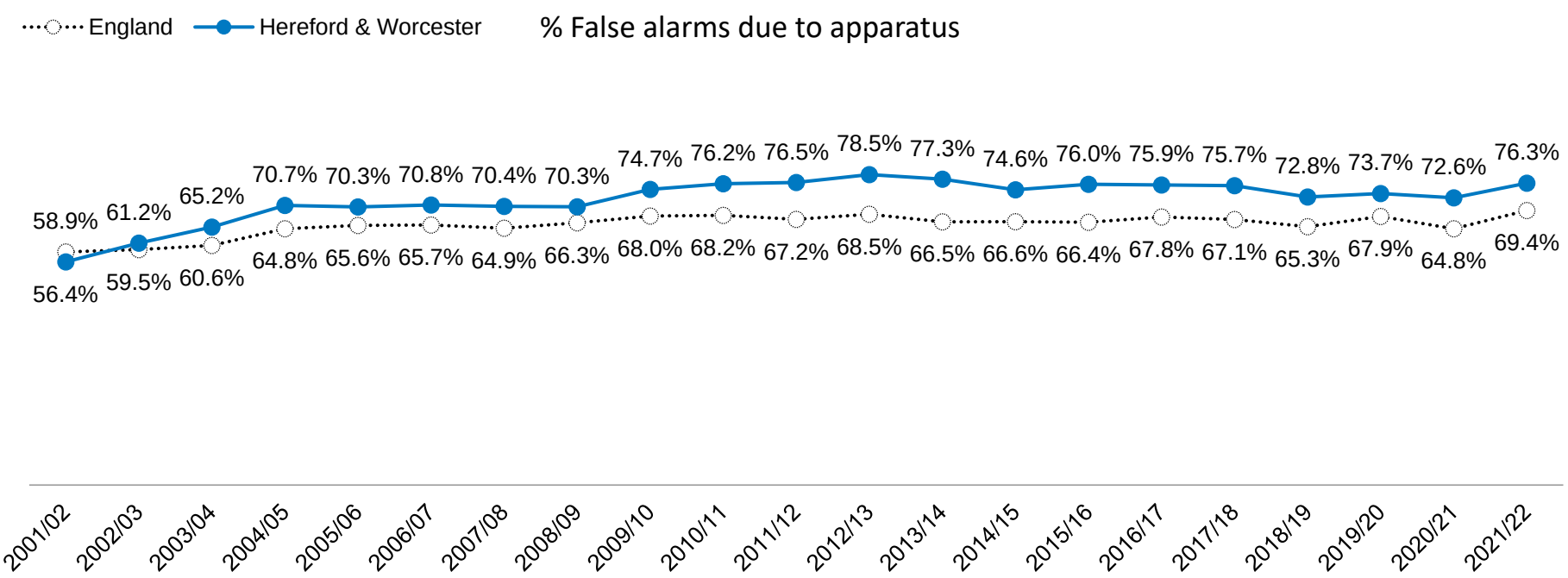


Figure 11: Percentage False alarms due to apparatus of total fire false alarms in England and HWFRS from 2001/02 to 2021/22 (HM Government, 2022)[28]

Fire false alarms due to apparatus constituted the largest category among all false alarms recorded locally by HWFRS, and nationally in England. However, the contribution of fire false alarms due to apparatus in Hereford & Worcester was on average 6.5% higher when compared to England. Datasets peaked for HWFRS most recently in 2021/22 whereas the highest number of false alarms due to apparatus in England was in 2012/13. The general upward trend of false alarms due to apparatus may be in part due to the number of premises commissioning alarm systems and increase in detection capacity.

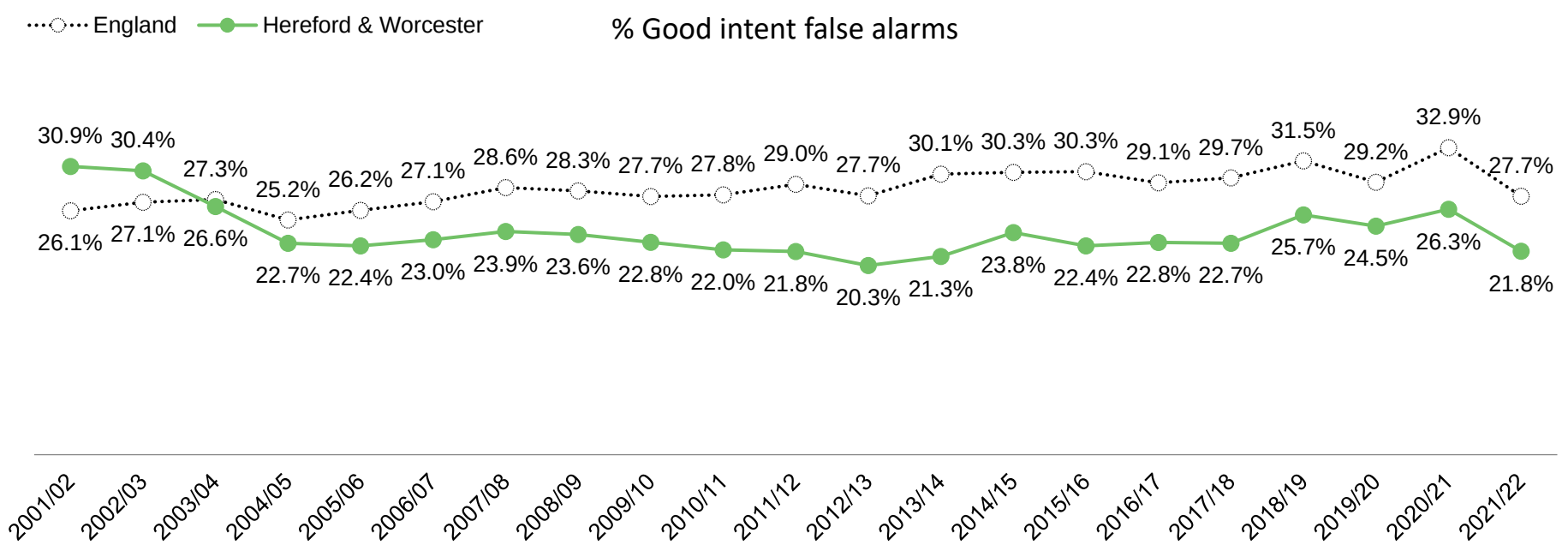


Figure 12: % Good intent false alarms of total false alarms in England and HWFRS from 2001/02 to 2021/22 (HM Government, 2022) [28]

Good intent false alarms constituted the second largest category among all false alarms recorded locally by HWFRS, and nationally in England. The contribution of good intent false alarms as a proportion of the total number of false alarms in Hereford & Worcester was on average 4.6% lower when compared to England.

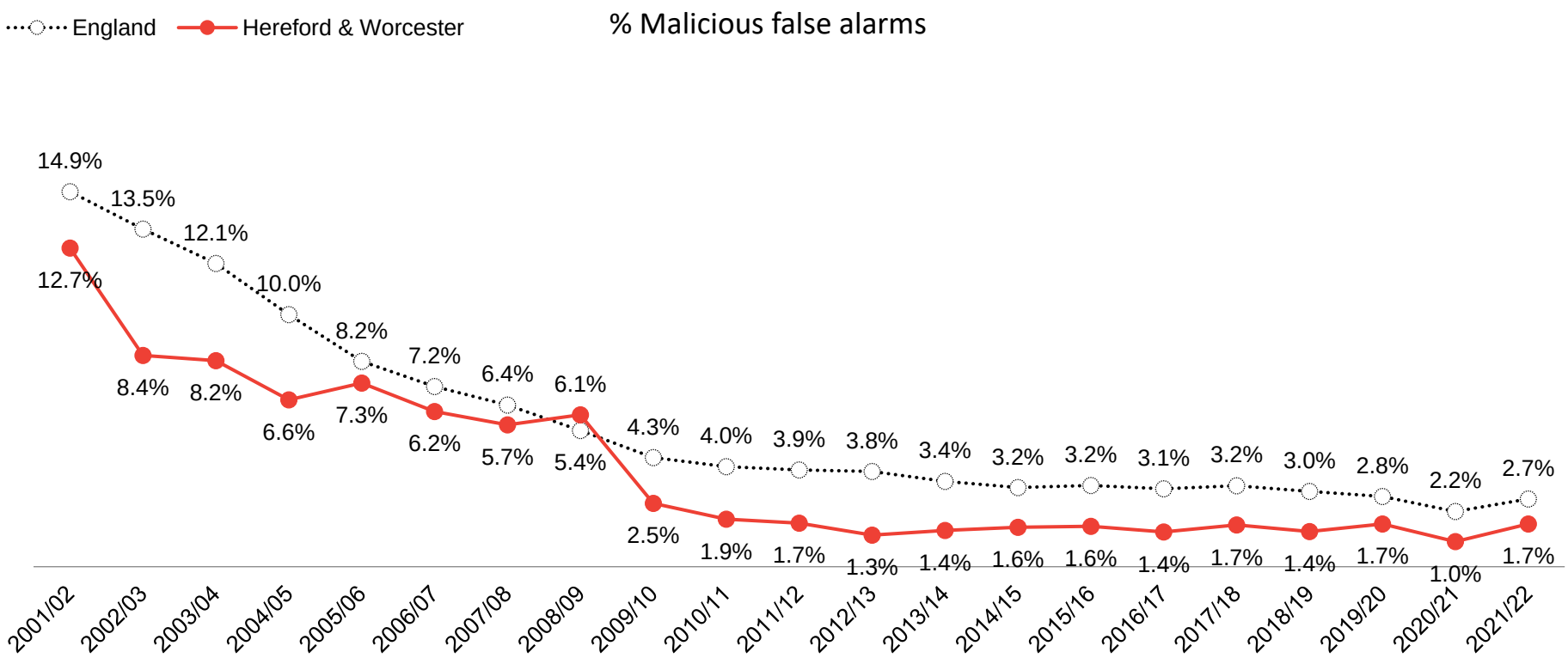


Figure 13: % Malicious false alarms of total fire false alarms in England and HWFRS from 2001/02 to 2021/22 (HM Government, 2022) [28]

Malicious false alarms constituted the third and the smallest category among all false alarms recorded locally by HWFRS, and nationally in England. The national dataset showed a downward trend; a total decrease of 12.2% over the 21-year period. Locally the dataset initially showed a downward trend by 11% over this whole period. As a general trend HWFRS has a lower false alarm rate as a proportion of total false alarms than Fire Services in England by an average of 1.8%.

5. Detailed analysis of HWFRS false alarm data from 2009/10 to 2021/22

5.1 Total false alarms

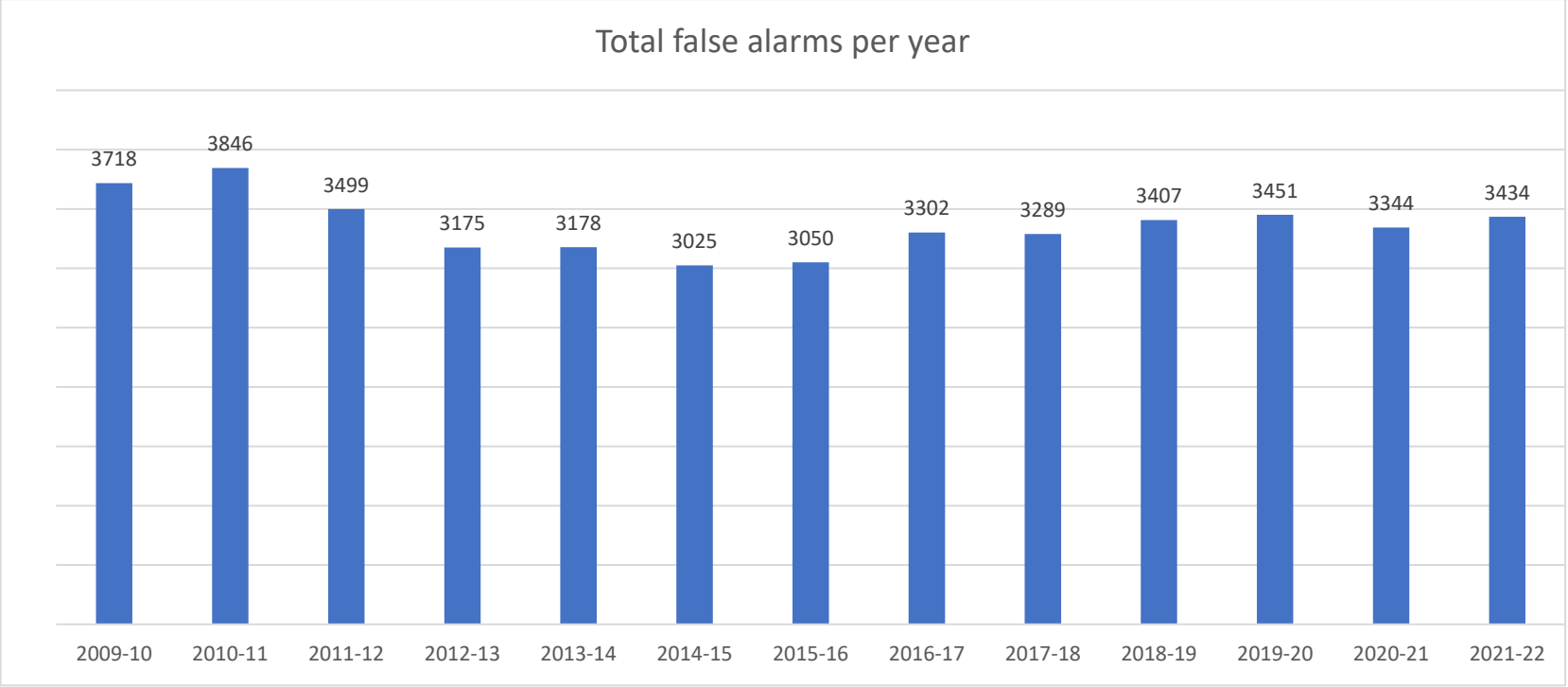


Figure 14: HWFRS false alarms from 2009/10 to 2021/22, taken from IRS.

The highest number of false alarm incidents was recorded in 2010/11 resulting in a total of 3,846 incidents attended, and the lowest in 2014/15. Please note that the year 2014/15 there were a number of national strikes across the Service and therefore a number of confirmed false alarm incidents were call challenged by fire control and subsequently not attended by crews. On average over this 13-year period HWFRS attended 3363 incidents per year.

5.2 Origin of false alarm calls

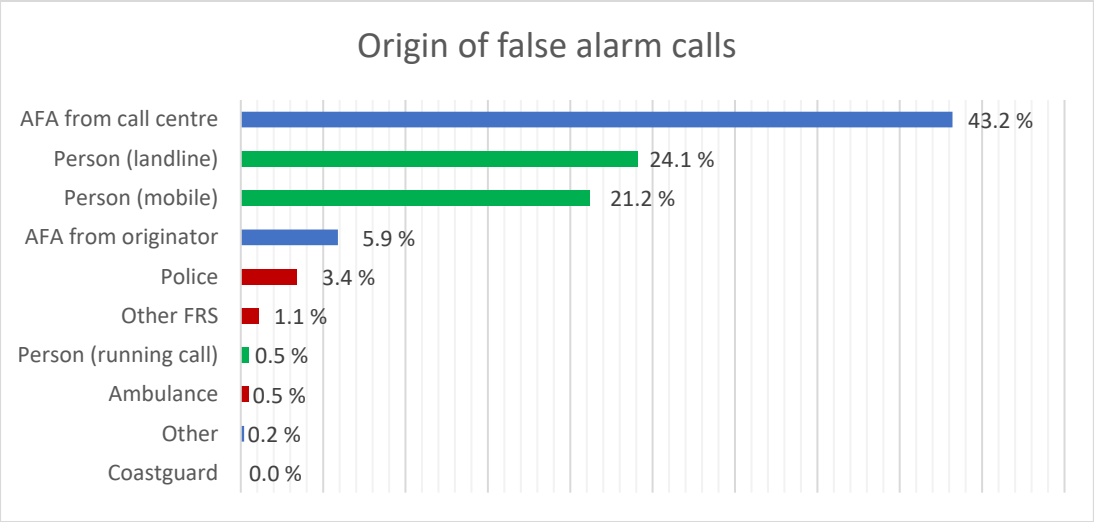


Figure 15: Origin of false alarm calls from 2009/10 to 2021/22, data from IRS

The 13-year dataset showed that 49.1% of all false alarms originated either from being forwarded from a call centre (remotely) or from the premises itself. For those false alarms originating from a call centre, this generally shows an upward trend over this period from a minimum of 36.4% fire false alarms in 2010-11, to 49.7% in 2021-22.

The second largest group of calls came directly from a person, with calls from a landline and mobile accounting for 45.3% of fire false alarm calls. Analysis over the 13-year period reveals a downwards trend towards the use of landlines, and an increase in the use of mobile phones reflecting the technological advances and societal changes in this area. Alarms operating may be heard by passers-by initiating a call more readily.

Requests made by other blue light emergency services which resulted in false alarms constituted 5% of the total of fire false alarms, with the majority of calls being made by the Police. The highest number of fire false alarm calls from the Police was received in 2010/11 (4.9% of the total), this steadily decreased to now reaching 2.3% in 2021/22. The number of fire false alarm calls made by Ambulance has remained low during this period ranging from 0.6% to 0.3% of fire false alarm calls.

Reviewing the data for false alarm reasons over a 13-year period from 2009/10 to 2021/22 reveals that the top causes are due to cooking/burnt toast, unknown causes, faults with the system and being accidently or carelessly set off.

5.2.1 False alarms by premises type

Reviewing numbers false alarms from 2009/10 to 2021/22 where the incident type selected at Control was ‘Alarms – AFA’ (Q 2.3 in IRS), not including incidents over the border reveals the following breakdown in terms of property type (Q3.2 in IRS). The table below represents the top 25 of 173 premises types at which false alarm AFAs were recorded.

Property Type	Number of AFA false alarm incidents from 2009/10 to 2021/22	% of properties with false alarm AFAs
Self-contained Sheltered Housing	4107	12.8
Up to 3 storeys	2948	9.2
Hospital	2755	8.6
House - single occupancy	2662	8.3
Retirement/Elderly	1319	4.1
Nursing/Care	1017	3.2
Bungalow - single occupancy	971	3.0
Factory	952	3.0
Purpose built office	870	2.7
Single shop	721	2.3
Sheltered Housing - not self-contained	698	2.2
Warehouse	679	2.1
Other	569	1.8
College/University	515	1.6
10 or more storeys	513	1.6
Shopping Centre	512	1.6
Large supermarket	478	1.5
Secondary school	415	1.3
Infant/primary school	405	1.3
Hotel/motel	376	1.2
Engineering	368	1.1
Up to 2 storeys	365	1.1
3 or more storeys	351	1.1
Boarding School accommodation	328	1.0
Student Hall of Residence	302	0.9

Table 4: Percentage breakdown of property types for all false alarm AFAs, 2009/10 to 2021/22, data from IRS

5.3 False alarm reasons

The following data represents the causes for false alarms over the period from 2009/10 to 2021/22 where the incident type at Control was ‘Alarms-AFA’:

False alarm reason	Number of incidents	% of total
Cooking/burnt toast	5611	17.5%
Unknown	5424	16.9%
Faulty	4994	15.6%
Accidentally/carelessly set off	3472	10.8%
Other	2588	8.1%
Dust	2445	7.6%

Testing	1879	5.9%
Steam	1116	3.5%
Chemicals/aerosols	827	2.6%
Minute animals (e.g. Thrips and Midges)	668	2.1%
Smoking	659	2.1%
Poor maintenance	350	1.1%
Other cooking	345	1.1%
Power surge	268	0.8%
Water intrusion	215	0.7%
Damaged	200	0.6%
Toaster/toast	165	0.5%
Incorrect positioning	162	0.5%
Security/intruder alarm	98	0.3%
Smoke Cloak	91	0.3%
Not required	61	0.2%
Fumes/heat haze	56	0.2%
Reported incident/Location not found	45	0.1%
Storm	45	0.1%
Smoke from elsewhere (not at location)	44	0.1%
Unsuitable equipment	43	0.1%
Overheating appliance	37	0.1%
water supplies -sprinklers only	25	0.1%
Bonfire	25	0.1%
Fire elsewhere (not at location)	19	0.1%
Smoking chimney	15	0.0%
Carbon monoxide alarm	14	0.0%
Overheating light/fitting	12	0.0%
Air conditioning	8	0.0%
Controlled burning	6	0.0%
By phone	6	0.0%
Special Service - Not Required	4	0.0%
Grand Total	**32042**	**100%**

Table 5: Incidents attended by HWFRS from 2009/10 to 2021/22 relating to false alarms caused by apparatus, data from IRS

5.4 Recent annual data - AFAs occurring in 2021-22

The latest data available (taken from IRS v2018.1.2 on 30/10/22) for incidents HWFRS responded to from 1st April 2021 to 31st March 2022 reveals the following:

Total incidents = **7425** (not including incidents 'over the border')

Number of false alarms = **3434** incidents i.e. **46.2%** of all incidents were false alarms.

Number of AFA incidents (origin of call – AFA from originator and AFA from call centre) = 2005 incidents i.e. 27% of all incidents were AFAs

Number of false alarm AFAs = 1889 incidents i.e. **25%** of all incidents were false alarm AFAs, these account for 55% of all false alarms.

Of all AFA's in this period 94.2% were false alarms.

More broadly however, where the incident type was selected in Fire Control as 'Alarms – AFA' Q 2.3 in IRS, i.e. where control mobilised as per an AFA, this provides 2,604 incidents as false alarms (35% of all incidents, 96.9% of all 'Alarms- AFA' calls).

This difference is down to how the origin of call has come through to the Service. In addition to the AFA coming from a call centre or from an authorised person at the premises 'AFA originator', a call may be taken from the landline or mobile of another person (staff or member of public) at/near to the premises who hears the actuation of the alarm and calls the Fire Service.

Number of AFA incidents reported as coming from a call centre or originator reported as fires = 87 incidents (1.1% of total incidents). The severity of these incidents varies significantly from those extinguished prior to arrival to those where fires had to be extinguished by the Service. An evaluation of this is further considered in subsequent sections which look at incidents where 2 or more pumping appliances were required, where BA was worn and reviewing casualty information.

Looking at the 2021/22 data for **false alarms due to apparatus**:

Of the total incidents attended in 2021-22, nearly one quarter (**23.7%**) were false alarm AFAs due to apparatus.

Of all false alarm incidents attended in 2021-22, nearly three quarters **(74.5%)** were false alarms due to apparatus.

Of all false alarm incidents coming from a call centre or the originator in 2021-22, **51.2%** (1,760 incidents) were false alarm AFAs due to apparatus.

Of all the false alarm AFA incidents in 2021-22, **93.2%** were false alarm AFAs due to apparatus.

Evaluating this data based upon category of property (Question 3.2 in IRS) false alarm incidents due to apparatus within sleeping premises (Dwellings and Other Residential) account for 894 incidents or **12.0%** of total incidents. This compares with Non-Residential premises which account for 863 incidents or **11.6%** of the total incidents during 2021/22.

Refining this data further based upon property type (Question 3.2 in IRS) using the categories found in Appendix 2 reveals the following for false alarm incidents due to apparatus:

- Domestic premises – 1173 incidents (15.7% of total calls)
- Commercial premises 945 incidents (12.7% of total calls)
- Commercial premises with sleeping – 442 incidents (5.9% of total calls)

Looking at the 2021/22 data for **false alarm good intent AFAs**:

False alarm good intent AFAs = 109 incidents

Of the total incidents attended in 2021-22, **1.4%** were false alarm good intent AFAs.

Of all false alarm AFA incidents in 2021-22, **5.8%** were false alarm good intent AFAs

Of all false alarm incidents in 2021-22, **3.1%** were false alarm good intent AFAs

Looking at the origin of the **false alarm malicious AFAs** in 2021/22

False alarm malicious AFAs = 20 incidents

Of the total incidents attended in 2021-22, **0.3%** were false alarm malicious AFAs.

Of all false alarm AFA incidents in 2021-22, **1%** were false alarm malicious AFAs

Of all false alarm incidents in 2021-22, **0.6%** were false alarm malicious AFAs

5.5 False alarms due to apparatus over 2009/10 to 2021/22

Reviewing the data for false alarms due to apparatus within dwellings, non-residential premises, non-residential premises with sleeping risk, public buildings and places of further education/Schools based on Appendix 2 categories over the period 2009/10 to 2021/22 provides the following data:

False alarms due to apparatus at dwellings and residential premises where there is a sleeping risk accounted for on average **1000.8** incidents annually.

False alarms due to apparatus at non-residential premises accounted for on average **576.4** incidents annually.

False alarms due to apparatus at non-residential premises with a sleeping risk accounted for on average **579.5** incidents annually.

False alarms due to apparatus at Public Buildings, including places of assembly accounted for on average **219.3** incidents annually.

False alarms due to apparatus at places of Further Education, including Schools accounted for on average **110.9** incidents annually.

The annual average of false alarm apparatus incidents at non-residential premises without sleeping including public buildings and places of education (576.4+219.3+110.9) is approximately **906.6** incidents.

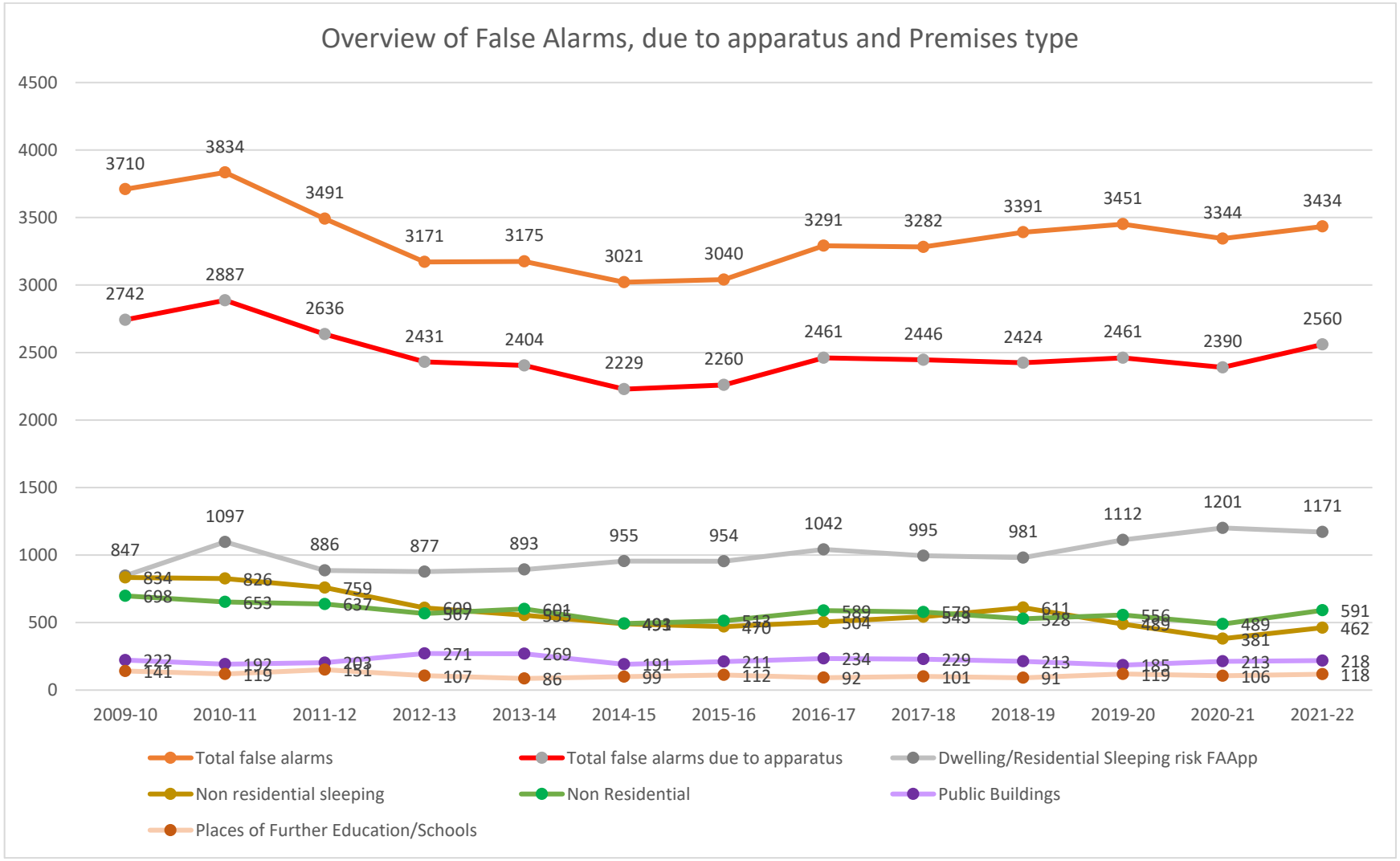
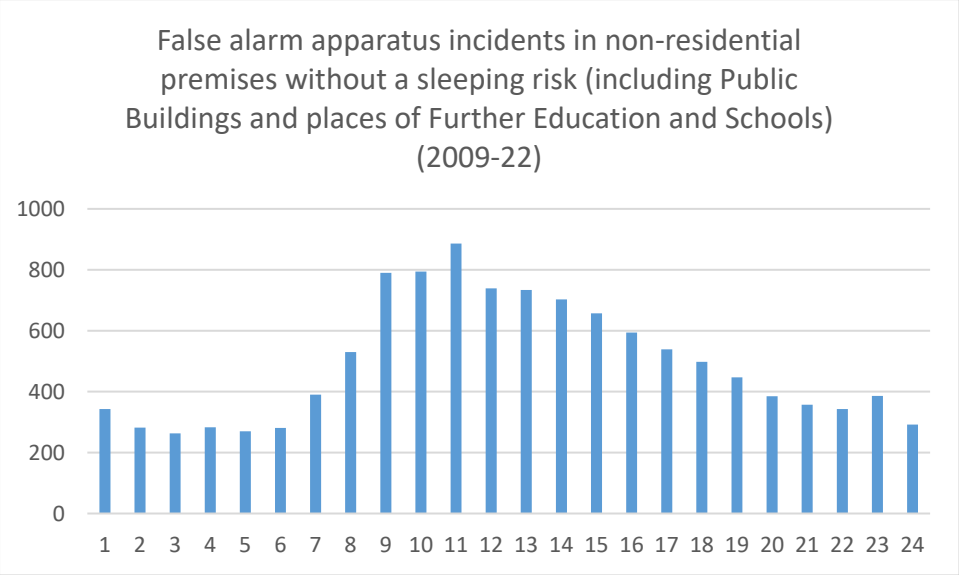


Figure 16: Overview of false alarms, due to apparatus and premises type from 2009/10 to 2021/22, data from IRS

Analysing false alarms in non-residential premises without a sleeping risk (including Public Buildings and places of Further Education and Schools) provides the following daily and hourly data:



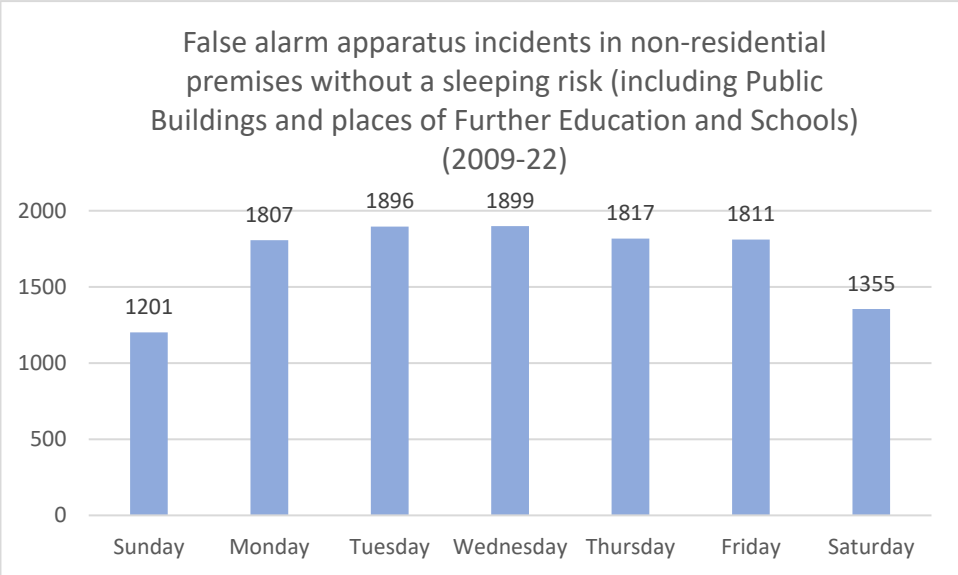


Figure 17: Number of false alarms per day/hour in non-residential premises without a sleeping risk from 2009/10 to 2021/22, data from IRS

Where 78.3% of all false alarm apparatus incidents in in non-residential premises without a sleeping risk (including public buildings and places of Further Education and Schools) occur Monday to Friday.

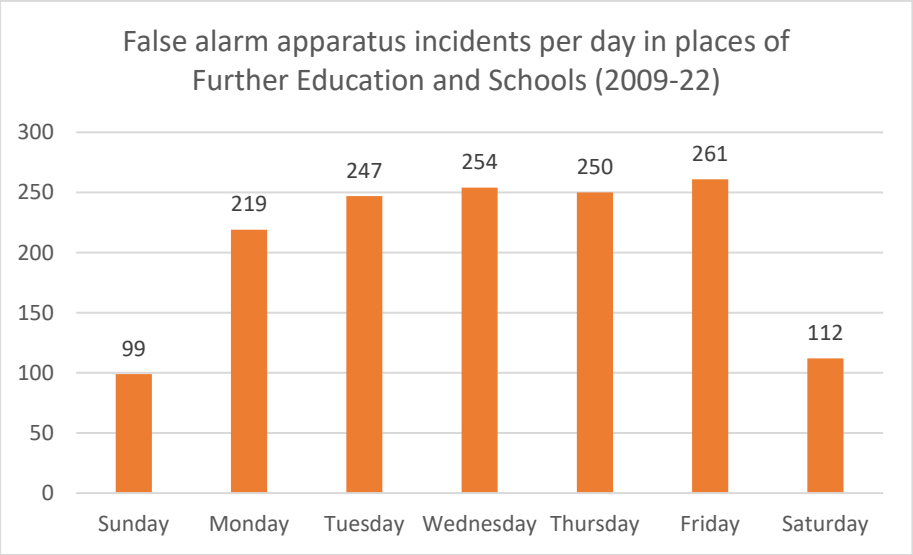
Between the hours of 09:00 and 17:00 accounted for 47.9% of false alarms in non-residential premises without a sleeping risk (including public buildings and places of Further Education and Schools), approximately 434 incidents annually.

Between the hours of 08:00 and 18:00 accounted for 58.8% of false alarms in non-residential premises without a sleeping risk (including public buildings and places of Further Education and Schools), approximately 533 incidents annually.

Between the hours of 08:00 and 20:00 accounted for 65.9% of false alarms in non-residential premises without a sleeping risk (including public buildings and places of Further Education and Schools), approximately 597 incidents annually.

The average annual number of false alarm apparatus in these types of incidents is approximately 907 incidents.

Analysing false alarms due to apparatus in places of Further Education and Schools provides the following hourly data:



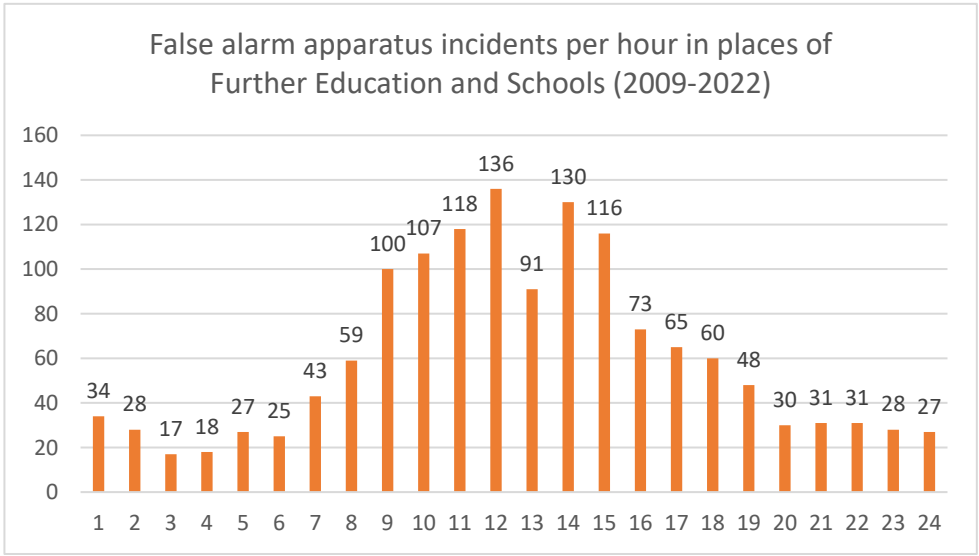


Figure 17a: Number of false alarms per day/hour in places of Further Education and Schools from 2009/10 to 2021/22, data from IRS

Where 85.4% of all false alarm apparatus incidents in places of Further education and Schools occur Monday to Friday.

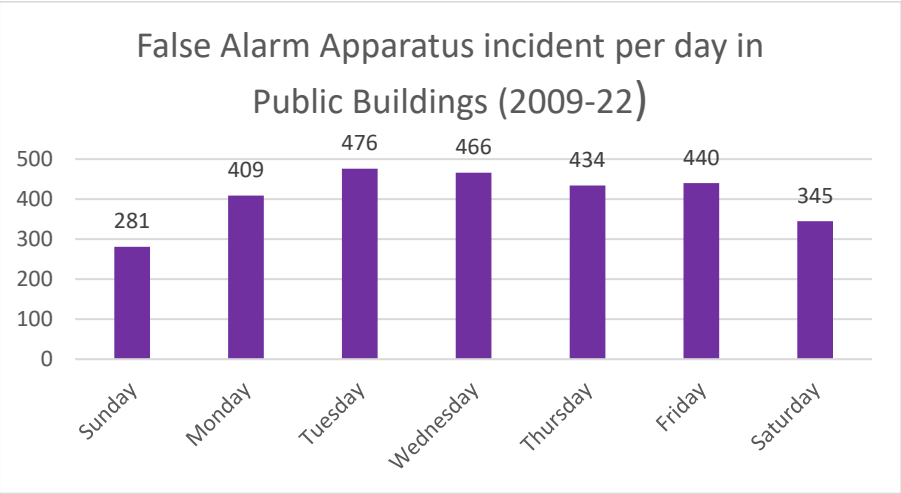
Between the hours of 09:00 and 17:00 accounted for 58.0% of false alarms in commercial premises without sleeping, approximately 64 incidents annually.

Between the hours of 08:00 and 18:00 accounted for 69.1% of false alarms in commercial premises without sleeping, approximately 77 incidents annually.

Between the hours of 08:00 and 20:00 accounted for 75.0% of false alarms in commercial premises without sleeping, approximately 83 incidents annually.

The average annual number of false alarm apparatus in these types of incidents is approximately 111 incidents.

Analysing false alarms in Public Buildings including places of assembly provides the following daily and hourly data:



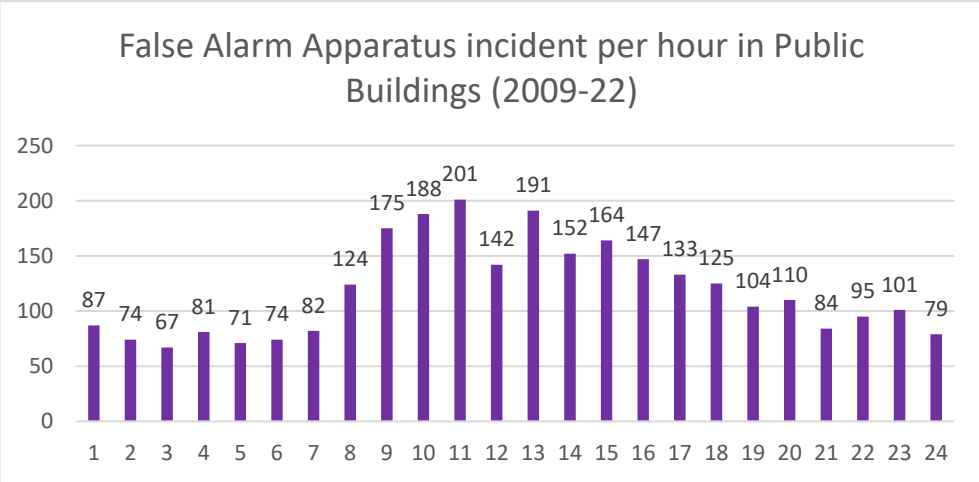


Figure 17b: Number of false alarms per day/hour in Public Buildings including places of assembly from 2009/10 to 2021/22, data from IRS

Where 78% of all false alarm apparatus incidents in Public Buildings including places of assembly occur Monday to Friday.

Between the hours of 09:00 and 17:00 accounted for 46.2% of false alarms in Public Buildings including places of assembly, approximately 101 incidents annually.

Between the hours of 08:00 and 18:00 accounted for 56.8% of false alarms in Public Buildings including places of assembly, approximately 125 incidents annually.

Between the hours of 08:00 and 20:00 accounted for 64.3% of false alarms Public Buildings including places of assembly, approximately 141 incidents annually.

The average annual number of false alarm apparatus in these types of incidents is approximately 219 incidents.

Analysing false alarms in non-residential premises (without a sleeping risk) provides the following daily and hourly data:

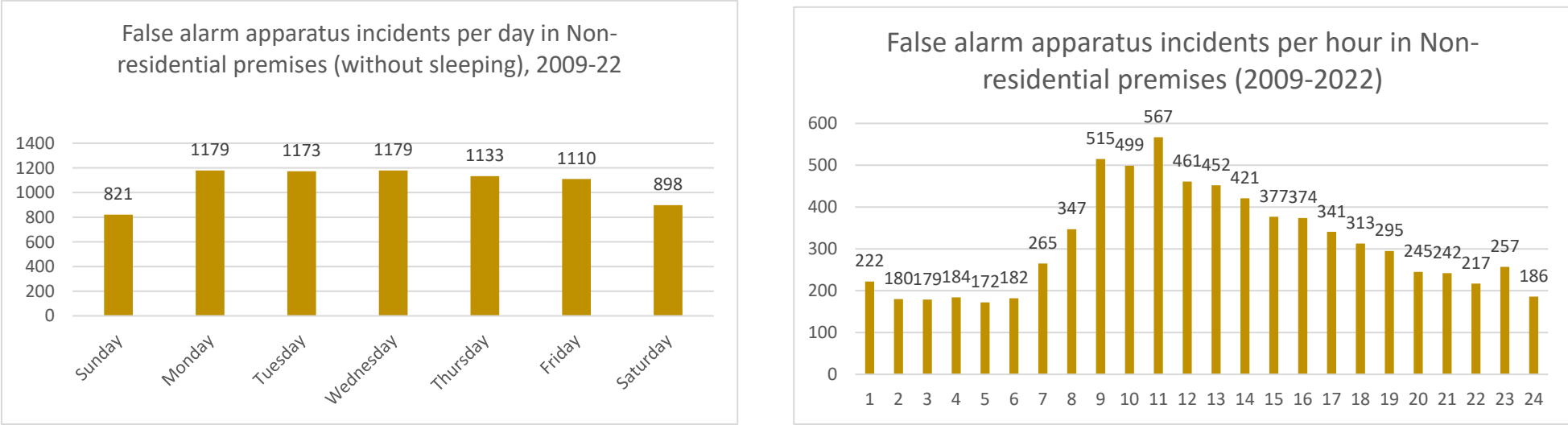


Figure 17c: Number of false alarms per day/hour in non-residential premises (without a sleeping risk) from 2009/10 to 2021/22, data from IRS

Where 77.1% of all false alarm apparatus incidents in non-residential premises (without a sleeping risk) occur Monday to Friday.

Between the hours of 09:00 and 17:00 accounted for 46.6% of false alarms in non-residential premises (without a sleeping risk), or approximately 269 incidents annually.

Between the hours of 08:00 and 18:00 accounted for 57.7% of false alarms in non-residential premises (without a sleeping risk), or approximately 332 incidents annually.

Between the hours of 08:00 and 20:00 accounted for 64.9% of false alarms in non-residential premises (without a sleeping risk), or approximately 374 incidents annually.

The average annual number of false alarm apparatus in these types of incidents is approximately 576 incidents.

5.6 AFAs occurring from 2009/10 to 2021/22

The data in this section is based on the following IRS variables:

Reporting period	2009/10 to 2021/22
1.5 OTB incident	No
2.3 Incident type at Control	Alarms - AFA

	Malicious false Alarm	Good intent false alarm	False alarm due to apparatus	Total False alarms
2009-10	2	104	2444	2550
2010-11	0	79	2582	2660
2011-12	0	40	2377	2417
2012-13	0	37	2254	2291
2013-14	23	99	2357	2479
2014-15	14	93	2163	2270
2015-16	26	93	2168	2287
2016-17	21	94	2367	2482
2017-18	26	96	2364	2486
2018-19	21	95	2342	2458
2019-20	35	197	2364	2596
2020-21	16	121	2325	2462
2021-22	35	137	2432	2604

Table 6: Annual breakdown of AFAs from 2009/10 to 2021/22, data taken from IRS.

On average over the 13-year period from 2009/10 to 2021/22 it can be observed that AFAs constituted 48.8% of all false alarms where the call came from the call centre/originator. This increases to 73.4% of all false alarms where Fire Control have selected incident types as 'Alarms AFA'. Therefore, addressing changes in response towards AFAs could have a significant bearing on reducing the burden caused by UwFSs.

Data from IRS v2018.1.2 reveals the following:

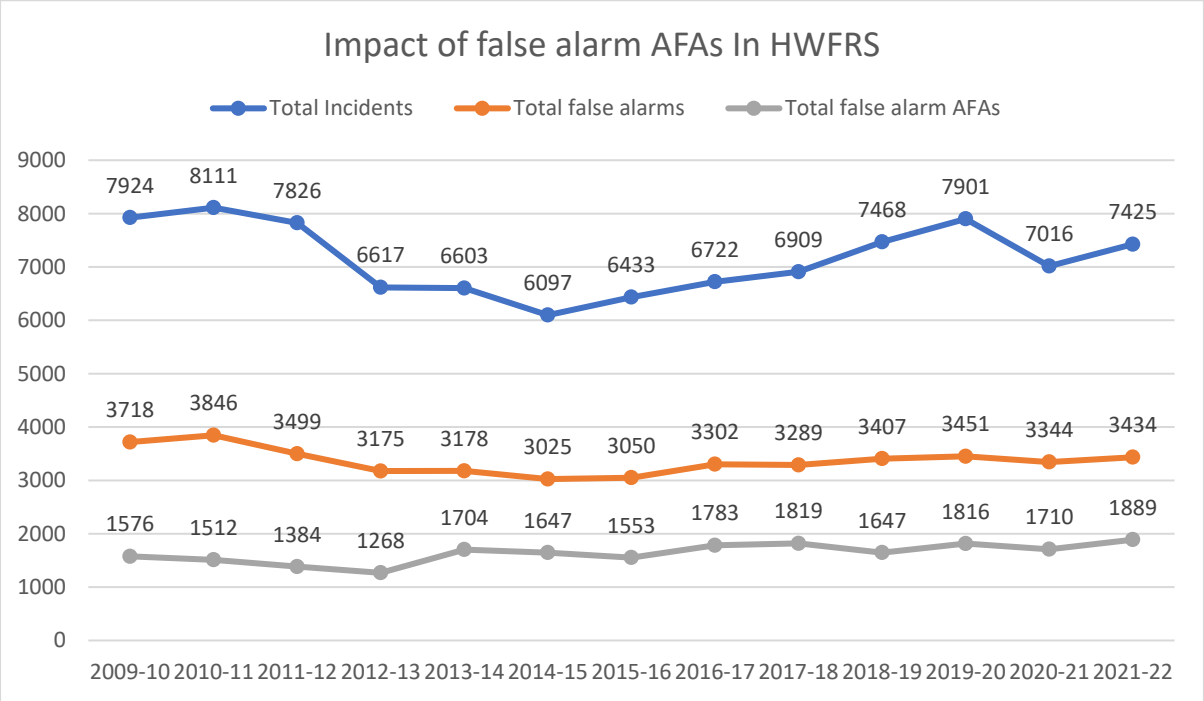


Figure 18: Incident data from 2009/10 to 2021/22 of the proportion of false alarms as a result of AFAs compared with the number of total incidents, data from IRS

The Service attended 33,116 AFA incidents (classed as type 'Alarms – AFA' by Fire Control) between 2009/10 and 2021/22, some 2,547 incidents annually. 32,042 (96.8%) were subsequently determined to be false alarms. On average over this period this equates to around 2,465 false alarm AFA incidents each year, 95.3% of these being false alarms due to apparatus. AFAs that the Service attends which result in a false alarm accounts for 34.6% of all incidents.

When reviewing an incident type recorded by Fire Control as an AFA, but which turned out to be a false alarm, Figure 19 below reveals the breakdown of incidents according to the false alarm reason. The majority of false alarms are due to apparatus, which may be further broken down by category as per section 5.3.

For AFAs which result in being false alarms on average, 95.3% are found to be false alarms due to apparatus, 4% are found to be false alarms due to good intent and 0.7% are found to be malicious false alarms.

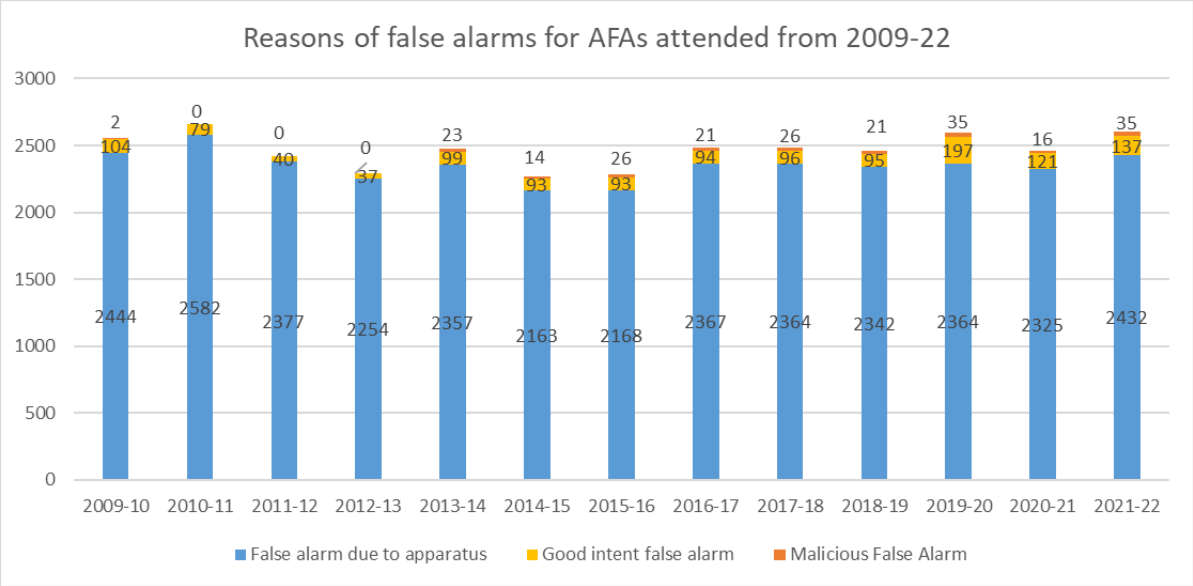


Figure 19: Reasons of false alarms for AFAs attended from 2009/10 to 2021/22, data from IRS

5.6.1 AFAs received from call centres

	Total AFA from call centres	Total false alarm AFAs from call centres	Total fire AFAs from call centres	Total Special Service AFA from call centre
2009/10	1471	1420	47	4
2010/11	1394	1342	41	11
2011/12	1288	1251	37	0
2012/13	1173	1142	24	7
2013/14	1504	1456	46	2
2014/15	1391	1344	44	3
2015/16	1361	1315	45	1
2016/17	1556	1510	45	1
2017/18	1548	1503	44	1
2018/19	1394	1341	51	2
2019/20	1572	1541	30	1
2020/21	1575	1536	37	2
2021/22	1718	1662	52	4
Total	18945	18363	543	39
Annual average	1457.3	1412.5	41.8	3.0
	Percentage	96.9%	2.9%	0.2%

Table 7: Annual breakdown of AFAs from call centres (2009/10 to 2021/22), data taken from IRS.

5.6.2 Distribution of AFAs per Time of day

Data from IRS reveals that of all the false alarms originating from AFAs (Call centre/originator) from 2009/10 to 2021/22, a total of 21,308, Figure 20 below provides the incident count per hour.

In light of any scaling down of response during specific time of the day the following analysis of time periods are provided for context:

Where between office hours of 09:00 till 17:00, 47% of AFA false alarm incidents occur.

Between the hours of 07:00 and 19:00 accounts for 67% of AFA false alarm incidents occur.

Between the hours of 08:00 and 18:00 accounts for 58% of AFA false alarm incidents occur.

Between the hours of 08:00 and 20:00 accounts for 67.8% of AFA false alarm incidents occur.

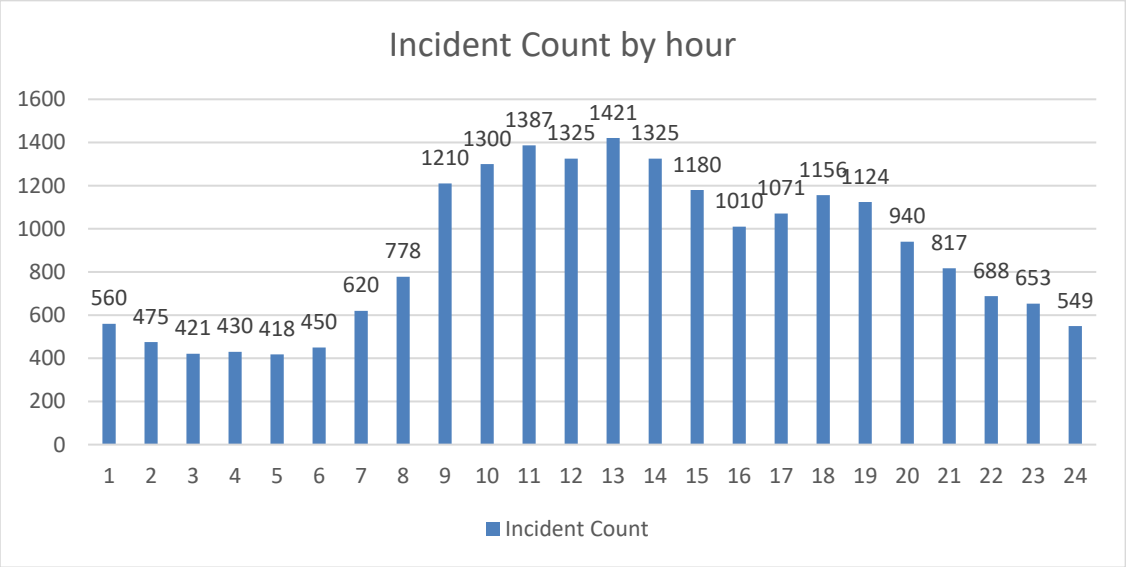


Figure 20: Incident count per hour of false alarm AFAs during 2009/10 to 2021/22

Breaking this down further into false alarm due to apparatus, provides the following data:

Between the hours of 09:00 and 17:00 accounts for 47.1% of false alarm apparatus incidents.

Between the hours of 07:00 and 19:00 accounts for 67% of false alarm apparatus incidents.

Between the hours of 08:00 and 18:00 accounts for 58.1% of false alarm apparatus incidents.

Between the hours of 08:00 and 20:00 accounts for 67.7% of false alarm apparatus incidents.

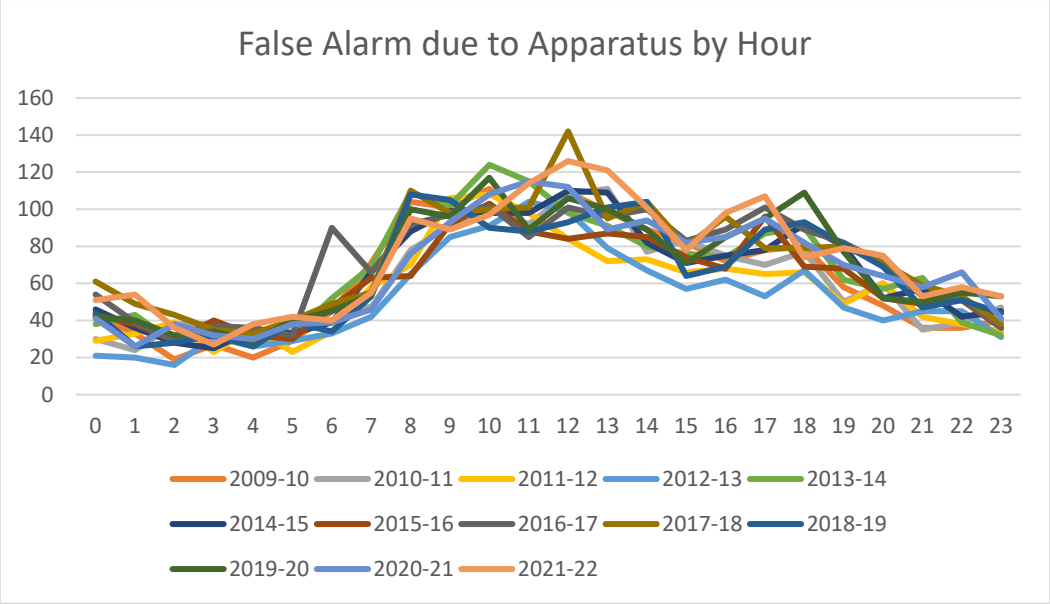


Figure 21: Annual False Alarms due to apparatus by hour from 2009/10 to 2021/22, data from IRS.

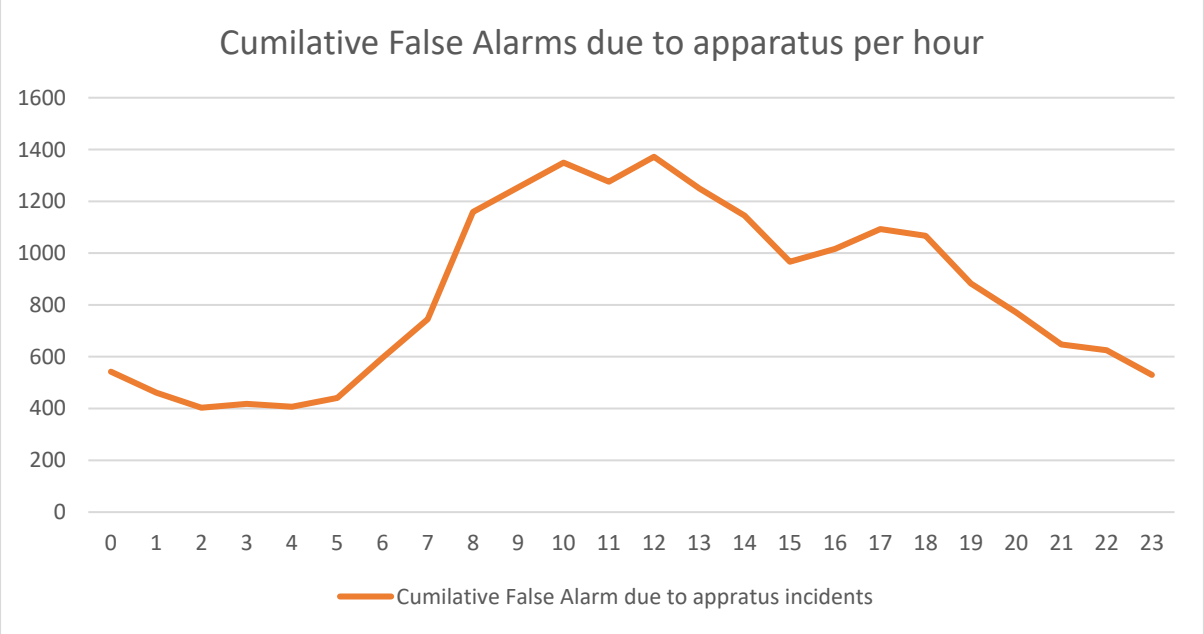


Figure 22: Cumulative False Alarms due to apparatus by hour from 2009/10 to 2021/22, data from IRS.

Hourly data of false alarm due to apparatus incidents for premises types follows a similar pattern where the greatest proportion of incidents can be seen to occur during waking hours, within non-residential premises.

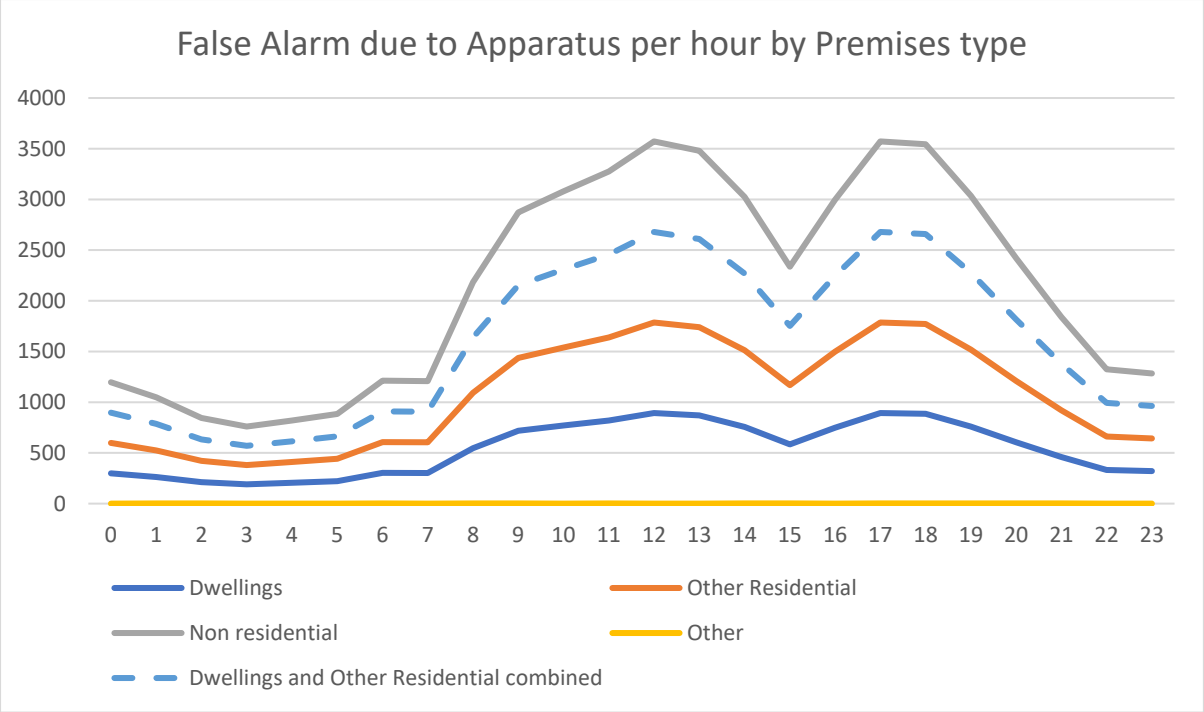


Figure 23: Breakdown of false alarms per hour by premises type, based on incidents attended from 2009/10 to 2021/22, data taken from IRS

5.6.3 Days of the week

Just as it is reasonable to conclude that fewer people are likely to be at a place of work outside of office hours, so too it is likely that commercial, non-residential premises are likely to be vacant during the weekend. As a result, considering that a high proportion of false alarm AFA's can be attributed to human interaction, e.g. cooking, accidental/carelessly set off, it would be reasonable to expect a smaller proportion of false alarm AFAs to occur during the weekend. Analysing distributions of AFA false alarms during the days of the week within non-residential premises, confirms this hypothesis:

Of 11,267 false alarm AFA incidents within non-residential premises, during the period from 2009/10 to 2021/22 Saturday and Sunday resulted in the fewest incidents, accounting for 11.9% and 10.4% respectively. Discounting AFA false alarm incidents in non-residential premises occurring at weekends 2,510 (22.2%), 8757 false alarm incidents (77.8%) occurred in non-residential premises from Monday to Friday over the past 13 years. This equates to approximately 674 incidents annually.

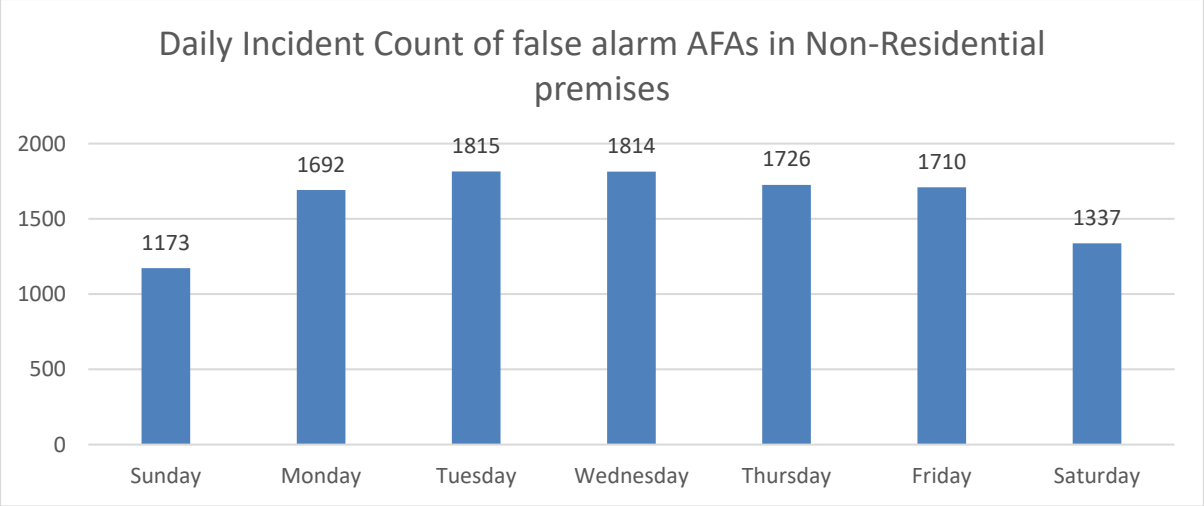


Figure 24: Daily number of false alarm AFA incidents in non-residential premises during 2009/10 and 2021/22.

5.6.4 Hours of the day

Scrutinising this further to examine when during the day false alarm AFAs were recorded at non-residential premises. IRS 2018.1.2 Question 3.2 'Property type' has 3 relevant filtering options: Dwelling, Other Residential and Non-residential. If commercial premises are taken as Non-Residential, and an incident count per hour is performed then the following distribution is observed in Figure 25 below.

Where during office hours of 09:00 till 17:00, 47.7% of false alarm non-residential incidents occur. Between the hours of 07:00 and 19:00 accounts for 67.3% of false alarm non-residential incidents. Between the hours of 08:00 and 18:00 accounts for 58.7% of false alarm non-residential incidents and between the hours of 08:00 and 20:00 this accounts for 66% of the total false alarms at non-residential incidents.

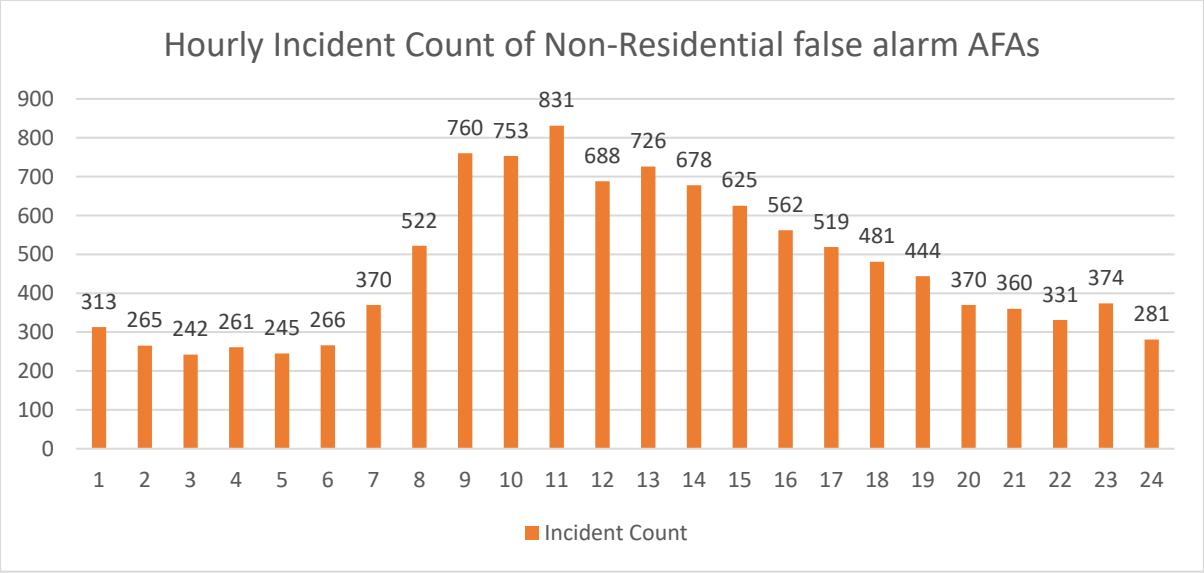


Figure 25: Hourly number of false alarm AFA incidents in non-residential premises during 2009/10 to 2021/22.

5.7 Fires at Automatic Fire Alarms (AFAs)

In order to effectively reduce the number of UwFSs as a result of AFAs, it is essential to understand the impact of those incidents that are initially received by Fire Control as an AFA, and which upon investigation turn out to be a real fire.

Fire Control may have received the call from the ARC/originator and upon their interrogation it may become apparent that signs of fire are present which confirm the cause of the alarm's activation. This would attract an enhanced pre-determined attendance (PDA).

Additional resources mobilised to an incident would also be considered should there be repeat calls to the premises, i.e. where the AFA is backed up by a 999 call.

Attending fire crews at an AFA will investigate the cause of the fire, where possible gaining access to the premises, identifying the location of any alarms through inspecting any fire alarm panel, and conducting a search of the premises. Where possible, a duty holder from the premises will be used to assist the identification and cause of the alarm. It is a duty for the responsible person of a premises (in the case of a commercial premises) to have an appointed, suitably competent person to operate/maintain the Alarm Panel, and have means to reset or maintain it adequately. Out of office hours, crews will conduct as best they are able a 360-degree recce of the premises, looking for visible signs of heat or smoke. Operational crews will look to gain access to the premises through the attendance of a keyholder, however, where this is not forthcoming, after a period of 20mins from arrival and no signs of fire, crews will become available for redeployment. If during the course of their investigations at the premises, a fire or smoke is discovered then using their professional judgement, they may request further fire appliances to respond to the incident.

Over the 13-year period from 2009/10 to 2021/22, HWFRS annually attended on average 70 incidents (0.89% of all incidents annually) which were initiated as an AFA (from a call centre/originator) that resulted in a fire being reported.

These figures marginally rise if those incidents where the incident type 'AFA -Alarms' selected at Control are considered. The average number of fires annually that were reported over this 13-year period were approximately 75 incidents, or 1.1% of the annual number of incidents.

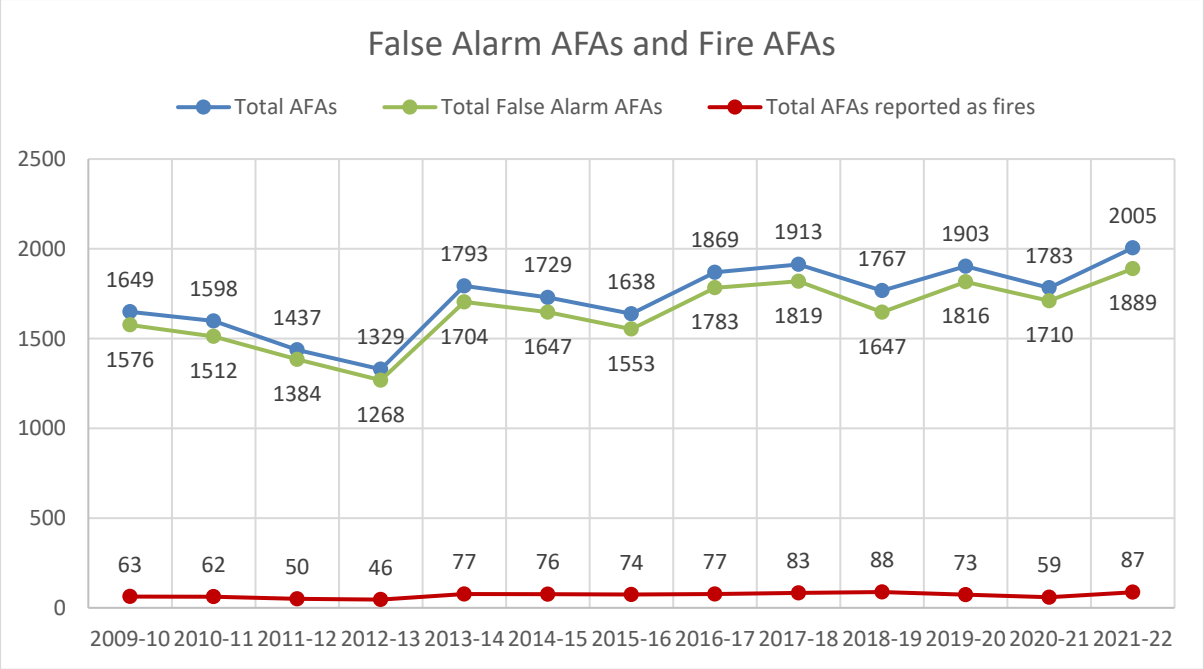


Figure 26: Comparison of false alarm AFAs and those AFAs which resulted in a fire being reported as attended by HWFRS from 2009/10 to 2021/22, data from IRS

IRS has three incident categories under Q3.1; False alarm, Fire and Special Services. Special services are not considered in this review.

The severity of AFAs which resulted in a fire vary significantly, from those that on attendance were extinguished prior to arrival, to those where additional resources were needed to extinguish the fire.

As can be seen from figure 27 below, the proportion of AFAs where a fire was reported at which 2 or more appliances were required is approximately one third of all AFAs which reported a fire. This equates to 1.3% of all AFAs, or 0.31% of all incidents. When the number of AFAs where a fire was reported that required 3 or more appliances is reviewed, this reduces further to being approximately 10% of all AFAs where a fire was reported, 0.4% of all AFAs and 0.1% of all incidents.

Of those incidents where a more significant fire was detected, it is helpful to understand whether the AFA was backed up by a subsequent 999 call, the nature and use of the premises, whether it was a domestic/commercial premises and the time of day when the fire occurred.

During the 13-year period under review, there were 9 incidents where an initial AFA call turned out to be a real fire, attracting a response of 6 appliances or more. Of these, 7 were commercial and 2 residential. 999 back up calls were received to all premises apart from 2 in commercial premises, these incidents occurred at 23:46 and 05:17 respectively.

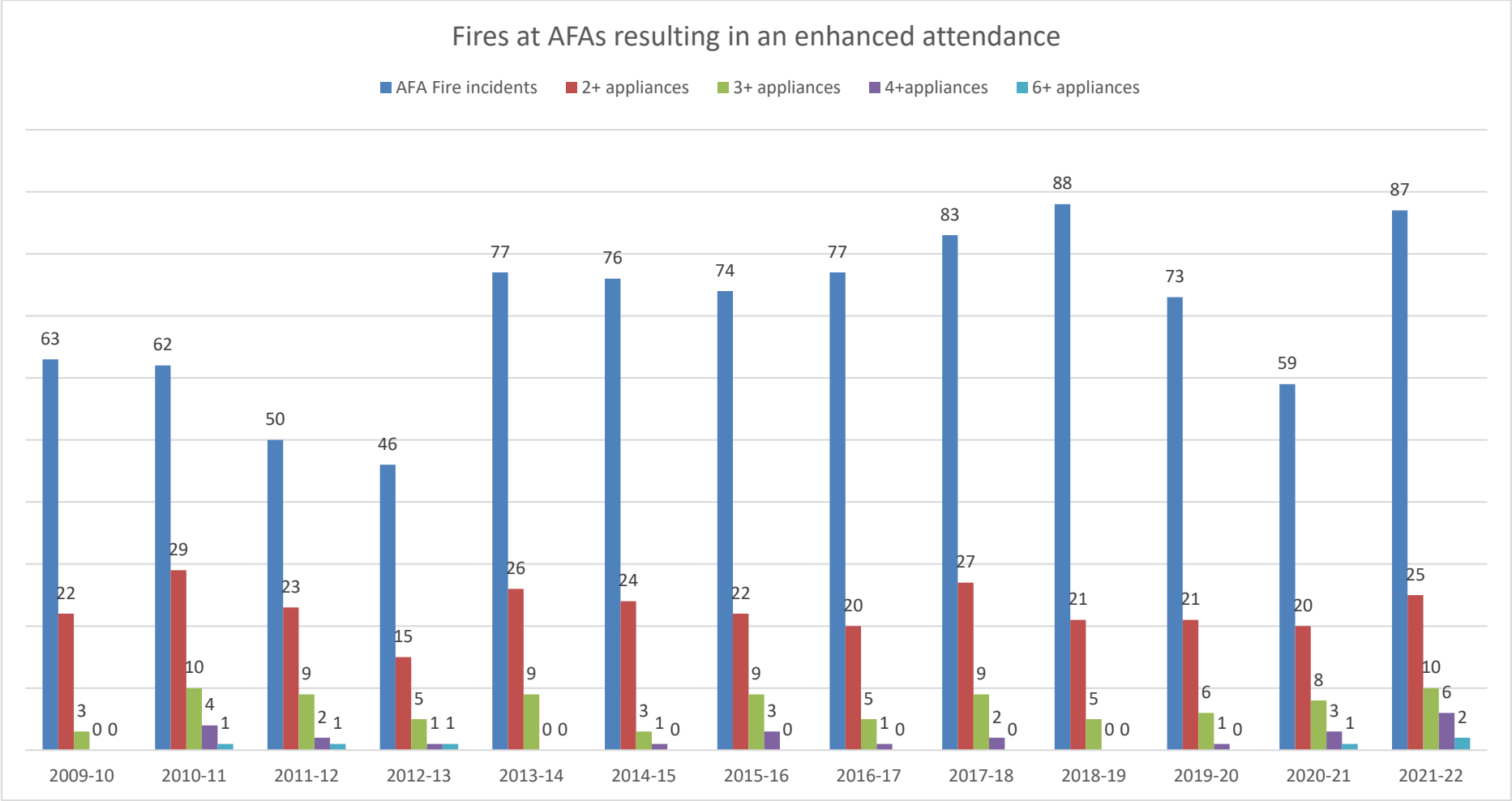


Figure 27: HWFRS incident data from IRS v2018.1.2 of the total number of incidents initiated as an AFA from a call centre/originator but which were reported as fires.

(Additional data shows cumulative number of incidents where 2,3,4 and 6 or more appliance were required.)

Reference	Call Time	Incident Type	Sub Type	Address	Station	IRS Form	Commercial/Domestic	999 Backup?	Time of call to backup 999 call mm:ss
38010795	05/10/2010 03:31	Fire	AFA	LAWRENCE SKIP HIRE FORGE HOUSE,STOURPORT ROAD,KIDDERMINSTER,NEAR FOLEY PARK	Stourport - CLOSED	IRS Form	Commercial	Yes	Originated from person calling from site
39000487	16/01/2011 05:58	Fire	AFA	NORFOLK HOUSE,ETNAM STREET,LEOMINSTER,	Leominster	IRS Form	Residential	Yes	01:24
39002197	03/03/2011 11:35:18	Fire	Building	BOBST GROUP,BROAD GROUND ROAD,REDDITCH,NEAR UNIT 10 T0 12	Redditch	IRS Form	Commercial	Yes	01:45
39011621	02/10/2011 13:08	Fire	AFA	BRITISH HEART FOUNDATION,2,MARKET STREET,KIDDERMINSTER,	Kidderminster - CLOSED	IRS Form	Commercial	Yes	04:52
39011798	05/10/2011 23:46:06	Fire	AFA	HARTLEBURY CASTLE AND MUSEUM,STOURPORT ROAD,HARTLEBURY,	Stourport - CLOSED	IRS Form	Commercial	No	-
40004548	03/05/2012 05:17:15	Fire	Building	TGS BOWLING,STATION APPROACH,HEREFORD,NEAR BARRS COURT	Hereford	IRS Form	Commercial	No	-
114129	20/12/2020 00:41:45	Fire	Persons	DERWENT HOUSE HURCOTT ROAD KIDDERMINSTER DY10 2PD	Wyre Forest	IRS Form	Residential	Yes	07:50
126881	19/11/2021 06:58:47	Fire	Building	AEROMET INTERNATIONAL COSGROVE CLOSE WORCESTER WR3 8UA	Worcester	IRS Form	Commercial	Yes	01:30
127487	06/12/2021 10:20:21	Fire	AFA	MIDLAND CARPET DISTRIBUTORS FREDERICK ROAD HOO FARM INDUSTRIAL ESTATE KIDDERMINSTER DY11 7RA	Wyre Forest	IRS Form	Commercial	Yes	02:45

Table 8: AFAs which resulted in fires attracting 6 or more appliances from 2009/10-2021/22, data from IRS includes selection of ‘Alarm - AFA’ at Control and those AFAs from call centres /originators

Of those AFAs originating from call centres/originators that were reported as fires during the period 2009/10 to 2021/22, 33.9% occurred in non-residential premises. Of those AFAs reported as fires which attracted a response of more than 2 appliances, 37.2% occurred in commercial premises, the remainder occurred in dwellings or other residential premises.

In the 13-year period, for those non-residential premises where the Service responded to an AFA and a fire was reported and attracted 2 or more appliances, out of the 116 incidents, 58 incidents occurred during the office hours of 09:00 – 17:00.

Similarly, for those non-residential premises where the Service responded to an AFA and a fire was reported and attracted 3 or more appliances, there were 40 recorded incidents, 14 of which occurred in Hospitals. 19 of the 40 incidents occurred during the office hours of 09:00 and 17:00. Reviewing the occasions during office hours 09:00 to 17:00, where further backup calls were made from non-residential premises provides a mixed picture. 7 out of 19 incidents provided a further back up call, and 5 incidents were fires which were extinguished prior to arrival.

Calls with the origin identified as 'AFA originator' are those calls which have come from the site. As such the individual could deem themselves as having contacted the Service to notify them that an Alarm has activated, and may or may not have fully investigated the cause. They may also be in a position on pass on further details, or receive confirmation from Fire Control that the Fire Service will attend - they may not see the need to re-contact the Fire Service.

Reviewing those AFA fire incidents in non-residential premises, where the call came from an Alarm Receiving Centre (ARC), it can be seen that during the hours of 09:00 to 17:00, approximately half of the incidents were recorded as having a back-up call.

It is clear that any change towards a non-attendance policy for a particular type of premises, for instance within prescribed timeframes would not be without its risk. Premises may have been accustomed to understand that when their AFA system activates, this will trigger their evacuation and the response of the Fire Service. As a consequence, employees or members of the public could delay a 999 call to the Fire Service as they see the incident escalating, with the resulting initial attending crews tackling a more significant fire.

It is essential that any change in strategy towards AFA attendance would need active business engagement, liaison with ARCs and a media/communication strategy to ensure changes and developments are fully understood.

5.7.1 Classification of Fires AFAs which were reported as fires

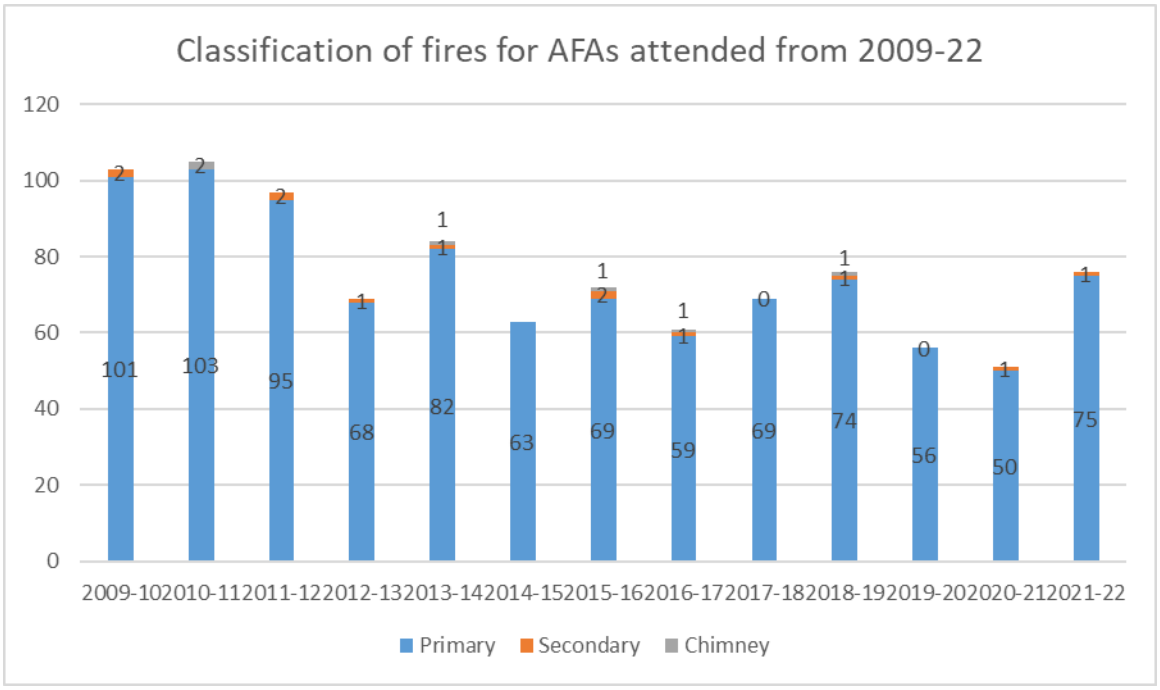


Figure 28: Classification of fires for AFAs attended from 2009/10 to 2021/22, data taken from IRS

On average, annually the Service attends approximately 75 incidents which are recorded as an AFA incident type at control and are reported as fires.

Definitions (taken from gov.uk):

Primary fires are potentially more serious fires that harm people or cause damage to property and meet at least one of the following conditions:

- any fire that occurred in a (non-derelict) building, vehicle or (some) outdoor structures
- any fire involving fatalities, casualties or rescues
- any fire attended by five or more pumping appliances

Secondary fires are generally small outdoor fires, not involving people or property. These include refuse fires, grassland fires and fires in derelict buildings or vehicles, unless these fires involved casualties or rescues, or five or more pumping appliances attended, in which case they become primary fires.

Chimney fires are fires in buildings where the flame was contained within the chimney structure and did not involve casualties, rescues or attendance by five or more pumping appliances. Chimneys in industrial buildings are not included and are included under primary fires.

5.7.2 Premises type

Of all AFAs that were selected by Fire Control as an AFA incident type from 2009/10 to 2021/22, 96.8% were false alarms (annually 2,465 incidents), 0.3% were attributed as special service incidents (annually 7 incidents) and 2.9% were reported as fires (75 incidents annually).

Of the 2.9% reported, these will have been of differing severities as is considered in sections 5.7.6 and 5.7.7, however the following breakdown of premises types where these incidents occurred may be observed as follows:

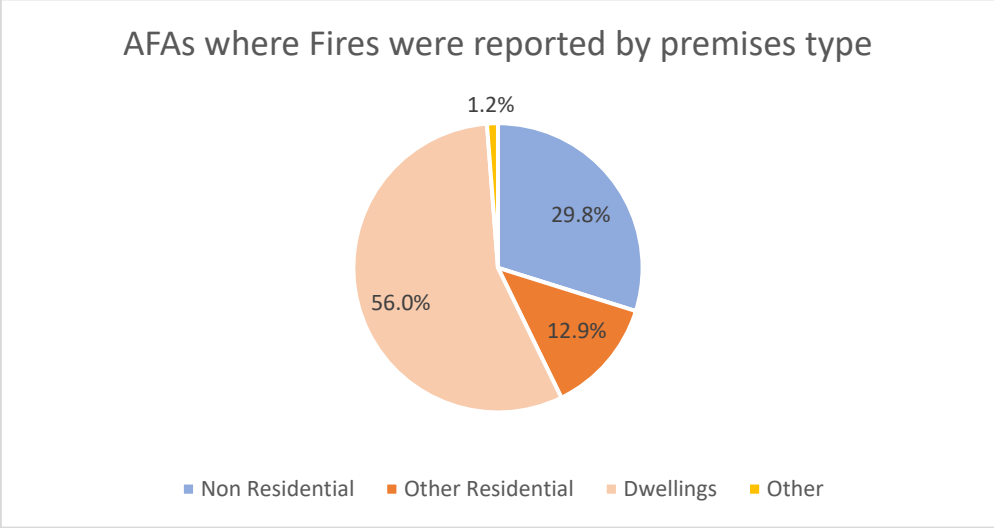


Figure 29: Property types for Fire AFAs attended from 2009/10 to 2021/22, data taken from IRS

If dwellings and other residential accommodation are combined to account for non-commercial type premises, this suggests that **68.9%** of the reported AFA fires occurred in a domestic setting (52 incidents annually). Those 'other' premises include AFA fires in outdoor/vehicle settings. **29.8%** of the reported AFA fires occurred in a non-residential setting (23 incidents annually).

More specifically, the breakdown of incidents where a fire was reported at an AFA incident (selected at Control) by the Property type produces the following data:

3.2 Property Type	% of AFA fires
Self-contained Sheltered Housing	23.8%
Up to 3 storeys	10.3%
House - single occupancy	9.7%
Hospital	6.2%
Bungalow - single occupancy	5.8%
Retirement/Elderly	5.3%
Factory	3.9%
Engineering	2.6%
10 or more storeys	2.5%
Nursing/Care	2.2%
Sheltered Housing - not self-contained	2.1%
3 or more storeys	1.6%

Other	1.5%
Student Hall of Residence	1.4%
Up to 2 storeys	1.3%
Recycling	1.2%
Purpose built office	1.1%
Prison	1.0%
College/University	1.0%
Single shop	0.8%
Large supermarket	0.8%
Printing	0.8%
Assembly	0.7%
Department Store	0.6%
Hotel/motel	0.5%
Small refuse/rubbish/recycle container (excluding wheelie bin)	0.4%
Bank/Building Society	0.4%
Nurses'/Doctors' accommodation	0.4%
Infant/primary school	0.4%
4 to 9 storeys	0.4%
Other Residential Home	0.4%
Other retail warehouse	0.4%
Other (including surgery)	0.4%
Animal products	0.3%
Loose refuse (incl in garden)	0.3%
Warehouse	0.3%
Other private non-residential building	0.3%
Secondary school	0.3%
Laboratory/research Establishment	0.3%
Other Dwelling	0.3%
Medical/health centre	0.2%
Chemicals	0.2%
Museum	0.2%
Doctors surgery	0.2%
Hostel (e.g. for homeless people)	0.2%
Pub/wine bar/bar	0.2%
Shopping Centre	0.2%
Other Restaurant/cafe (licensed for sale of alcohol)	0.2%
Food and drink processing	0.2%
Dentist	0.2%
Takeaway, fast food	0.2%
Police station	0.2%
Other outdoor structures	0.2%
Boarding School accommodation	0.2%
Leisure Centre	0.2%
Other entertainment venue	0.2%

Town Hall	0.1%
Highway/road surface/pavement	0.1%
Vehicle Repair	0.1%
caravan/mobile home (permanent dwelling)	0.1%
Telephone Exchange	0.1%
Other holiday residence (cottage, flat, chalet)	0.1%
Law Courts	0.1%
Bingo Hall	0.1%
Waste	0.1%
Other outdoor items including roadside furniture	0.1%
Cinema	0.1%
Gym	0.1%
Theatre	0.1%
Bakery	0.1%
Pre School/nursery	0.1%
Indoor Market	0.1%
Van	0.1%
Health spa/farm	0.1%
Other cultural venue	0.1%
Other retail	0.1%
Community centre/Village or Parish Hall	0.1%
Stately Home	0.1%

Table 9: AFAs where fires were reported by premises type, 2009/10-2021/22, data from IRS

Highlighted in the table above are those premises where sleeping may occur. This accounted for **76.0%** of all premises where a fire was reported at an AFA.

5.7.3 Time of day

AFA incidents that were reported as a fire between 2009/10 and 2021/22, where the origin of call was from an AFA call centre/originator, the following hourly distribution is observed:

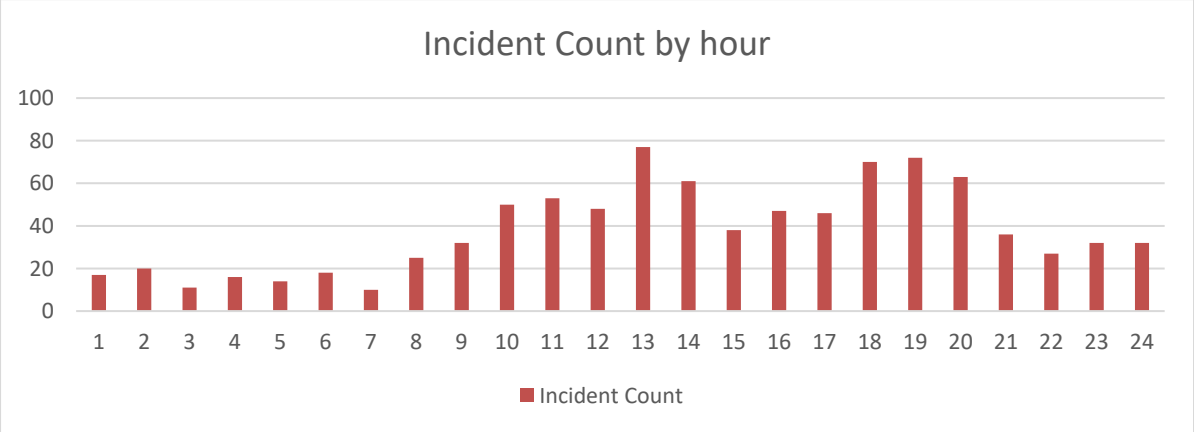


Figure 30: Incident count per hour of AFAs which resulted in a fire being reported during 2009/10 to 2021/22

- Office hours of 09:00 till 17:00 account for 45.9% of the total AFA fire incidents.
- Between the hours of 07:00 and 19:00 accounts for 55.1% of incidents.
- Between the hours of 08:00 and 18:00 accounts for 57% of incidents.
- Between the hours of 08:00 and 20:00 accounts for 71.8% of incidents.

If dwellings and other residential premises are reviewed, 72% of AFA fire incidents occur between the hours of 08:00 and 20:00, equating to around 33 incidents annually.

The hourly distribution of the more significant fires which attracted 2 or more appliances to an initial AFA call, reveals a similar distribution:

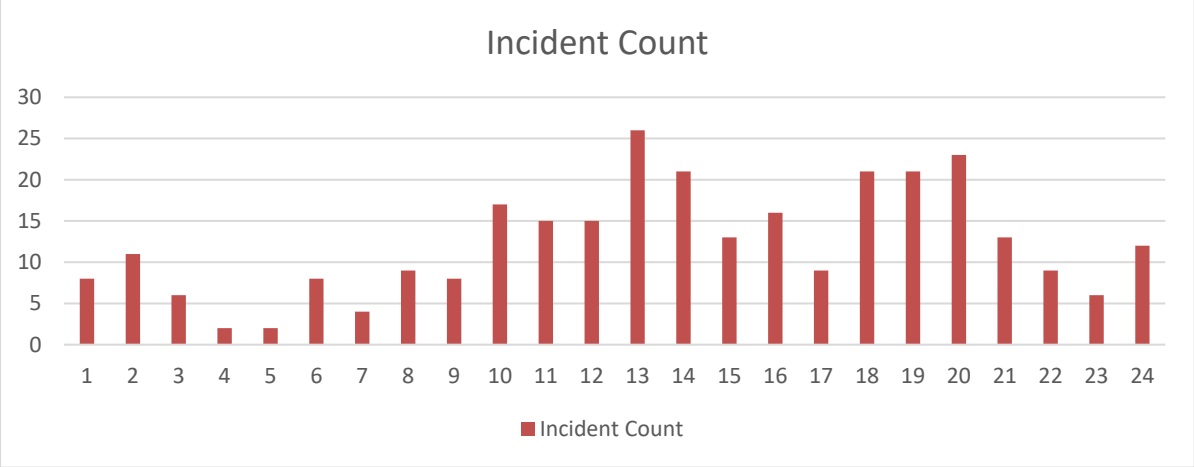


Figure 31: Incident count per hour of AFAs which resulted in a fire being reported where 2 or more appliances attended during 2009/10 to 2021/22, data from IRS

- Where during office hours of 09:00 till 17:00, 44.7% of incidents occur.
- Between the hours of 07:00 and 19:00 accounts for 64.7% of incidents.
- Between the hours of 08:00 and 18:00 accounts for 44.4% of incidents.
- Between the hours of 08:00 and 20:00 accounts for 69.4% of incidents.

5.7.4 Day of the week

Reviewing the daily distribution of AFAs which resulted in a fire being reported during this period shows a slight similarity to that of the distribution of false alarm AFAs, however this revealed that the fewest number of incidents generally occurred on a Friday:

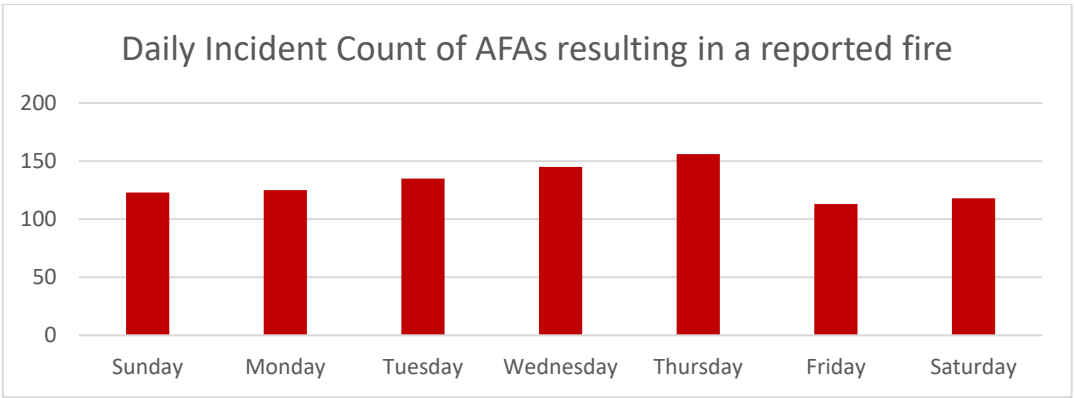


Figure 32: Daily numbers of reported fires from AFA incidents during 2009/10 and 2021/22.

5.7.5 Impact of AFAs which resulted in fire and attracting 2+ appliances

Table 10 below provides the distribution of AFAs per station area which resulted in a fire and which attracted two or more appliances. It can be seen that Wholetime stations as highlighted in bold account for approximately 90% of these kinds of incidents.

Station	Number of incidents (2009-2022)
Bewdley - closed	1
Broadway	1
Bromsgrove	**29**
Bromyard	2
Droitwich Spa	**11**
Eardisley	1
Evesham	**11**
Ewyas Harold	0
Fownhope	0
Hereford	**38**
Kidderminster - closed	**26**
Kingsland	0
Kington	0
Ledbury	2
Leintwardine	0
Leominster	1
Malvern	**13**
Pebworth	2
Pershore	3
Peterchurch	0
Redditch	**33**
Ross-on-Wye	9
Stourport - closed	2
Tenbury Wells	3
Upton-upon-Severn	1
Whitchurch	0
Worcester	**96**
Wyre Forest	**10**
Total	295

Table 10: Distribution of AFAs which were reported as fires with an enhanced (2+) attendance, data taken from IRS

The range of premises in which a fire at an AFA resulted in the attendance of 2 or more appliances can be seen below. The highest proportion of these kinds of incidents occurred in self-contained sheltered housing, premises of up to 3 storeys and single occupancy houses which accounted for approximately a third of these incidents.

Premises where sleeping is reasonably likely to be expected is highlighted below and accounts for approximately **69%** of these incidents.

Premises type	Number of 2+ appliance AFA fire incidents
10 or more storeys	15
3 or more storeys	3
4 to 9 storeys	2
Animal products	3
Assembly	3
Barn	1
Boarding School accommodation	3
Bungalow - single occupancy	13
Chemicals	1
College/University	2
Dentist	1
Department Store	2
DIY Warehouse	2
Doctors surgery	1
Engineering	13
Factory	7
Fence	1
Food and drink processing	1
Hospital	21
Hostel (e.g. for homeless people)	2
Hotel/motel	3
House - single occupancy	29
Infant/primary school	2
Large supermarket	3
Law Courts	1
Library	1
Leisure Centre	2
Multi-Storey	1
Museum	1
Nurses'/Doctors' accommodation	1
Nursing/Care	5
Other	6
Other Dwelling	1
Other entertainment venue	1
Other holiday residence (cottage, flat, chalet)	1
Other indoor sporting venue	1
Other outdoor sporting venue	1
Other private non-residential building	2
Other retail warehouse	1
Petrol station	1
Printing	1
Prison	5
Purpose built office	4
Recycling	12
Retirement/Elderly	9
Secondary school	1
Self-contained Sheltered Housing	39
Sheltered Housing - not self-contained	8
Shopping Centre	4
Single shop	1

Small refuse/rubbish/recycle container (excluding wheelie bin)	1
Student Hall of Residence	7
Takeaway, fast food	1
Towing caravan on site (not on tow)	1
Trailers - Trailer unit (not attached to tractor)	1
Tree scrub (includes single trees not in garden)	1
Up to 3 storeys	31
Warehouse	4
Waste	3
Total	295

Table 11: Property Type of AFAs which were reported as fires with an enhanced (2+) attendance over the period from 2009/10 to 2021/22, taken from IRS

5.7.6 Analysis of AFAs resulting in fires where breathing apparatus (BA) was used

Examining the data of AFAs received from a call centre or originator more closely, the more significant fires will not only receive more than 1 appliance as requested by the officer in charge, they will also require additional firefighting tactics. As useful benchmark, whether or not firefighter breathing apparatus was worn and the duration of the incident provides an insight into the severity of the fire.

Reviewing the AFA incident data from 2021-22, for those AFAs received from call centres or originators there were **11** instances where BA was recorded as having needed to be used, 3 within domestic dwellings and 8 within non-residential premises. Of all of the incidents there were 2 occasions where no backup duplicate call was received by Fire Control, one being a domestic premises, and 1 being a commercial premises. The incidents occurred at varying times throughout the day with 5 out of 8 incidents occurring in non-residential premises outside of office hours (09:00 – 17:00).

Of particular note were those instances where evacuations were needed, or where individuals were injured. Of all 11 incidents, injuries were recorded for fires occurring in domestic premises only, one being where a person was able to evacuate themselves, but was treated for smoke inhalation and one occasion where the individual was unable to evacuate themselves and required immediate Fire Service assistance sustaining burns. This persons reported incident received no backup/duplicate calls and 4 fire appliances attended.

The duration of Fire Service attendance at these incidents varied from 37 minutes, to 7 days at the significant fire at Midland Carpet Distributors, Kidderminster. The majority of incidents required FRS attendance for between 1-3 hours.

Expanding this dataset within IRS over the full 13-year period from 2009/10 to 2021/22, reveals that there were **96** incidents in total where the AFA had come from a call centre/originator, which turned out to be a fire where BA was required to be worn. On average there are **7.3** incidents annually when this occurs in HWFRS. No fatalities were recorded throughout the entire period. At 22 incidents injuries were recorded (including rescue with injury) and at 7 incidents rescues of persons were recorded (without injury).

From this data, the majority of incidents where injuries were recorded were in the domestic environment (20) compared to the non-residential/Other residential environment. 4 out of the 7 incidents where persons were rescued without injury also occurred in the domestic setting.

Of the 96 incidents requiring BA, 42 occurred in dwellings, 52 occurred in non-residential/other residential and 2 occurring in road vehicles which had triggered an AFA detection system.

Time of Call	2.2 Origin of call	Number of duplicate calls	3.7 Number of appliances attended before stop	Address	3.2 Premises type	Main action taken by FRS personnel	9.1 How many people were evacuated without assistance from the FRS?	9.2 How many people were evacuated with assistance from the FRS	9.3 How many people were assisted (by FRS) in their evacuation?	Time spent at incident (stop - attendance)	stop time	In attendance time
25/04/2021 07:57:48	AFA from call centre	1	2	HEENAN COURT SANSOME PLACE WORCESTER WR1 1UA	Dwelling - self contained sheltered housing	Hose reel - 1 male casualty suffering smoke inhalation	1	0		03:17	11:23	08:06
14/07/2021 22:07:39	AFA from call centre	1	4	THERMA BEAD UNIT 1-2 SHIPSTON CLOSE WORCESTER WR4 9XN	Non residential - industrial manufacturing - factory	2 BA 1 Hosereel, forced entry				01:49	00:05	22:16
22/07/2021 09:51:47	AFA from call centre	4	2	MORRISONS ROMAN WAY MALVERN WR14 1PZ	Non residential - Retail - Large supermarket	Fire in refrigeration unit - 2 BA 1 CO2 extinguisher, gas monitoring				02:27	12:26	09:59
11/08/2021 02:18:07	AFA from originator	0	1	NTM GB LTD WHITEHOUSE ROAD Aggborough and Spennells KIDDERMINSTER DY10 1HT	Non residential - vehicle repair	Fire in electrical motor in 65m x150m factory, 2BA 1 hosereel, 1 CO2 extinguisher, PPV				01:13	03:41	02:28
27/08/2021 05:23:56	AFA from call centre	4	5	KOITO EUROPE UK KINGSWOOD ROAD HAMPTON LOVETT DROITWICH WR9 0QH	Non residential - Industrial Manufacturing - Engineering	Fire involving large injection molding machine, 4BA, 1 Hosereel, 1 main jet			51-100	02:28	08:05	05:37
23/10/2021 20:05:26	AFA from call centre	3	3	ENVIROSORT, SEVERN WASTE SERVICES, WOODBURY LANE NORTON WORCESTER WR5 2DF	Non residential - Warehouses and bulk storage - Waste	Fire involving 1 10x3m recycling bin and machinery, 2 BA 1 hosereel, 1 main jet				01:42	22:03	20:21
31/10/2021 09:49:51	AFA from call centre	0	4	HAWKINS CLOSE WORCESTER WR2 5QZ	Dwelling - House - Single occupancy	Fire in ground floor, 1 female rescued with injury, 6BA 1 Hosereel, PPV, small gear		1		02:49	12:48	09:59
19/11/2021 06:58:47	AFA from call centre	5	7	AEROMET INTERNATIONAL COSGROVE CLOSE WORCESTER WR3 8UA	Non residential - industrials manufacturing - engineering	Fire involving 10,000L oil tank, 4BA 2 Hosereels			21-50	08:00	15:08	07:08
22/11/2021 05:54:09	AFA from call centre	1	2	EGREMONT GARDENS WORCESTER WR4 0QH	Dwelling House - single occupancy	1 hosereel, PPV, extinguished prior to arrival	2			01:05	07:10	06:05
06/12/2021 10:20:21	AFA from call centre	42	22	MIDLAND CARPET DISTRIBUTORS FREDERICK ROAD HOO FARM INDUSTRIAL ESTATE KIDDERMINSTER DY11 7RA	Non residential - warehouses and bulk storage - warehouse	Significant factory fire, Main jets, ground and aerial monitors, BA			Up to 5	169:34	13:02	10:28
20/12/2021 20:50:12	AFA from call centre	0	2	ASDA STORES ST MARTINS QUARTER SILVER STREET WORCESTER WR1 2DA	Non Residential - Car parks - multi storey	Other sources - Hosereel (high pressure) (HRJ) - tank supply only				00:37	21:31	20:54

Table 12: AFA incidents in 2021/22 where BA was worn, data from IRS

5.7.7 Casualty data from AFAs attended 2009/10 to 2021/22

For incidents where the origin of call was from the AFA originator or AFA call centre from 2009/10 to 2021/22 data recorded in IRS revealed:

- 1 incident where there was a fatality
- 106 incidents where there were 134 casualties with injuries (incl. rescue with injury)
- 78 incidents where there were 92 persons rescued without injury

Of the 106 incidents where casualties were reported, 91 incidents were attributed to fire and recorded 116 casualties, 15 incidents were attributed to special service calls, recording 18 casualties.

Fatalities

As can be seen below, whilst this special service call originated from an AFA call centre, there were no signs of fire, with steam believed to have activated the detector.

Incident Number	Property Type (3.2)	Age (9.7)	Gender (9.8)	Ethnicity (9.9)	Details
53246	Property - Building - Dwelling - Self-contained Sheltered Housing	71	Male	White - British	ALARM OPERATING DUE TO STEAM FROM SHOWER, COLLAPSED ELDERLY MAN IN BATH UNCONCIOUS AND NOT BREATHING

Injuries (incl. rescue with injury)

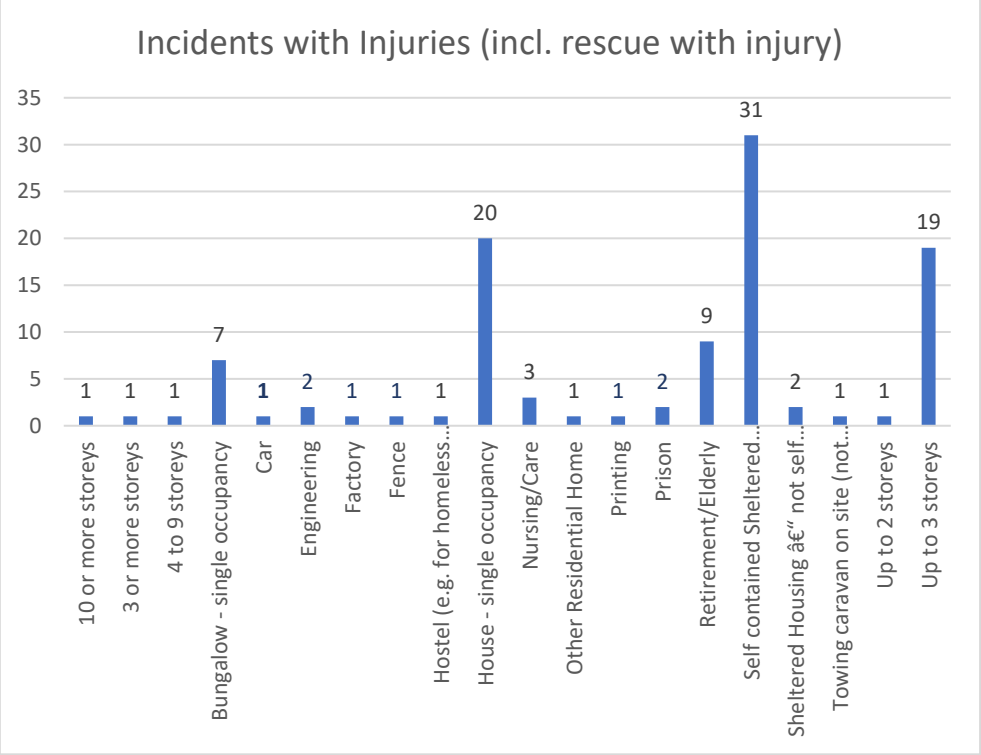


Figure 33: Number of Incidents at AFAs where injuries were recorded (Incl. rescue with injury) broken down into Property type, 2009/10 to 2021/22 IRS data

As can be seen above, if the data is broken down into premises type. Over a 13-year period 98 out of 106 incidents (92.4%) occurred dwellings and other residential premises, accounting for 122 casualties. A further 8 incidents out of 106 (7.5%) occurred in non-residential or other premises types, where 12 casualties were reported.

In terms of casualty demographics:

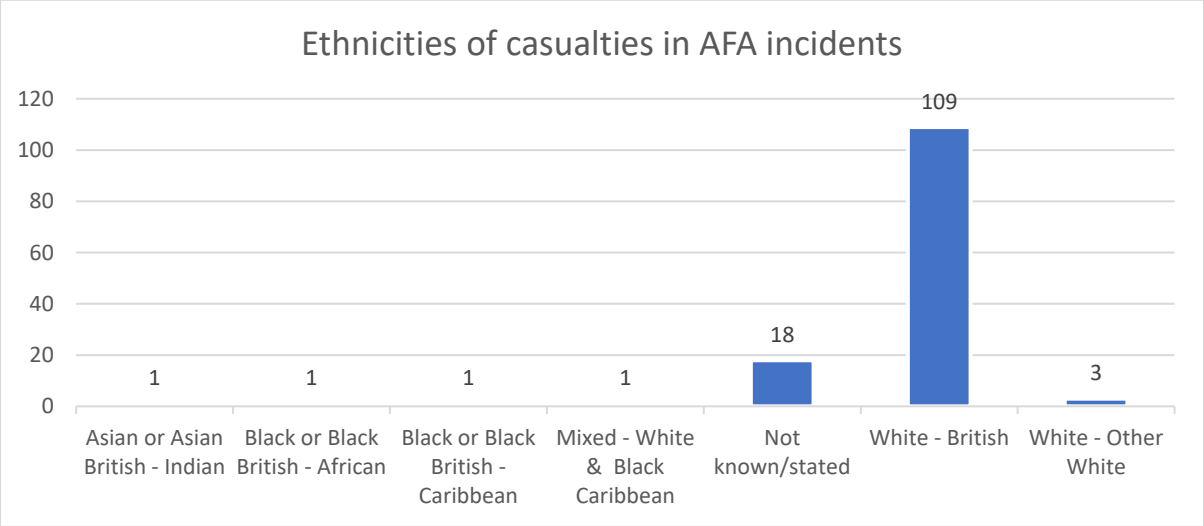


Figure 34: Ethnicities of casualties at AFAs where injuries were recorded (Incl. rescue with injury), 2009/10 to 2021/22 IRS data

Age Range	Numbers of casualties
0-18	4
19-34	15
35-64	39
65+	76
Total	**134**

Table 13: Age ranges of casualties at AFAs where injuries were recorded (Incl. rescue with injury), 2009/10 to 2021/22 IRS data

Gender	Number of casualties
Female	65
Male	69
Total	**134**

Table 14: Genders of casualties at AFAs where injuries were recorded (Incl. rescue with injury), 2009/10 to 2021/22 IRS data

Severity of injuries

First aid given at scene	41
Precautionary check recommended	31
Victim went to hospital, injuries appear to be Serious	7
Victim went to hospital, injuries appear to be Slight	55
Grand Total	**134**

Table 15: Severity of injuries to casualties at AFAs where injuries were recorded (Incl. rescue with injury), 2009/10 to 2021/22 IRS data

Rescued (rescue without injury)

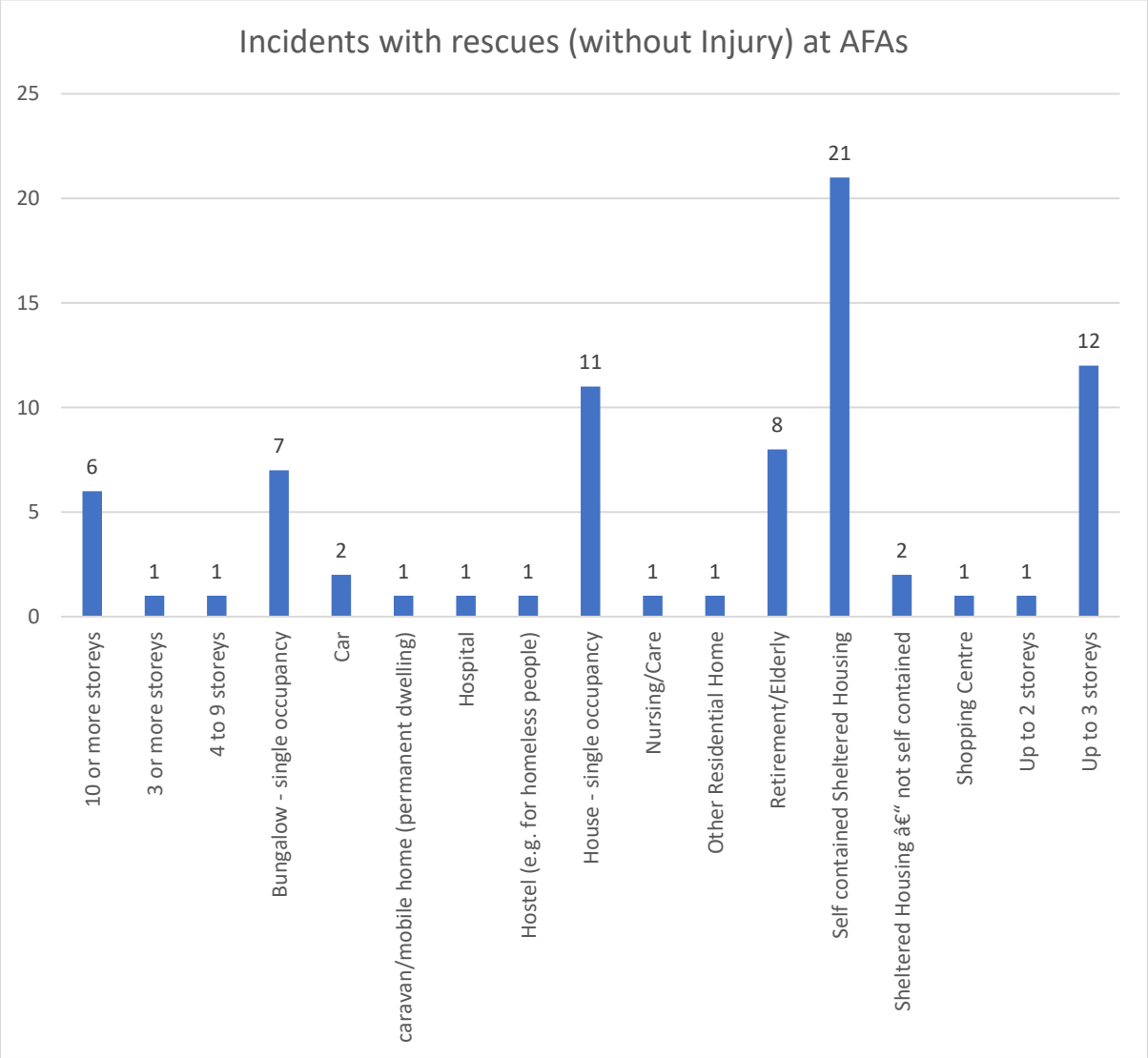


Figure 35: Number of Incidents at AFAs where persons were rescued (without injury) broken down into Property type, 2009/10 to 2021/22 IRS data

Data from IRS of the category of property reveals that of the 78 incidents where rescues occurred, 95% of these occurred in dwellings or other residential premises.

Demographics for this 'Rescued' category are as follows:

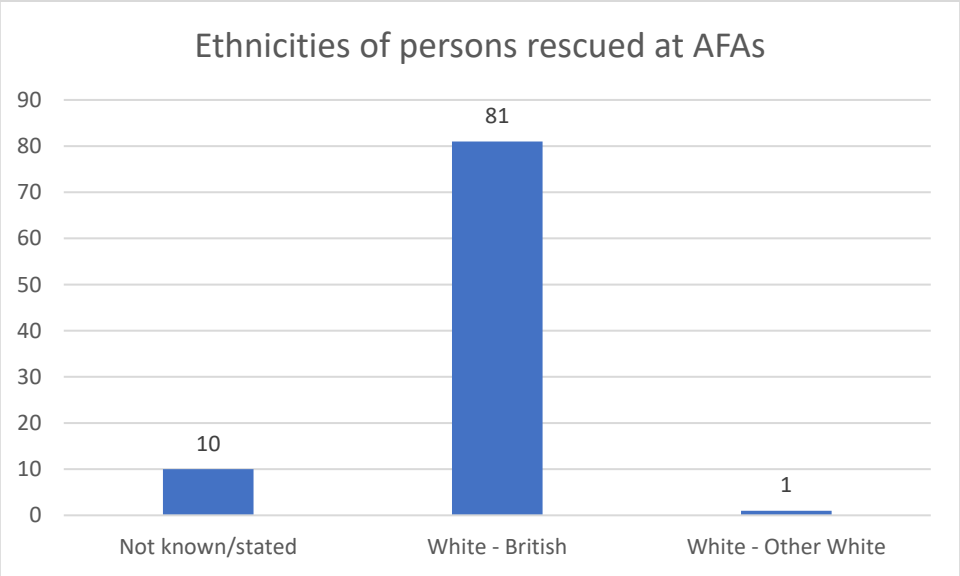


Figure 36: Ethnicities of persons at AFAs where rescues were recorded (without injury), 2009/10 to 2021/22 IRS data

Age Range	Numbers of Rescues
0-18	3
19-34	6
35-64	14
65+	69
Total	**92**

Table 16: Age ranges of casualties at AFAs where rescues were recorded (without injury), 2009/10 to 2021/22 taken from IRS data

Gender	Number of persons rescued
Female	62
Male	30
Total	**92**

Table 17: Genders of persons rescued (without injury) at AFA incidents, from 2009/10 to 2021/22 taken from IRS data

5.9 Impacts of false alarms in station areas

5.9.1 Distribution of false alarms

Station Risk Profiles provide local detail about fire and other risks in each of the Service's 25 fire station areas. They include information about each fire station and the types of incidents they attend, and highlight the main areas at risk of accidental dwelling fire and other life risk incidents.

Within each Station Risk Profile a trend analysis over the last 12 years is provided of false alarms incidents within that station area, providing a breakdown of false alarms caused by apparatus, good intent false alarms or malicious false alarms.

Station Risk Profiles	
Broadway	Leominster
Bromsgrove	Malvern
Bromyard	Pebworth
Droitwich Spa	Pershore
Eardisley	Peterchurch
Evesham	Redditch
Ewyas Harold	Ross-on-Wye
Fownhope	Tenbury Wells
Hereford	Upton-upon-Severn
Kingsland	Whitchurch
Kington	Worcester
Ledbury	Wyre Forest
Leintwardine	

Table 18: Station Risk Profiles

Targeting AFAs as a means of reducing the burden from UwFS can realistically be achieved with respect to reducing the numbers of incidents which are generated as false alarms due to apparatus. Calls received which results in a good intent or malicious false alarms being recorded may be addressed through continuous education and prevention activity with robust call challenging and enquiry at point of call in Fire Control.

The following table summarises the number of false alarm incidents from 2009-22 within each station ground where the incident type at Control was selected as 'Alarms-AFA', and discounts those incidents over the border.

Station	13-year total	Annual average	Annual duration hh:mm:ss
Worcester	6745	519	19:29:30
Stourport - CLOSED	917	71	14:32:29
Bewdley - CLOSED	204	16	08:34:27
Kidderminster - CLOSED	2565	197	11:48:24
Bromsgrove	2582	199	12:31:16
Droitwich Spa	1401	108	10:53:02
Redditch	4482	345	20:22:41
Evesham	1907	147	08:09:04

Pebworth	37	3	01:33:18
Broadway	298	23	12:31:30
Pershore	729	56	06:38:23
Upton upon Severn	211	16	08:52:06
Malvern	1987	153	11:30:48
Ledbury	610	47	01:38:18
Fownhope	67	5	02:48:58
Ross on Wye	618	48	01:58:28
Whitchurch	80	6	03:21:45
Hereford	4164	320	07:00:45
Ewyas Harold	107	8	04:29:50
Eardisley	89	7	03:44:26
Kington	87	7	03:39:24
Leintwardine	31	2	01:18:11
Kingsland	95	7	03:59:34
Leominster	692	53	05:05:05
Tenbury Wells	104	8	04:22:16
Peterchurch	67	5	02:48:58
Bromyard	274	21	11:30:58
Wyre Forest	892	69	13:29:26
Total Incidents	**32042**	**2465**	**1346:43:21**

Table 19: Number of AFAs resulting in false alarms per station area (2009-22), data from IRS

From this data, it can be observed that 83.4% (26,725) of incidents occurred in wholetime station areas compared to 16.6% in On-call station areas. This only slightly reduces to 82.2% wholetime and 17.8% On-Call if only those calls from AFA call centres and AFA originator area reviewed. Annual AFA duration is evaluated using the total crewing system average.

5.9.2 Impact of AFA reduction per Station area

Should the Service adopt a blanket non-attendance approach towards all AFAs received from ARCs or from the originator following an alarm activation, the effective reduction in terms of incidents per Station area would be in the region as follows:

Station	Average Total annual incidents (2009-2022)	Average number of false alarm due to apparatus	% potential reduction
Broadway	38.7	18.9	48.8%
Bromsgrove	599.9	201.8	33.6%
Bromyard	99.6	18.6	18.6%
Droitwich Spa	334	111.3	33.3%
Eardisley	41.8	6.3	15.0%
Evesham	424.4	152.3	35.8%
Ewyas Harold	35.2	7.5	21.3%
Fownhope	26.5	6.7	25.2%
Hereford	845.6	321.9	38.0%
Kingsland	53.4	8.6	16.1%

Kington	36.2	5.0	13.8%
Ledbury	130.5	47.1	36.0%
Leintwardine	23.9	2.2	9.2%
Leominster	153	46.4	30.3%
Malvern	413.9	159.3	38.4%
Pebworth	30.3	5.5	18.1%
Pershore	137.6	50.7	36.8%
Peterchurch	26.2	3.9	14.8%
Redditch	938.3	355.7	37.9%
Ross-on-Wye	183.7	50.6	27.5%
Tenbury Wells	55.7	9.0	16.1%
Upton-upon-Severn	95.7	15.8	16.5%
Whitchurch	46.1	4.7	10.1%
Worcester	1296	519.3	40.0%
Wyre Forest*	1089.4	357.0	32.7%

*Wyre Forest figures amalgamate Bewdley/Stourport/Kidderminster

Table 20: Potential reduction of incidents as a % based on numbers of UwFS within each station area, data taken from IRS

This indicates that on average for an on-call Station, the effective potential reduction would be in the region of 22% of the incidents annually. This compares to a potential reduction of 27.1% of all incidents on average per year for a Wholetime station.

5.9.3 Financial Impact of UwFS for On-call stations

Over the period from 2009/10 to 2021/22, On Call stations attended approximately 846 false alarm incidents per year within Herefordshire and Worcestershire. 70.9% of these were false alarm incidents due to apparatus.

Based on current pay scales, Table 21 provides the minimum approximate costings for attendance at false alarm incidents, where the incident had a duration of 1 hour and where 1 appliance attends. It is therefore a conservative estimate for an on-call crew, and does not take into consideration fuel or other miscellaneous costs.

Item	Cost	Explanation of calculation
Disturbance allowance:	£16.96	£4.24 x 4 crew
Hourly cost	£60.48	£14.72 x 3 FF(c) + £16.32 x 1 CC
Total cost	£77.44	
Annual cost of all On-call false alarm incidents	£65,514	846 *£ 77.44
Annual cost of all On-call false alarm apparatus incidents	£46,449	£65,514*70.9%

Table 21: Approximate annual costings of On-call attendance at false alarm incidents

5.10 Time impact and Duration of AFAs

Based on analysis of incidents over the last 13 years (2009-22), the average number of annual incidents the Service attends where the incident type is selected at Control as 'Alarms- AFA' is 2,547 incidents, 2,465 resulting in false alarms. Data from the last 2 years (2020-2022) has demonstrated that the average duration of an AFA including travel time is 32 minutes 47 seconds. Annually, over a 13-year period this equates to approximately 1347 hours (around 56 days) being spent by crews attending AFAs which turn out to be a false alarm, or as seen below around 2,869 hours in the past two years (2020-22).

False Alarms: 01/04/2020 - 31/03/2022					
All Crewing systems	Average of Travel Time to incident	Average of Time at incident	Average of Travel time from incident to home	Average of Total Time	Total time over 2 years (hh:mm:ss)
All False Alarms	00:06:16	00:15:34	00:15:52	00:34:12	4198:45:09
Origin of Call: AFA from Originator	00:04:57	00:15:45	00:09:01	00:29:19	167:37:24
Origin of Call: AFA from Call Centre	00:06:08	00:15:07	00:10:54	00:31:53	1821:29:00
Incident Type at Control: Alarms - AFA	00:05:56	00:15:39	00:11:29	**00:32:47**	**2869:13:16**
Wholetime	Average of Travel Time to incident	Average of Time at incident	Average of Travel time from incident to home	Average of Total Time	Total time over 2 years (hh:mm:ss)
All False Alarms	00:06:24	00:14:48	00:11:20	00:32:17	1918:09:16
Origin of Call: AFA from Originator	00:04:56	00:14:37	00:08:55	00:28:11	89:44:05
Origin of Call: AFA from Call Centre	00:06:35	00:14:48	00:10:50	00:31:56	885:57:28

Incident Type at Control: Alarms - AFA	00:06:14	00:14:54	00:10:49	00:31:41	1372:45:11
Daycrewed (7am -7pm only)	Average of Travel Time to incident	Average of Time at incident	Average of Travel time from incident to home	Average of Total Time	Total time over 2 years (hh:mm:ss)
All False Alarms	00:06:29	00:14:55	00:12:21	00:33:21	706:29:38
Origin of Call: AFA from Originator	00:04:50	00:14:27	00:09:52	00:28:40	23:53:34
Origin of Call: AFA from Call Centre	00:06:18	00:13:48	00:11:09	00:30:59	335:09:37
Incident Type at Control: Alarms - AFA	00:06:07	00:14:37	00:10:42	00:31:04	490:26:09
On-call *	Average of Travel Time to incident	Average of Time at incident	Average of Travel time from incident to home	Average of Total Time	Total time over 2 years (hh:mm:ss)
All False Alarms	00:05:57	00:17:00	00:14:38	00:37:19	1574:06:15
Origin of Call: AFA from Originator	00:05:03	00:18:32	00:08:45	00:31:46	53:59:45
Origin of Call: AFA from Call Centre	00:05:23	00:16:20	00:10:51	00:32:20	600:21:55
Incident Type at Control: Alarms - AFA	00:05:22	00:17:21	00:12:57	00:35:24	1006:01:56
On-call * includes 7pm - 7am for those stations which are day crewed					

Table 22: Duration of AFA incidents resulting in false alarms, per crewing system from 2020-22, data from IRS

5.11 False Alarms in Healthcare premises

Data from false alarms for the following hospitals (private medical services and NHS premises) within HWFRSs area have been analysed. From 2009/10 to 2021/22 the Service attended 3,149 incidents at hospitals, of which 90.6% were false alarms. As a proportion of all false alarms due to apparatus, regarding premises type Hospitals account for 8.2% of false alarms.

Station Ground	Number of false alarms at hospitals between 2009/10 and 2021/22
Bewdley - CLOSED	5
Broadway	1
Bromsgrove	126
Bromyard	18
Droitwich Spa	13
Eardisley	2
Evesham	88
Fownhope	2
Hereford	692
Kidderminster - CLOSED	176
Kingsland	1
Kington	1
Ledbury	8
Leominster	15
Malvern	24
Pershore	38
Redditch	598
Ross on Wye	13
Stourport - CLOSED	2
Worcester	1005
Wyre Forest	28
Grand Total	**2856**

Table 23: Station grounds of Healthcare premises where false alarms were recorded from 2009/10 to 2021/22, data from IRS

False alarms received from the Worcestershire Royal, Hereford County Hospital and the Alexandra Hospital account for 80.5% of the total false alarms for Healthcare premises. This is most likely due to the size of the hospital, where generally the larger the hospital, the greater number of detector heads are likely to be present from which a false alarm may arise. As described in section 3.2, the NHS Technical Memorandum 2013 provides guidance for acceptable levels of performance for numbers of false alarms, based on the number of detector heads/manual call points.

Data for these hospitals provides the current gradings:

	Approx. no. of detectors / call points	No. of false alarms	BS5839 acceptable failure rate per year	HTM 2013 calculated 'detector years'	Calculated grading
	Worcestershire Royal Hospital				
2016/17	4017	102	161	39	C
2017/18	4017	132	161	30	C
2018/19	4017	132	161	30	C
2019/20	4103	114	164	35	C
2020/21	4103	52	164	78	B
2021/22	4103	77	164	53	B
	Hereford County Hospital				
2016/17	2521	47	101	54	B
2017/18	2521	35	101	72	B
2018/19	2521	57	101	48	C
2019/20	2525	40	101	63	B
2020/21	2525	45	101	56	B
2021/22	2525	77	101	32	C
	The Alexandra Hospital, Redditch				
2016/17	3500	35	140	100	A
2017/18	3500	36	140	97	B
2018/19	3500	57	140	61	B
2019/20	2250	72	90	31	C
2020/21	2250	56	90	40	C
2021/22	2250	47	90	47	C

	Kidderminster General Hospital				
2016/17	1700	23	68	74	B
2017/18	1700	25	68	68	B
2018/19	1700	12	68	142	A
2019/20	1612	8	65	201	A
2020/21	1612	9	65	179	A
2021/22	1612	18	65	90	B

Table 24: Gradings of Healthcare premises* which attract the highest numbers of false alarms.

Note: the approximate number of detectors and call points for each hospital were provided by HWFRS fire safety officers and NHS Trust fire safety advisors.

*It should be noted that performance gradings are evaluated per 'unit' and that the number of detector heads for the Alexandra hospital has assumed to have not changed in the past 3 years. A common understanding of what a unit consists of across a site would be required to provide more accurate gradings.

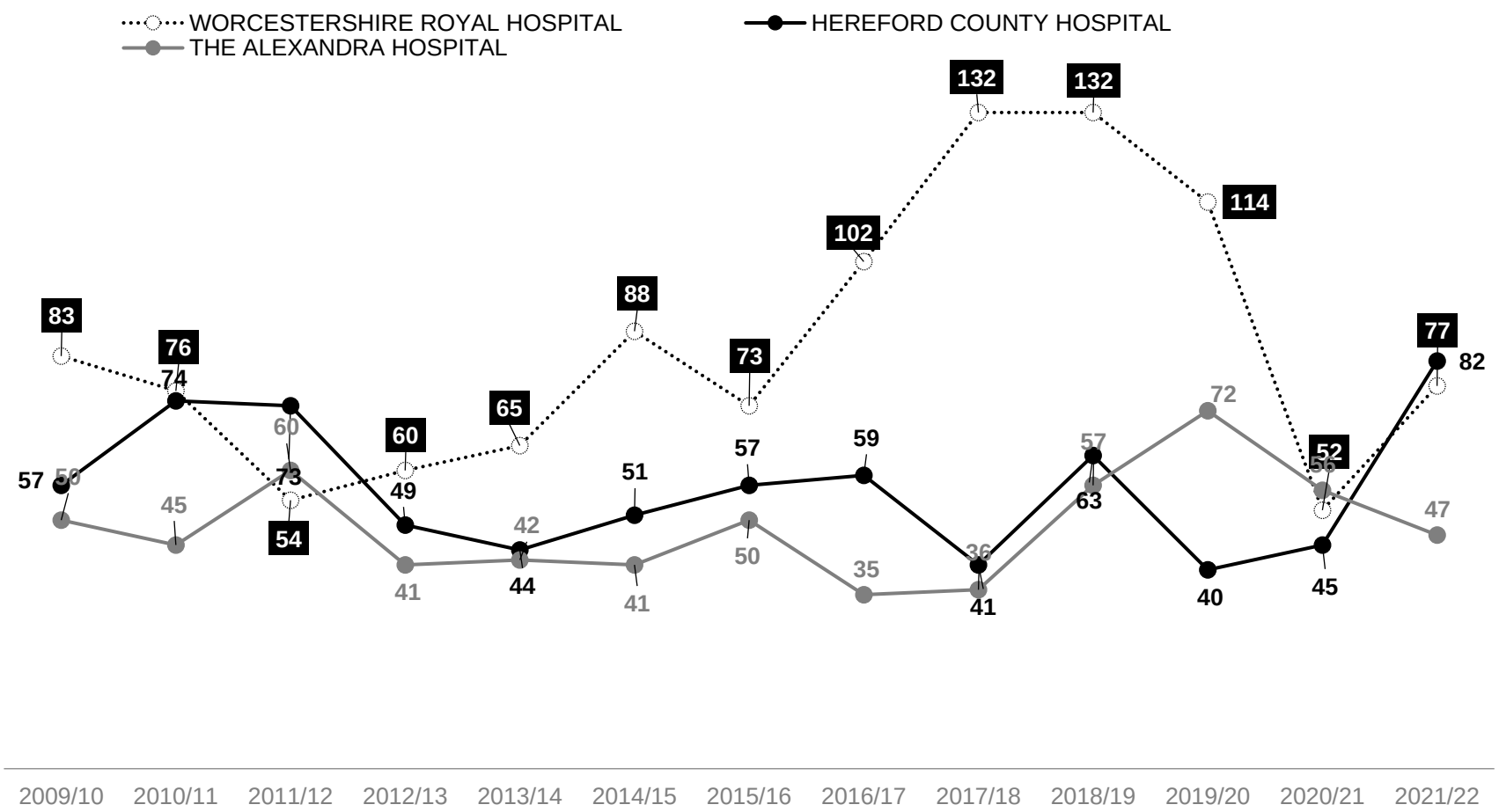


Figure 37: Top 3 hospitals which receive the highest volume of False Alarms from 2009/10 to 2021/22, Data from IRS

5.12 False Alarms in Education premises

Data from false alarms in places of education revealed the following data:

Count	School type					
False alarm reason	College/University	Secondary school	Infant/primary school	Other	Pre School/nursery	Grand Total
2009/10	77	31	26	6	10	150
2010/11	49	40	27	13	6	135
2011/12	79	25	34	13	9	160
2012/13	42	35	35	4	2	118
2013/14	42	18	29	3	7	99
2014/15	32	27	36	5	5	105
2015/16	42	37	29	9	5	122
2016/17	23	27	45	6	5	106
2017/18	32	38	29	6	6	111
2018/19	15	35	39	9	1	99
2019/20	43	41	38	2	4	128
2020/21	25	39	41	1	9	115
2021/22	30	49	33	5	7	124
Grand Total	**531**	**442**	**441**	**82**	**76**	**1572**

Table 25: Annual false alarm data within place of Education from 2009/10 to 2021/22, data from IRS

The highest proportion of false alarms occur in colleges and universities, whilst secondary schools and infant/primary schools are in the same order of frequency. In a similar way to healthcare premises this may be due to the size of the premises (and therefore number of available detectors), number and movement of occupants which have the potential for giving rise to false alarms. Of all AFA incidents selected at control, these premises types of places of further education account for 4.9% of false alarm incidents. Out of all incidents at these premises types, false alarms account for 86.8% of incidents.

The table below identifies the top 10 causes of false alarm activations at places of education:

False alarm reason	College/University	Secondary school	Infant/primary school	Other	Pre School/nursery	Grand Total
Accidentally/carelessly set off	99	81	99	4	7	290
Unknown	68	83	66	16	16	249
Faulty	77	53	56	14	10	210
Dust	60	41	25	10	4	140
Other	37	49	36	7	4	133
Testing	42	29	38	13	5	127
Cooking/burnt toast	34	25	41	5	11	116
Steam	36	21	15	4	7	83
Chemicals/aerosols	29	9	6	4	1	49
Minute animals (e.g. Thrips and Midges)	5	8	11	2	5	31

Table 26: Top 10 reasons of false alarms at Places of Education from 2009/10 to 2021/22, data from IRS

5.13 Fires in Places of Education

Analysing fires within places of education, using the following parameters within IRS:

Reporting Period:	01/04/2009 to 31/03/2022
1.5 OTB Incident:	No
3.1 incident category:	Fire
3.2 Type of Property:	Building/Non-Residential/Education/Pre School/nursery, Building/Non-Residential/Education/Infant/primary school, Building/Non-Residential/Education/Secondary school, Building/Non-Residential/Education/College/University, Building/Non-Residential/Education/Other

This revealed 131 incidents over a 13-year period. Out of all incidents at these premises types, this accounts for 7.2% of incidents.

Out of these 131 incidents:

- BA was worn in 36 incidents
- 55% had damage of up to 5m^2, 2% had total damage of between 1001-2000m^2
- 23 had an origin of call from an AFA call centre or AFA originator

Number of Appliances attending	Number of incidents
0	1
1	36
2	74
3	15
4	2
8	2
9	1
Total	131

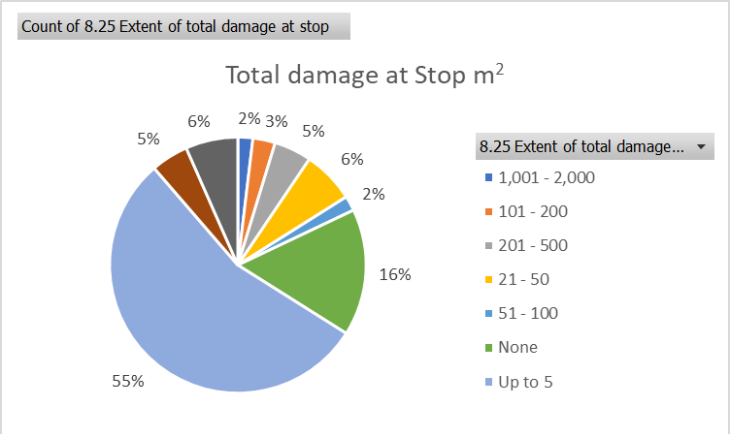


Figure 38: Total damage from fires at Places of Education 2009/10 to 2021/22, data from IRS

5.13 AFAs from Alarm Receiving Centres remote from the premises

As has been shown in Section 5.2, 43.2% of false alarm calls originate from call centres remote to the premises, this accounts for 1,413 incidents annually. Fire Control will interrogate the caller to determine whether they have contacted the premises to understand whether anyone is on the premises, or whether the cause for the alarm can be determined.

Using the following parameters within IRS:

Reporting Period:	01/04/2009 to 31/03/2022
1.5 OTB Incident:	No
2.2 Origin of Call:	AFA from call centre

Analysing those AFA calls received from Alarm Receiving Centres remote from the premises, over a 13-year period from 2009/10 to 2021/22 it can be seen that HWFRS responded to 19,782 incidents. Of these incidents, 92.8% were found to be false alarms. This accounts for all types of false alarm, good intent, due to apparatus and malicious.

Of all incidents at places of education (1,809), AFAs from call centres accounted for 62.3% (1,128). 98.0% of AFAs from call centres from these premises turned out to be false alarms, 1.8% turned out to be fires and 0.2% special service calls.

6. Call filtering guidance

As defined within the Chief Fire Officers Association's (CFOA) guidance, call filters are the steps taken to limit the possibility of a false alarm being transmitted to a FRS as an Unwanted Fire Signal. Call filtering, sometimes called call challenging, is commonly used by FRSs to reduce the large number of UwFS resulting in an emergency response being required. In many premises there exists a culture of telephoning the FRS if the fire alarm system is activated even though the cause of the activation is known to be something other than a fire. The call filtering process enables information to be gathered to aide the decision-making process of Fire Control staff.

As was seen by the analysis of HMICFRS Tranche 1 and 2 inspections, those Services who had a robust and consistent approach to call challenging were acknowledged has having taken positive action to reduce the numbers of UwFSs. Following a prescribed procedure with respect to call challenging, visually in the form of a flow chart, may contribute to this process.

The CFOA Guidance for the reduction of false alarms & unwanted fire signals, p12, provides a basic flowchart in understanding the call filtering procedure[10]:

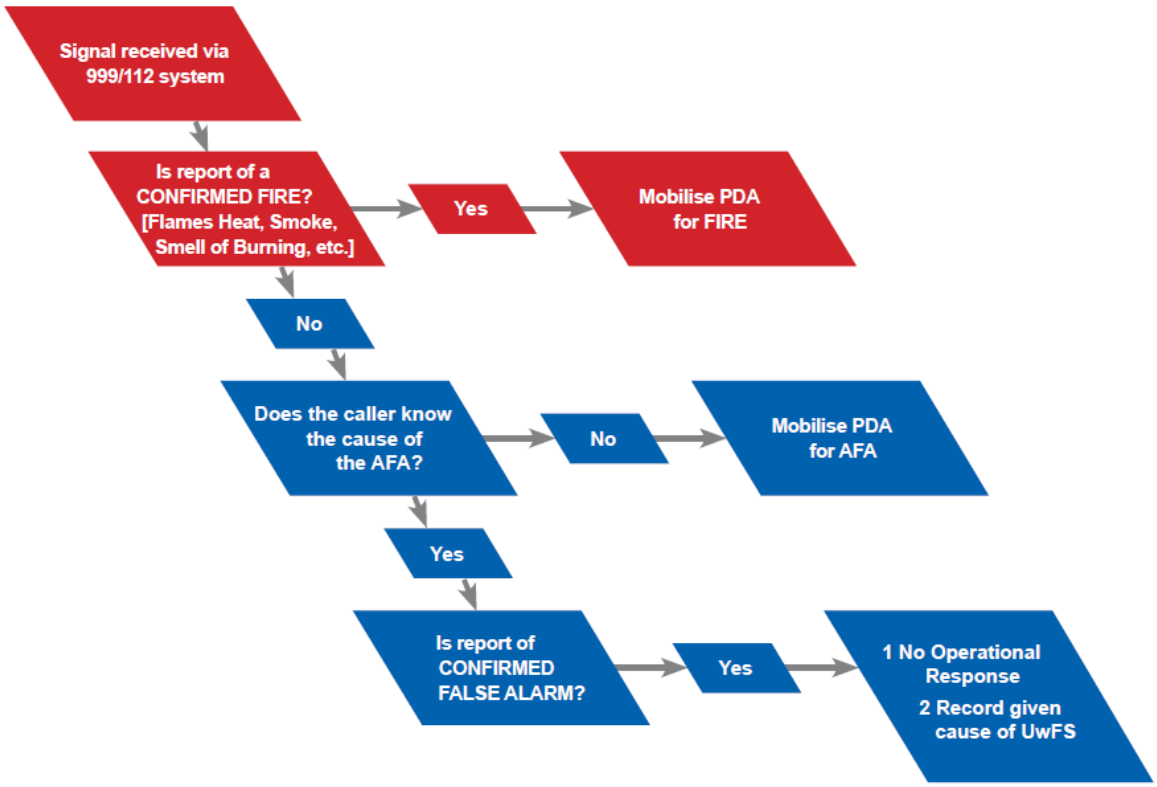


Figure 39: CFOA Call filtering process, CFOA Guidance for the reduction of false alarms & unwanted fire signals, p12, 2014[10]

Within this national document it highlights that FRS must be careful not to recommend the investigation of an alarm during an emergency call, and that any investigation process should already have been carried out as part of their existing procedures before an emergency call was made. Further to this, an example approach (see Figure 38 below) to call handling is provided for calls received from Fire Alarm Monitoring Organisations (FAMO) / Alarm Receiving Centres (ARC):

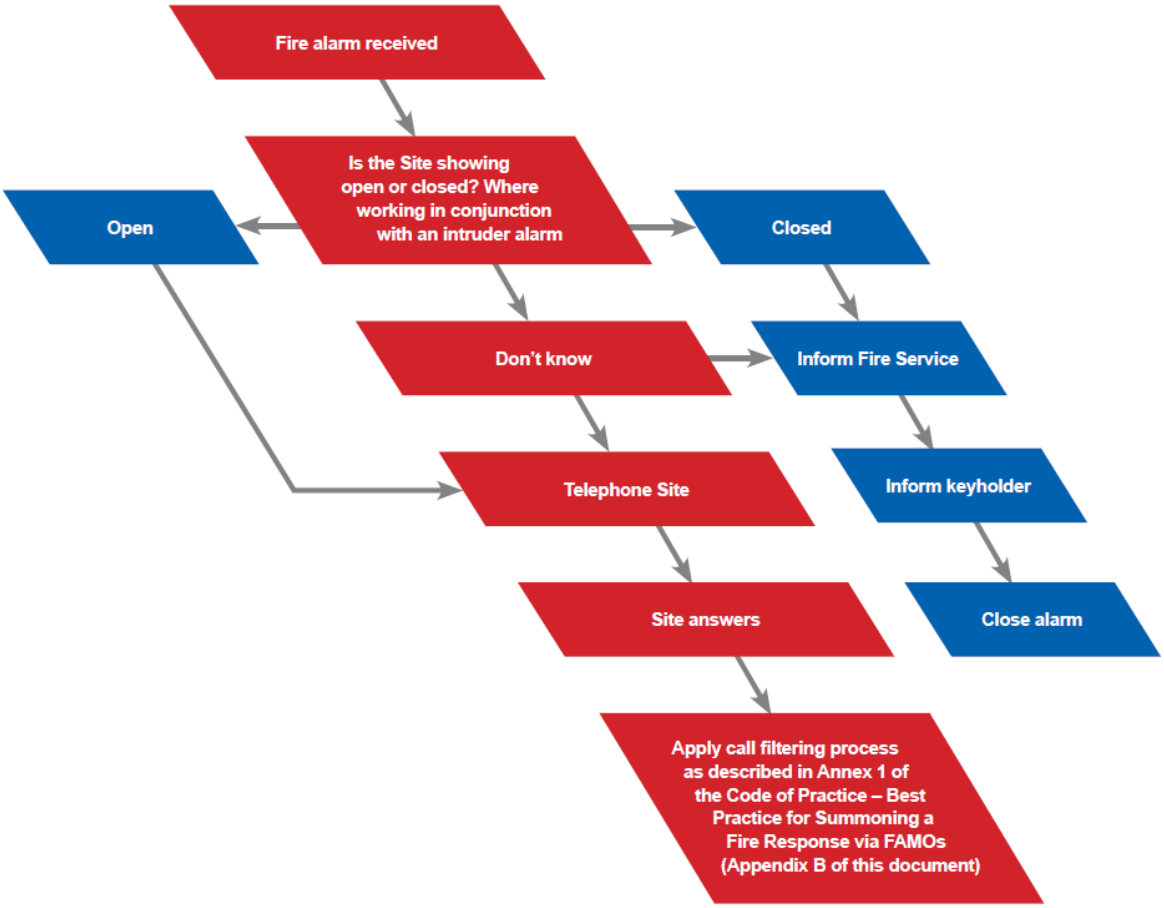


Figure 40: CFOA Call filtering process, CFOA Guidance for the reduction of false alarms & unwanted fire signals, p28, 2014. [10]

The call filtering process alluded to in Figure 43, and contained in Annex 1 of CFOA's Code of Practice – Best Practice for summoning a Fire Response via Fire Alarm Monitoring Organisations[11], provides a FAMO call filtering flow chart:

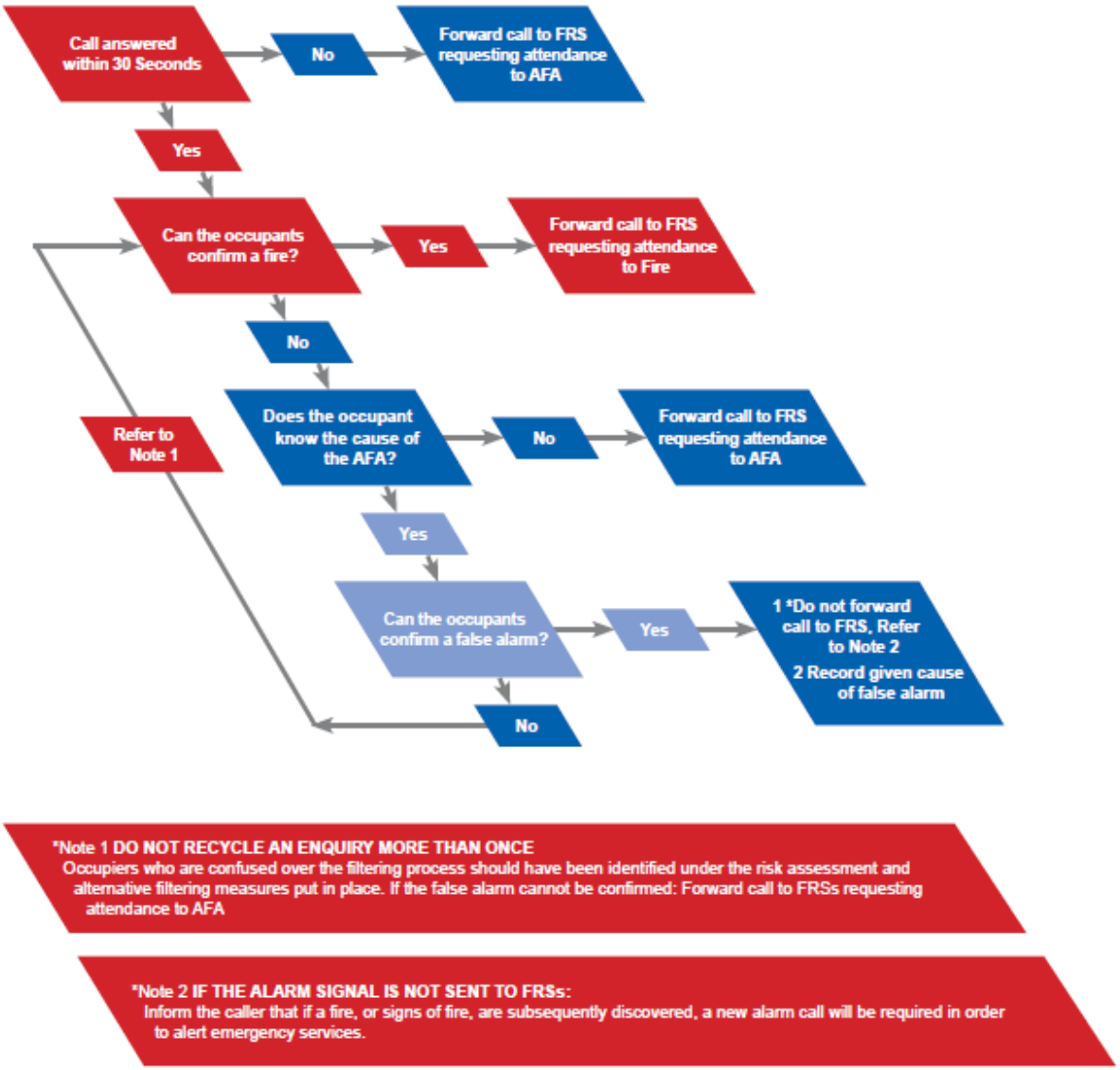


Figure 41: CFOA Code of Practice – Best Practice for summoning a Fire Response via Fire Alarm Monitoring Organisations, Annex 1, p12.[11]

7. Proposed responses to reduce attendance at UwFS

Following a review of the analysis of UwFS over the past 13 years (from April 2009 to March 2022), a series of proposed response and activity changes are suggested to reduce the numbers of UwFS which the HWFRS attends. These range from a combination of activities around business engagement, non or reduced attendance and the use of cost recovery processes. The objective is to reduce the occasions where the Service attends automated alarm signals unless there is confirmation that there is a genuine fire.

It is acknowledged that of all false alarm categories (false alarm good intent, false alarm due to apparatus and malicious false alarms), the Service should consider adapting its response towards those UwFSs which result in being false alarms due to apparatus. Prevention activity in relation to arson reduction/fire setting and proactive approaches within media campaigns which highlight the impact to the community from malicious unwanted fire signals, should continue to be an area of focus.

In order to highlight the impact of UwFS through current attendance at AFAs particularly at all commercial premises, HWFRS should provide information to the premises that the Service attended an AFA at the premises, the impact that this has and the responsible persons duties under the Fire Safety Order. Opportunity exists to forewarn business owners, whether during office hours or not, of the need to always back up a genuine fire with a 999 call, not relying on their AFA system to notify the Service due to potential future changes in AFA response by the Service. This is complemented by the Protection departments reviews of those premises which have received 3 or more false alarm AFAs per month.

On average over the 13-year period, HWFRS responded to 3363 false alarm incidents annually. 45.6% of the total incidents HWFRS responded to were fire false alarms (Figure 7), higher than the national average. Over this period false alarms due to apparatus within HWFRS were on average 8.3% higher when compared with English FRSs (Figure 8). False alarms due to apparatus accounted for just over two-thirds of all false alarms in 2021-22, AFAs accounting for 27% of all incidents.

Reviewing the response arrangements towards AFAs should be done in a risk-based approach to mitigate injury and loss. One proposal would be to consider the risk group categorisation of premises under the FSEC codes as per the CFOA Fire Safety Guidance Notes and Audit version 4.3, (November 2015)[19]. This provides a reasonable risk evaluation which is nationally accepted and which is compatible with current and planned software systems used by HWFRS. Additionally, the national FRS reporting tool (IRS), categorises property types into dwellings, other residential and non-residential premises, however these are only fully populated post incident.

The FRA Policy and Resources Committee meeting held on 4th September 2013 presented a report which proposed the formal adoption of the existing Interim Automatic False Alarm Reduction (AFA) Policy into a new policy. Any approved response model changes towards premises types would necessitate a change in policy.

All calls received into Fire Control undergo levels of call filtering in order to obtain accurate information from the caller to allow the Control operator to establish the nature of the emergency, who may be affected and its location in order to dispatch the appropriate nearest Fire Service asset. Those calls which are received where the occupier or person at the premises confirms and reasonably believes there to be a fire will generate a full emergency response.

Potential exists for calls received where the person/call centre cannot confirm the presence of a fire, but whose automatic fire alarms may be sounding or activating to undergo an enhanced level of call filtering to establish the appropriate response. Based on an evaluation of risk and intelligence, this could include not dispatching a response at all, or not dispatching a response during specific times of the day/week.

7.1 Premises types where a response to AFAs should be maintained:

- Domestic dwellings and other residential premises
- Other premises where there is a sleeping risk and licenced premises
- All premises where the presence of smoke/fire is observed at the premises – this would initiate the appropriate PDA

These include premises within FSEC codes A, B, C, D, E, F, G, H, L[19]:

- Hospitals
- Care Homes
- HMOs
- Flats
- Hostels
- Hotels
- Converted Flats
- Other Sleeping
- Licensed premises

Rationale:
These premises are those where occupants may be sleeping and may be either familiar or unfamiliar with their surroundings as such may be slow to respond. These premises are classified as higher risk premises in relation to life safety. Of all AFA incidents (between 2009-22), of the 106 incidents where injuries were reported, 92% of these occurred within residential/domestic premises. Maintaining a 24/7 approach to AFAs at these premises mitigates the majority of risk to life, since 72% (33 incidents annually) of AFAs which result in a genuine fire be between the hours of 08:00hrs and 20:00hrs. AFAs which resulted in injuries in premises with a sleeping risk suggest maintaining a 24/7 response is proportionate at this current time.

Additionally, a recent regulation 28 coroner's report to prevent future deaths published in 2022 highlighted a residential premises not connected to an ARC which contributed to a delay in attendance at a fatal fire.

It is noted that a recommendation within the British Standard for Fire Detection and Alarm Systems - BS 5389-1 (2017), 15.2 (f), p33 comments that:

'In residential care premises, facilities should be provided for automatic transmission of alarm signals to an ARC'

It also recommends that:

'alarm receiving centres to which fire alarm signals are relayed should conform to BS 8591 and have in place an agreement with the appropriate Fire and Rescue Service to pass on fire signals from the fire alarm systems as the monitored property'

BS 5389 acknowledges that:

'in premises, other than residential care homes, that generate a high number of unwanted fire signals, automatic transmission of a signal to an alarm receiving centre may be delayed pending investigation of alarm signals from these devices'

Licensed premises

It is foreseeable that some licenced premises may have a sleeping risk such as Inns, whereas others may not, such as restaurants or community centres. This would need determining at the point of call. Additionally, in premises where alcoholic beverages are sold or consumed it is acknowledged that persons may be slower to respond in the event of an emergency. It would be reasonable to consider implementing a policy of non-attendance at these premises during daytime hours, with the use of a robust call filtering methodology.

7.2 Premises where enhanced call filtering could be applied

Following the risk groupings as per the FSEC codes[19], Group C indicates those premises where members of the public may be present and which could be unfamiliar with the layout of the premises. Group D of the FSEC risk groupings identify those premises which are workplaces where the occupants are generally familiar with the layout of the premises, namely FSEC codes R, S and T. These commercial buildings are subject to the Fire Safety Order 2005 and require the responsible to have in place a suitable and sufficient fire risk assessment including fire safety arrangements and actions to take in the event of a fire. They should have a suitable procedure in place when a fire alarm actuates and be able to determine the nature of the alarm.

Group C includes FSEC codes J, K, M N, P

These are namely:

- Places of further Education
- Public Buildings
- Schools
- Shops
- Other Public Buildings

Additionally, Group D includes FSEC codes R, S, T:

- Factories
- Offices
- Other workplaces

During daytime hours it would be reasonable to review the Services response arrangements to each of these premise types based on the reduced risk from these premises not having a sleeping risk. Occupants where present should be alerted by a fire signal and be able to respond to an alarm or confirmed fire. Furthermore, for commercial premises there is a legal duty of the responsible person under the Regulatory Reform (Fire Safety Order) 2005 to ensure they have adequate fire safety arrangements for all relevant persons to evacuate to a place of safety.

Having a non-attendance policy at non-residential premises (commercial premises which do not have a sleeping risk) between the hours of 08:00 and 18:00, Monday to Friday could see a reduction in the region of 46.6% of the total false alarms attended at these kinds of premises, in the order of around 400 incidents per year where the call is from an AFA call centre or originator.

Consideration may be given to Public Bank Holidays, when commercial premises are likely to have a reduced occupancy or be closed. A response could be maintained in those instances following call filtering.

Outside of these hours, for example from 18:00 to 08:00 premises which do not have sleeping risk could still be subject to call filtering. However, if no persons are deemed to be on site/the premises is unoccupied then an attendance could be mobilised as per the risk reduction principles outlined in the Graded Response Policy.

For occasions where calls are received from a member of the public who are independent of the premises concerned, callers would not be call challenged to investigate and an attendance can be dispatched.

Alternatively, increasing the daytime hours to which a non-attendance policy may apply from e.g. from 09:00 - 17:00 increasing to 08:00 - 20:00 would statistically capture more false alarms. Custom timeframes could be adopted per premises type and be subject to periodic reviews.

7.2.1 Places of further Education and Schools

These premises are broken down into the following premises types within IRS:

- Building/Non-Residential/Education/Pre School/nursery,
- Building/Non-Residential/Education/Infant/primary school,
- Building/Non-Residential/Education/Secondary school,
- Building/Non-Residential/Education/College/University,
- Building/Non-Residential/Education/Other

The analysis of incidents at places of further education and schools suggests that on average during 2009-22, the Service attended 139 incidents annually, of which 86.8% are false alarms. Throughout this 13-year period, there were a total of 131 fires reported at these premises types.

AFA incidents accounted for approximately 116 incidents annually, approximately 114 of which were determined to be false alarms. In this 13-year period, there were 19 reported fires in these types of premises which initially had an AFA response mobilised. Of those calls received from ARCs, 98% were false alarm incidents.

69% of false alarm incidents, where an AFA response was mobilised occurred during office hours (08:00 to 18:00), this accounts for around 79 incidents annually. On average 85% of false alarms at places of education occur on weekdays (Monday to Friday), this accounts for approximately 97 incidents.

Due to the high incidence of false alarms from AFAs the Service could consider reducing its response to schools during periods of office hours and apply an enhanced call filtering. However, due to the high community value of these premises and relatively low numbers of incidents attended, further educational initiatives to encourage prompt notification to the Service of known false alarms may be prudent in the first instance.

It is also noted, that should a call filtering policy be considered for these types of premises a determination may be required of whether the school was operating within its term time (term dates may vary within Herefordshire and Worcestershire).

7.2.2 Public buildings

Public buildings for example include libraries, museums, theatres and places of assembly. The 'other public building' category includes for example village halls, churches and social clubs used more periodically.

These kinds of buildings contribute in the region of 219 incidents annually. Call filtering could be applied to ensure that community/heritage premises receive a response where no one is able to confirm on site that there are signs of fire. However, many public buildings are heritage premises, with public buildings holding potentially significant community value. It is noted that many significant risks are held within HWFRS's Intel system. Further reviews of incident data may provide an evidenced based approach towards these premises types

7.3 Other premises considered for exemption from call filtering

Where a policy of call filtering applies to commercial premises without a sleeping risk (FSEC Risk Groups C and D) it is foreseeable that some commercial properties could be considered high risk sites or of national or societal importance. It is therefore appropriate that an exemption process is considered.

HWFRS holds a database of existing operational risk (Intel) information of approximately 2,210 premises (339 of which are premises over the border) to assist operational response at an incident.

Identified Intel premises are evaluated on their level of operational risk which provides an intel inspection review frequency. Premises include a range of local commercial and heritage risks within each station area, operational information being available to Fire Control and responding crews on mobilisation to an incident.

As an approximation the number of Intel records* within Herefordshire and Worcestershire include:

- 1102 records of non-residential premises (without sleeping accommodation)
    - Of which 43 are indicated as high or very high intel risk
- 93 records of places of Further Education and Schools
- 219 records of Public Buildings or places of assembly
- 457 records of premises with a sleeping risk

*a single record may comprise one or more separate premises

Within the HWFRS area, there are 7 premises subject to COMAH (Control of Major Accidents and Hazards) regulations, 2 upper tier, and 5 lower tier.

The average number of false alarms due to apparatus (from 2019/20 to 2021/22) of those Intel non-residential premises which are high or very high risk combined with COMAH premises accounted for 33 false alarm incidents annually.

Proposed premises which are exempted from call filtering include:

- COMAH sites (upper/lower tier) and very high/high Intel risks

- Existing premises with enhanced pre-determined attendances contained within current Fire Control mobilising guidance
- Premises which have 'Live' Prohibition or Enforcement notices. (These indicate premises with fire safety deficiencies where delaying a response could be more significant.)

Other premises identified as Intel risks within the command and control mapping facility in Fire Control should be treated on a case by case basis, based on the information and intelligence gathered at the time of call, or subsequent to the call. e.g. repeat calls

If the responsible person of a premises wishes to be exempted from an enhanced call filtering approach due to addressing failures in their fire risk assessment which impacts their emergency fire procedures, an option to consider would be for the application for such exemption with the following conditions:

- The onus is on the Responsible Person to submit their case to HWFRS
- Exemptions may not be granted where HWFRS believe that the Responsible Person can take reasonable action to mitigate the risk.
- Exemptions may only be a temporary measure, and be reviewed within 12 months
- HWFRS expect the Responsible Person to work towards achieving a permanent satisfactory solution, e.g. upgrading alarm systems to a 'double knock' system, employing staff to manage the risk etc.

7.3.1 NFCC guidance for reducing attendance

CFOA guidelines for the reduction of False Alarm and UwFS, 2020[10] suggests that:

Once performance has become unacceptable in line with local policy, then best practice suggests that the following actions should be considered by FRS.

The FRS should:

- *Establish in advance the appropriate level at which changes in response are determined.*
- *Advise the protected premises that they have exceeded the acceptable performance trigger.*
- *Consider whether to revise the attendance level.*
- *Advise the protected premises in advance of any changes and remind them to alert their Insurance Company to any changes to FRS attendance levels.*
- *Continue to review the performance of AFA systems.*
- *Advise that the Fire Risk Assessment/Emergency Plan for the premises must be reviewed.*
- *Consider the use of regulatory enforcement powers.*

7.4 Cost recovery for attendance at UwFS

The Service does not currently charge the responsible person for persistent false alarms, a decision the Fire Authority approved in September 2013. Cost recovery for special service calls was implemented in HWFRS 2011 following the enabling mechanisms within Localism Act 2011 and therefore was in its infancy when this decision was made.

The Service implemented a cost recovery policy for other special services which is now well embedded in the Service, where the Service can charge providing there is no risk to life, danger to the property from fire, risk of fire or where the Service has decided not to charge. An example of which are lift rescues, where no charge will be made for an initial attendance and the owner notified that future attendances at the same lift may be chargeable. In HWFRS the Operational Policy department monitors this function. The current scale of charges for the attendance of a single appliance is £261.67 per hour (inclusive of crew)[29].

The Service could consider recovering costs for attendance at premises which provide persistent false alarms originating from their fire warning equipment.

HWFRS Fire safety Inspectors currently engage with businesses for premises where 3 false alarms AFAs are received in a month (completing an AFA trend questionnaire). However, this procedure is adopted generically to an activation of an AFA at a premises, rather than for example 3 specific faults of the same detector head or alarm panel.

Charges are made under Section 18 (C) of the Fire and Rescue Services Act 2004 (as amended)[30], which states a fire and rescue authority may charge a person for responding to report of fire etc. when:

a) ***The report of fire is at premises that are not domestic premises***
b) ***The report is false***
c) ***The report is made as a direct or indirect result of warning equipment having malfunctioned or been mis-installed***
d) ***There is a persistent problem with false reports of fire at the premises that are made as a direct or indirect result of warning equipment under common control having malfunctioned or been mis-installed***

Operational personnel record the location of faulty detectors (zone/floor/detector number) within IRS, which should be used to determine a repeated AFA false alarm UwFS. Each individual AFA call which results in a false alarm would need to be assessed on its own merit to determine if it is considered chargeable within prescribed parameters.

NFCC guidance[10] refers to BS-5389-1[23] acceptable numbers of false alarms per annum (1 false alarm per 25 detectors should generate an investigation). However, the number of detectors within the premises may not be easily be accessible or determined. Where a premises is in breach of this British Standard or related HTM guidance, a charge could be considered.

Chargeable incidents could be issued to the Responsible Person. A clearly defined appeals procedure against this charging process would need to be outlined, where a premises may indicate why it does not comply with the chargeable criteria as described in Section 18C.

Adopting a formal approach to cost recovery for UwFSs would add an additional administrative burden where AFAs will need to be identified, tracked, invoiced and responsible person identified, however cost recovery is enshrined in the Fire & Rescue Services Act and serves

to promote the responsible persons legal obligations under the Fire Safety Order and reduce UwFS.

Any decision taken to implement a cost recovery process will require an evaluation of its effectiveness at UwFS reduction, reviewing the process to assure its consistent application. A minor amendment would be required to the existing Cost Recovery policy. In order to implement cost recovery, a determination of 'persistent' false alarms is required to be made or guidance around breaching British Standards.

FRS's such as Humberside, Northumberland and West Yorkshire currently have a cost recovery policy to charge for 4 or more false alarms within a 12-month period, where AFA calls are assessed on their own merits. Approaches taken include charging those persistent actuations for individual buildings within a site based on their Unique Property Reference Number (UPRN). Services engage with more complex premises such as Hospitals to ensure consistency.

It is noted that larger premises may have increased number of detector heads for their coverage within their building and as such may have potentially more false alarms as a result.

Acceptable alarm failures rates for hospitals is provided in NHS Health Technical Memorandum (HTM) 2013 and is based on the number of detector heads and numbers of false alarms generated in the last 12 months. This provides a performance score indicating an improvement goal to reduce UwFS. These types of principles could apply to other premises.

As a guide from 2019/20 to 2021/22, if a policy to charge for the 4th or more false alarm apparatus incidents in a 12-month period for a single premises approximate costs recovered would be in the region of:

2021/20 - £15,438.53 based on 59 incidents (59*261.67), excluding Hospitals, Sheltered housing, Schools, Local Authority Buildings and domestic dwellings.

2020/21 - £9,681.19 based on 37 incidents (37*261.67), excluding Hospitals, Sheltered housing, Schools, Local Authority Buildings and domestic dwellings.

2019/20 - £8,373.44 based on 32 incidents (32*261.67), excluding Hospitals, Sheltered housing, Schools, Local Authority Buildings and domestic dwellings.

I.e. an average of **£11,164.40** per annum.

Additionally, where Sheltered accommodation and care homes are included in cost recovery, these costs are likely to increase. Any implementation of a refined call filtering procedure would reduce the costs recovered. These above costings do not account for alternative buildings within a site.

7.5 Engagement with Alarm Receiving Centres (ARCs)

For the year ending 31 March 2018, 21 out of 42 FRSs had a policy of engaging with ARCs to reduce fire false alarm attendance.[31]

Fire Control currently has within its help pages on the Command and Control system approximately 43 listed Alarm Receiving Centres (ARCs), as detailed within Appendix 3.

Contractual arrangements have been historically processed through the IT/Communications department, whereby access is given to Fire Control's ex-directory/emergency lines for an annual fee of £250 (See Appendix 4). 17 contracts are currently in place, however once an organisation has access to the ex-directory line this access cannot easily be revoked.

Within CFOA's code of Practice for summoning a Fire Response via Fire Alarm Monitoring Organisations, c) iv) p8. CFOA strongly recommends *'that if charging is considered necessary by a FRS, it is limited to administration costs of line set-up, maintenance and testing*.'

HWFRS arrangements with ARCs have not been amended for a considerable time, such that a review should be conducted which examines current agreements in place, their adequacy and approaches taken by regional partners including contractual clauses and related costs.

HWFRS has a procedure in place with these premises so that prior to the testing of any alarms system, the Fire Service will be notified to mitigate the potential for any unwanted response. Fire Control take a record of:

- Name and Telephone Number of Person reporting the Automatic Fire Alarm System Test
- Name and Full Address of premises
- Name of Individual Building where known
- Estimated time of commencement and completion

Tests are required to be carried out ideally within the next 5 minutes of the notification.

Further to this, following any proposed changes in call filtering and the non-attendance at certain premises during specific times of the day, HWFRS should engage with ARCs to ensure they understand HWFRS position and desire to reduce the impact of UwFS. ARCs should be made aware of their duties in relation to the information they have on the premises, keyholders and their requirement to ensure premises are contacted prior to any call to Fire Control.

When a call is received in Fire Control by an ARC, it is common that they will not have contacted the premises which they represent to confirm a fire, and have limited details regarding property type and occupancy. They may also have inaccurate keyholder details.

HWFRS could consider revising its formal agreements with ARCs and Telecare providers to ensure a mutually understood standardised approach is taken (an example of which is found in Appendix 5). Use of the Authorities emergency telephone lines should be subject to conformity with prescribed terms and conditions.

8. Summary of scalable options to reduce UwFS

	Scalable options to promote UwFS reduction	Comments
1	Continue with current procedures	Return en-route/ 1 appliance/ Graded response
2	Response - Business engagement through operational crews advice/information when attending AFAs – recording of generation of BFSCs/Intel's from UwFSs	
3	Prevention – monitoring domestic AFAs, identifying origins/trends, recording preventative actions (HFSV/safeguarding) from UwFS. Identification of persistent premises and provide support.	
4	Education and initiatives - media campaigns highlighting the impact of UwFS, malicious/good intent false alarms	
5	Protection - Full audits for premises which persistently cause UwFSs	
6	Employ a UwFS officer to monitor and facilitate interventions to reduce UwFS	
7	Strengthen call filtering for calls received from commercial premises (no sleeping risk) with alarms sounding to confirm signs of fire/heat/smoke and to redial 999 if required.	Confirmed signs of fire required
8	Implement call filtering from ARCs to establish the premises type, whether it is a sleeping risk and whether they have contacted the premises to establish the reason for the activation and time of day.	ARC engagement - revision of ARC agreements – Legal to advise
9	Introduce a cost recovery mechanism for persistent repeat UwFS	Revise cost recovery and appeals. Administrative burden
10	Risk-based approach towards premises types based on FSEC principles. Apply call filtering to the following Group C and D premises (commercial premises without sleeping): **Shops, Offices, Factories, Warehouses** • Model 1 - Between 09:00 and 17:00 • Model 2 – Between 08:00 and 18:00 • Model 3 – Between 08:00 and 20:00 • Model 4 – 24/7	Call filtering requires confirmation of signs of fire at the premises before a PDA is mobilised. *Consider weekends and bank holidays
11	Exemptions from call challenging for higher risk premises • Domestic and residential premises • COMAH sites (upper/lower tier) • High/Very High-risk Intel premises • Premises with Fire Safety concerns • Existing enhanced PDA premises	
12	Places of Education – implement daytime call filtering, Monday to Friday with prescribed time frames	*Excl. Outside of term time *Excl. Public Bank Holidays

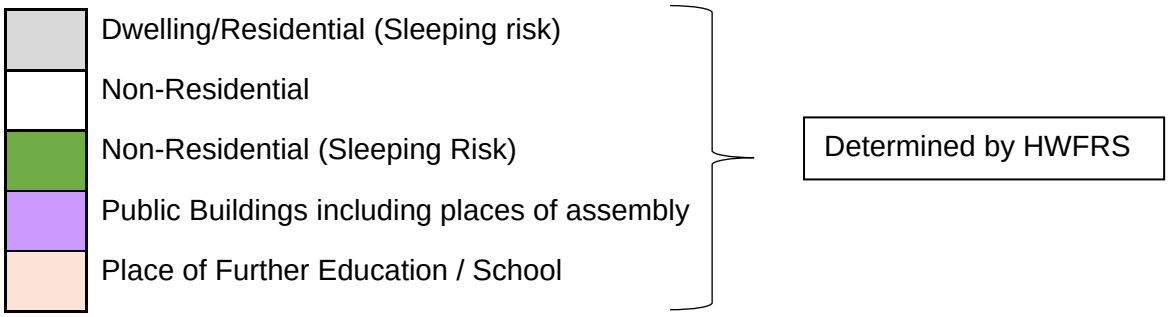
13	Licensed premises - implement daytime call filtering	
14	Public buildings – risk assess premises types according to heritage and societal value to determine when a call filtering strategy would be appropriate	
15	Hospitals – implement day-time non-attendance with prescribed time frames	
16	Sleeping risks - implement daytime call filtering	
17	Non-attendance to all premises types unless confirmed signs of fire at site through call filtering	

Table 27: Scalable options to reduce UwFSs

Appendix 1: AFA Trend Questionnaire used by the Protection-TFS department

	Comments
Premises ID	
Date of unwanted AFA trend visit	
Month unwanted AFAs occurred?	
Number of monthly activations?	
Causes of activation(s)	
Has the RP identified any trends in locations and causes for false activations?	
Have these been logged by the RP?	
What action is being taken by the RP to prevent further false activations?	
Are the management procedures correct and appropriate?	
How many detectors does the premises have? (Health care premises)	
Is a robust procedure in place for in/out of hour response to AFAs e.g. Fire alarm engineer?	
Is the Fire Risk Assessment valid?	
Is there a suitable testing and maintenance scheme in place, and recorded for the Fire alarm panel?	
Are there suitable arrangements in place for training of staff and evacuation drills?	
Does the premises require a full RI?	

Appendix 2: IRS Categories of properties



ID	Property type
1	Building/Dwelling/House - single occupancy
2	Building/Dwelling/Bungalow - single occupancy
3	Building/Dwelling/Self-contained Sheltered Housing
4	Building/Dwelling/caravan/mobile home (permanent dwelling)
5	Building/Dwelling/Houseboat (permanent dwelling)
6	Building/Dwelling/Tenement Building
7	Building/Dwelling/Other Dwelling
8	Building/Dwelling/Castle
9	Building/Dwelling/Royal Palace
10	Building/Dwelling/Stately Home
11	Building/Dwelling/Purpose Built Flat/Maisonette - multiple occupancy/Up to 3 storeys
12	Building/Dwelling/Purpose Built Flat/Maisonette - multiple occupancy/4 to 9 storeys
13	Building/Dwelling/Purpose Built Flat/Maisonette - multiple occupancy/10 or more storeys
14	Building/Dwelling/Converted Flat/Maisonette - multiple occupancy/Up to 2 storeys
15	Building/Dwelling/Converted Flat/Maisonette - multiple occupancy/3 or more storeys
16	Building/Dwelling/Licensed HMO/Up to 2 storeys
17	Building/Dwelling/Licensed HMO/3 or more storeys
18	Building/Dwelling/Unlicensed HMO/Up to 2 storeys
19	Building/Dwelling/Unlicensed HMO/3 or more storeys
20	Building/Dwelling/Unknown if licensed HMO/Up to 2 storeys
21	Building/Dwelling/Unknown if licensed HMO/3 or more storeys

22	Building/Other Residential/Hotel/motel
23	Building/Other Residential/Boarding House/B&B for homeless/asylum seekers
24	Building/Other Residential/Boarding House/B&B other
25	Building/Other Residential/Youth hostel
26	Building/Other Residential/Towing caravan on site (not on tow)
27	Building/Other Residential/Other holiday residence (cottage flat chalet)
28	Building/Other Residential/Hostel (e.g. for homeless people)
29	Building/Other Residential/Sheltered Housing – not self-contained
30	Building/Other Residential/Student Hall of Residence
31	Building/Other Residential/Boarding School accommodation
32	Building/Other Residential/Nurses'/Doctors' accommodation
33	Building/Other Residential/Military/Barracks
34	Building/Other Residential/Monastery/convent
35	Building/Other Residential/Other Residential Home
36	Building/Other Residential/Residential Home/Children's
37	Building/Other Residential/Residential Home/Nursing/Care
38	Building/Other Residential/Residential Home/Retirement/Elderly
39	Building/Non-Residential/Laboratory/research Establishment
40	Building/Non-Residential/Vehicle Repair
41	Building/Non-Residential/Sports pavilion/shower block/changing facility
42	Building/Non-Residential/Private garage
43	Building/Non-Residential/Private Garden Shed
44	Building/Non-Residential/Private Summer house
45	Building/Non-Residential/Private greenhouse
46	Building/Non-Residential/Other private non-residential building
47	Building/Non-Residential/Mines and quarries - buildings above ground
48	Building/Non-Residential/Public toilets
49	Building/Non-Residential/Other buildings/use not known
50	Building/Non-Residential/Offices and call centres/Call Centre
51	Building/Non-Residential/Offices and call centres/TV/film/music/art studio
52	Building/Non-Residential/Offices and call centres/Other

53	Building/Non-Residential/Offices and call centres/Purpose built office
54	Building/Non-Residential/Offices and call centres/Temporary office (e.g. porta cabin)
55	Building/Non-Residential/Offices and call centres/Converted office
56	Building/Non-Residential/Retail/Other retail
57	Building/Non-Residential/Retail/Bakery
58	Building/Non-Residential/Retail/Bank/Building Society
59	Building/Non-Residential/Retail/Travel Agent
60	Building/Non-Residential/Retail/Estate Agent
61	Building/Non-Residential/Retail/Indoor Market
62	Building/Non-Residential/Retail/Vehicle sales
63	Building/Non-Residential/Retail/Petrol station
64	Building/Non-Residential/Retail/Department Store
65	Building/Non-Residential/Retail/Laundrette
66	Building/Non-Residential/Retail/Hairdresser
67	Building/Non-Residential/Retail/Furniture warehouse
68	Building/Non-Residential/Retail/Other retail warehouse
69	Building/Non-Residential/Retail/Large supermarket
70	Building/Non-Residential/Retail/Shopping Centre
71	Building/Non-Residential/Retail/DIY Warehouse
72	Building/Non-Residential/Retail/Electrical warehouse
73	Building/Non-Residential/Retail/Single shop
74	Building/Non-Residential/Retail/Post office (purpose built)
75	Building/Non-Residential/Retail/Post office (within other shop/premises)
76	Building/Non-Residential/Industrial Processing/Recycling
77	Building/Non-Residential/Industrial Processing/Other
78	Building/Non-Residential/Industrial Processing/Distillery plant (including alcohol)
79	Building/Non-Residential/Industrial Processing/Animal products
80	Building/Non-Residential/Industrial Processing/Chemicals
81	Building/Non-Residential/Industrial Processing/Oil refinery
82	Building/Non-Residential/Industrial Manufacturing/Food and drink processing
83	Building/Non-Residential/Industrial Manufacturing/Assembly

84	Building/Non-Residential/Industrial Manufacturing/Printing
85	Building/Non-Residential/Industrial Manufacturing/Other
86	Building/Non-Residential/Industrial Manufacturing/Factory
87	Building/Non-Residential/Industrial Manufacturing/Mill
88	Building/Non-Residential/Industrial Manufacturing/Engineering
89	Building/Non-Residential/Public Utilities/Water works
90	Building/Non-Residential/Public Utilities/Other
91	Building/Non-Residential/Public Utilities/Telephone Exchange
92	Building/Non-Residential/Public Utilities/Gas works
93	Building/Non-Residential/Public Utilities/Sewage works
94	Building/Non-Residential/Public Utilities/Electricity power station
95	Building/Non-Residential/Warehouses and bulk storage/Waste
96	Building/Non-Residential/Warehouses and bulk storage/Hazardous materials
97	Building/Non-Residential/Warehouses and bulk storage/Other
98	Building/Non-Residential/Warehouses and bulk storage/Warehouse
99	Building/Non-Residential/Warehouses and bulk storage/Oil
100	Building/Non-Residential/Warehouses and bulk storage/Gas
101	Building/Non-Residential/Animal boarding/breeding/kennels (not farm)/animal shelter/cats
102	Building/Non-Residential/Animal boarding/breeding/kennels (not farm)/animal shelter/dogs
103	Building/Non-Residential/Animal boarding/breeding/kennels (not farm)/animal shelter/Other
104	Building/Non-Residential/Car Parks/Underground
105	Building/Non-Residential/Car Parks/Multi-Storey
106	Building/Non-Residential/Car Parks/Other
107	Building/Non-Residential/Education/College/University
108	Building/Non-Residential/Education/Other
109	Building/Non-Residential/Education/Pre School/nursery
110	Building/Non-Residential/Education/Infant/primary school
111	Building/Non-Residential/Education/Secondary school
112	Building/Non-Residential/Food and Drink/Other Restaurant/café – not licensed

113	Building/Non-Residential/Food and Drink/Other Restaurant/café – Not known if licensed
114	Building/Non-Residential/Food and Drink/Pub/wine bar/bar
115	Building/Non-Residential/Food and Drink/Takeaway fast food
116	Building/Non-Residential/Food and Drink/Other Restaurant/café – (licensed for sale of alcohol)
117	Building/Non-Residential/Entertainment and culture/Health spa/farm
118	Building/Non-Residential/Entertainment and culture/Health Centre (not medical)
119	Building/Non-Residential/Entertainment and culture/Other entertainment venue
120	Building/Non-Residential/Entertainment and culture/Other cultural venue
121	Building/Non-Residential/Entertainment and culture/Exhibition Centre
122	Building/Non-Residential/Entertainment and culture/Community centre/Village or Parish Hall
123	Building/Non-Residential/Entertainment and culture/Conference Centre
124	Building/Non-Residential/Entertainment and culture/Library
125	Building/Non-Residential/Entertainment and culture/Museum
126	Building/Non-Residential/Entertainment and culture/Art Gallery
127	Building/Non-Residential/Entertainment and culture/Casino
128	Building/Non-Residential/Entertainment and culture/Concert Hall
129	Building/Non-Residential/Entertainment and culture/Zoo
130	Building/Non-Residential/Entertainment and culture/Sport and Social club
131	Building/Non-Residential/Entertainment and culture/Theme Park
132	Building/Non-Residential/Entertainment and culture/Bingo Hall
133	Building/Non-Residential/Entertainment and culture/Cinema
134	Building/Non-Residential/Entertainment and culture/Theatre
135	Building/Non-Residential/Entertainment and culture/Club/night club
136	Building/Non-Residential/Hospitals and medical care/Day care centre (drop in centre)
137	Building/Non-Residential/Hospitals and medical care/Doctors' surgery
138	Building/Non-Residential/Hospitals and medical care/Veterinary surgery
139	Building/Non-Residential/Hospitals and medical care/Dentist
140	Building/Non-Residential/Hospitals and medical care/Hospital
141	Building/Non-Residential/Hospitals and medical care/Other (including surgery)

142	Building/Non-Residential/Hospitals and medical care/Medical/health centre
143	Building/Non-Residential/Sporting venues/Other indoor sporting venue
144	Building/Non-Residential/Sporting venues/Golf Clubhouse
145	Building/Non-Residential/Sporting venues/Indoor stadium
146	Building/Non-Residential/Sporting venues/Swimming Pool
147	Building/Non-Residential/Sporting venues/Ice rink
148	Building/Non-Residential/Sporting venues/Leisure Centre
149	Building/Non-Residential/Sporting venues/Gym
150	Building/Non-Residential/Sporting venues/Sports Hall
151	Building/Non-Residential/Sporting venues/Racecourse
152	Building/Non-Residential/Sporting venues/Motor racing circuit
153	Building/Non-Residential/Sporting venues/Other outdoor sporting venue
154	Building/Non-Residential/Sporting venues/Cricket ground
155	Building/Non-Residential/Sporting venues/Tennis Courts
156	Building/Non-Residential/Sporting venues/Greyhound stadium
157	Building/Non-Residential/Sporting venues/Football stadium
158	Building/Non-Residential/Sporting venues/Rugby Stadium
159	Building/Non-Residential/Sporting venues/Athletics Stadium
160	Building/Non-Residential/Public admin security and safety/Other public buildings
161	Building/Non-Residential/Public admin security and safety/MoD office within Building
162	Building/Non-Residential/Public admin security and safety/Ambulance station
163	Building/Non-Residential/Public admin security and safety/Prison
164	Building/Non-Residential/Public admin security and safety/Young offenders unit
165	Building/Non-Residential/Public admin security and safety/Central Government Office
166	Building/Non-Residential/Public admin security and safety/Police station
167	Building/Non-Residential/Public admin security and safety/Fire station
168	Building/Non-Residential/Public admin security and safety/Town Hall
169	Building/Non-Residential/Public admin security and safety/Law Courts
170	Building/Non-Residential/Public admin security and safety/Local Government Office
171	Building/Non-Residential/Religious/Temple

172	Building/Non-Residential/Religious/Synagogue
173	Building/Non-Residential/Religious/Other
174	Building/Non-Residential/Religious/Cathedral
175	Building/Non-Residential/Religious/Church/Chapel
176	Building/Non-Residential/Religious/Mosque
177	Building/Non-Residential/Permanent Agricultural/Other building
178	Building/Non-Residential/Permanent Agricultural/Silo
179	Building/Non-Residential/Permanent Agricultural/Intensive Farming Sheds (chickens, pigs etc.)
180	Building/Non-Residential/Permanent Agricultural/Milking Parlour
181	Building/Non-Residential/Permanent Agricultural/Tractor Shed
182	Building/Non-Residential/Permanent Agricultural/Barn
183	Building/Non-Residential/Permanent Agricultural/Greenhouse (commercial) glass
184	Building/Non-Residential/Permanent Agricultural/Greenhouse (commercial) polytunnel
185	Building/Non-Residential/Transport buildings/Bus/coach station/garage
186	Building/Non-Residential/Transport buildings/Other transport building
187	Building/Non-Residential/Transport buildings/Airport - elsewhere
188	Building/Non-Residential/Transport buildings/Docks
189	Building/Non-Residential/Transport buildings/Ferry terminal
190	Building/Non-Residential/Transport buildings/Airport - terminal
191	Building/Non-Residential/Transport buildings/Airport - hangar
192	Building/Non-Residential/Transport buildings/Airport - fuel storage
193	Building/Non-Residential/Transport buildings/Train station - elsewhere
194	Building/Non-Residential/Transport buildings/Trains - engine shed
195	Building/Non-Residential/Transport buildings/Trains - other
196	Building/Non-Residential/Transport buildings/Train station - platform (overground)
197	Building/Non-Residential/Transport buildings/Train station - platform (underground)
198	Building/Non-Residential/Transport buildings/Train station - concourse
199	Road Vehicle/Car
200	Road Vehicle/Van
201	Road Vehicle/Motor Home

202	Road Vehicle/Agricultural
203	Road Vehicle/Motorcycle
204	Road Vehicle/Lorry/HGV
205	Road Vehicle/Tanker
206	Road Vehicle/Bus/coach
207	Road Vehicle/Minibus
208	Road Vehicle/Caravan on tow
209	Road Vehicle/Multiple Vehicles
210	Road Vehicle/Other
211	Road Vehicle/Trailers - Trailer unit (not attached to tractor)
212	Road Vehicle/Towing caravan elsewhere (not on tow)
213	Road Vehicle/Caravan unspecified
214	Road Vehicle/Bicycle
215	Other transport vehicle/Trains/Passenger Train (above ground)
216	Other transport vehicle/Trains/Freight Train
217	Other transport vehicle/Trains/Tram
218	Other transport vehicle/Trains/Underground train – London system
219	Other transport vehicle/Trains/Underground train – Other system
220	Other transport vehicle/Aircraft/Passenger plane
221	Other transport vehicle/Aircraft/Light aircraft
222	Other transport vehicle/Aircraft/Helicopter
223	Other transport vehicle/Aircraft/Freight plane
224	Other transport vehicle/Aircraft/Military plane
225	Other transport vehicle/Aircraft/Military helicopter
226	Other transport vehicle/Aircraft/Other
227	Other transport vehicle/Boats/Barge
228	Other transport vehicle/Boats/Fishing boat
229	Other transport vehicle/Boats/Large passenger vessel
230	Other transport vehicle/Boats/Motor yacht
231	Other transport vehicle/Boats/Tanker
232	Other transport vehicle/Boats/Other merchant vessel

233	Other transport vehicle/Boats/Naval vessel
234	Other transport vehicle/Boats/Other water craft
235	Outdoor/Grassland woodland and crops/Standing crop
236	Outdoor/Grassland woodland and crops/Stacked/baled crop (incl. manure heap)
237	Outdoor/Grassland woodland and crops/Woodland/forest - conifers/softwood
238	Outdoor/Grassland woodland and crops/Woodland/forest - broadleaf/hardwood
239	Outdoor/Grassland woodland and crops/Tree scrub (includes single trees not in garden)
240	Outdoor/Grassland woodland and crops/Straw/stubble burning
241	Outdoor/Grassland woodland and crops/Private/Domestic garden/allotment (vegetation not equipment/building)
242	Outdoor/Grassland woodland and crops/Nurseries market garden
243	Outdoor/Grassland woodland and crops/Heathland or moorland
244	Outdoor/Grassland woodland and crops/Grassland pasture grazing etc.
245	Outdoor/Grassland woodland and crops/Scrub land
246	Outdoor/Grassland woodland and crops/Railway trackside vegetation
247	Outdoor/Grassland woodland and crops/Roadside vegetation
248	Outdoor/Grassland woodland and crops/Canal/riverbank vegetation
249	Outdoor/Grassland woodland and crops/Hedge
250	Outdoor/Outdoor structures/Refuse/rubbish tip
251	Outdoor/Outdoor structures/Small refuse/rubbish/recycle container (excluding wheelie bin)
252	Outdoor/Outdoor structures/Post box
253	Outdoor/Outdoor structures/Telephone box
254	Outdoor/Outdoor structures/Kiosk
255	Outdoor/Outdoor structures/Other outdoor structures
256	Outdoor/Outdoor structures/Tunnel subway
257	Outdoor/Outdoor structures/Bridge
258	Outdoor/Outdoor structures/Railway goods yard
259	Outdoor/Outdoor structures/Shelter
260	Outdoor/Outdoor structures/Camping tent
261	Outdoor/Outdoor structures/Other tent/marquee

262	Outdoor/Outdoor structures/Other outdoor items including roadside furniture
263	Outdoor/Outdoor structures/Railings
264	Outdoor/Outdoor structures/Outdoor storage
265	Outdoor/Outdoor structures/Recycling collection point bottle bank
266	Outdoor/Outdoor structures/Large refuse/rubbish container (e.g. skip)
267	Outdoor/Outdoor structures/Common external bin storage area
268	Outdoor/Outdoor structures/Wheelie Bin
269	Outdoor/Outdoor structures/Fence
270	Outdoor/Outdoor equipment and machinery/Garden equipment
271	Outdoor/Outdoor equipment and machinery/Agricultural equipment
272	Outdoor/Outdoor equipment and machinery/Pipes and drains
273	Outdoor/Outdoor equipment and machinery/Cables
274	Outdoor/Outdoor equipment and machinery/Barbeque
275	Outdoor/Outdoor equipment and machinery/Other outdoor equipment/machinery
276	Outdoor/Other outdoors (including land)/Loose refuse (incl. in garden)
277	Outdoor/Other outdoors (including land)/River/canal
278	Outdoor/Other outdoors (including land)/Lake/pond/reservoir
279	Outdoor/Other outdoors (including land)/Sea
280	Outdoor/Other outdoors (including land)/Highway/road surface/pavement
281	Outdoor/Other outdoors (including land)/Railway
282	Outdoor/Other outdoors (including land)/Airfield/runway
283	Outdoor/Other outdoors (including land)/Cycle path/public footpath/bridleway
284	Outdoor/Other outdoors (including land)/Cemetery
285	Outdoor/Other outdoors (including land)/Park
286	Outdoor/Other outdoors (including land)/Beach
287	Outdoor/Other outdoors (including land)/Landfill site
288	Outdoor/Other outdoors (including land)/Wasteland
289	Outdoor/Other outdoors (including land)/Other outdoor location
290	Outdoor/Other outdoors (including land)/Mines and quarries - excluding buildings above ground
291	Outdoor/Other outdoors (including land)/Playground (not equipment) or Recreational area

292	Outdoor/Other outdoors (including land)/Golf Course (excluding buildings)
293	Outdoor/Other outdoors (including land)/Animal harm outdoors
294	Outdoor/Other outdoors (including land)/Human harm outdoors
295	Not known/False Alarm - Property not found

Appendix 3: Listed Fire Alarm Companies (ARCs) with HWFRS – excerpt from Fire Control help pages 03/04/22

FIRE ALARM COMPANIES

Abel Alarms Leicestershire

ADT Fire & Security

Advance Independent Monitoring - AIM

Aid Call Careline - PPP Taking Care

Anchor Call - Anchor Hanover

Appello Careline - Careline UK

Bouygues

Bromsgrove Lifeline

British Telecommunications Security Opt 6

Chubb Monitoring Centre

Cirrus Comm System, New Milton, Hampshire (States Appello)

Community Housing (formerly Amica 24)

Cougar Monitoring Ltd

Crime Prevention Services

Custodian Leeds - Chubb Monitoring Centre

Custodian Nottingham

East Midlands Central Station - EMCS Nottingham

Group 4 Security - G4S

Halifax Security Control Centre

Hanover On Call - Anchor Hanover West Yorkshire

Hereford Careline / centra

Mitec Security

Multiplex Security Communications Ltd Birmingham

National Monitoring Cheshire

Northern Monitoring - Southern Monitoring

One Complete Solution - OCS Group UK Ltd

Pointer EMC - Custodian

Redditch Lifeline

Romec Security Services / cougar

Scutum Digital Plymouth (formerly Securi-Guard)

Secom Plc SurreySecuritas Milton Keynes

Security Alarm Services Ross On Wye

Sefton Security Liverpool

Security Monitoring Centres - SMC Nottingham

Southern Monitoring - Northern Monitoring Hampshire

SSS specialised security systems Ltd

Tesco ARC, Welwyn Garden City

Tunstall Lifeline Ltd Yorkshire

UK Monitoring Ltd Bradford

Wyre Forest Central Control

Yeoman Monitoring

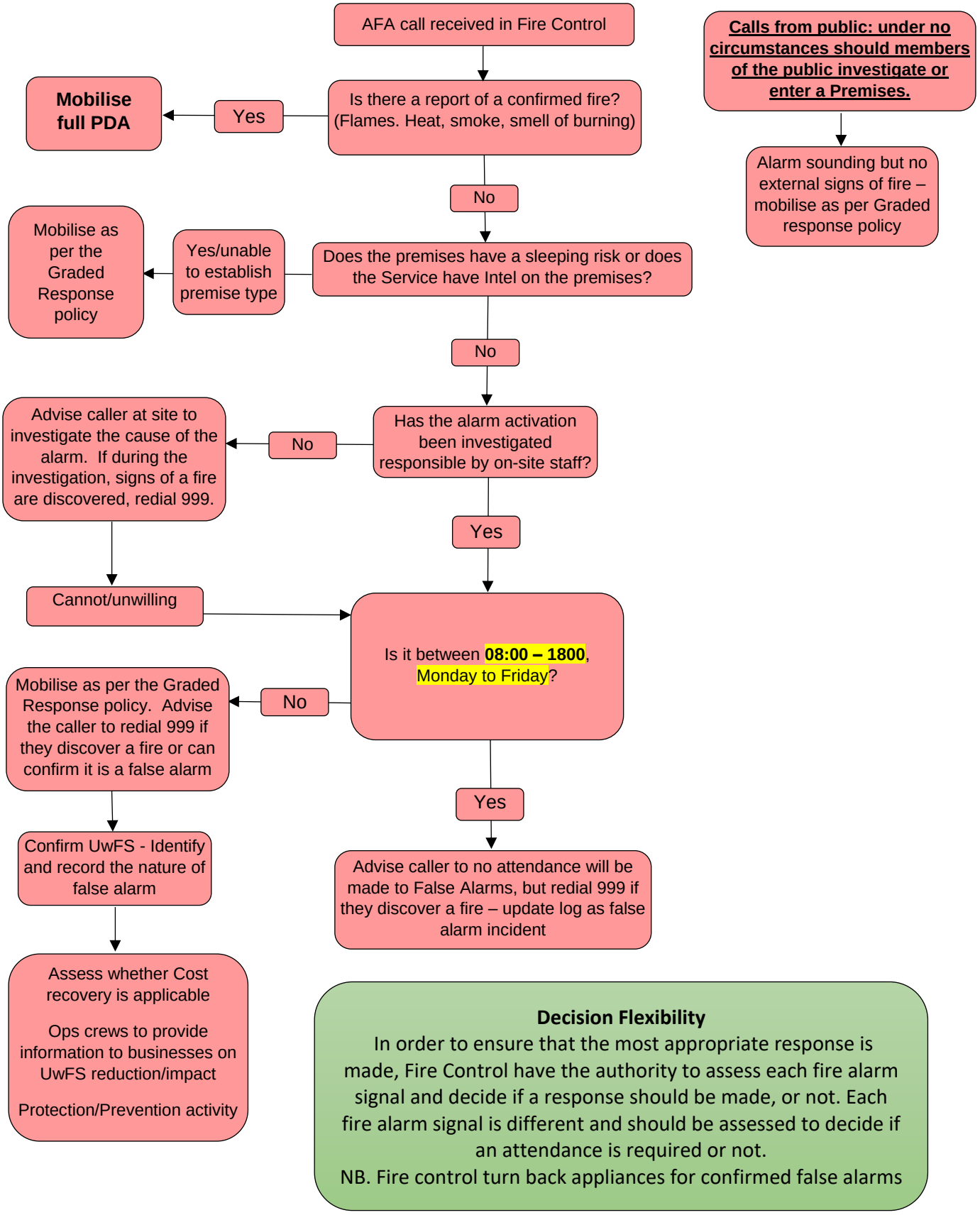
Appendix 4: Current HWFRS documents relating to agreements with ARCs (Fire Alarm Monitoring Organisations)

Covering Letter.docx

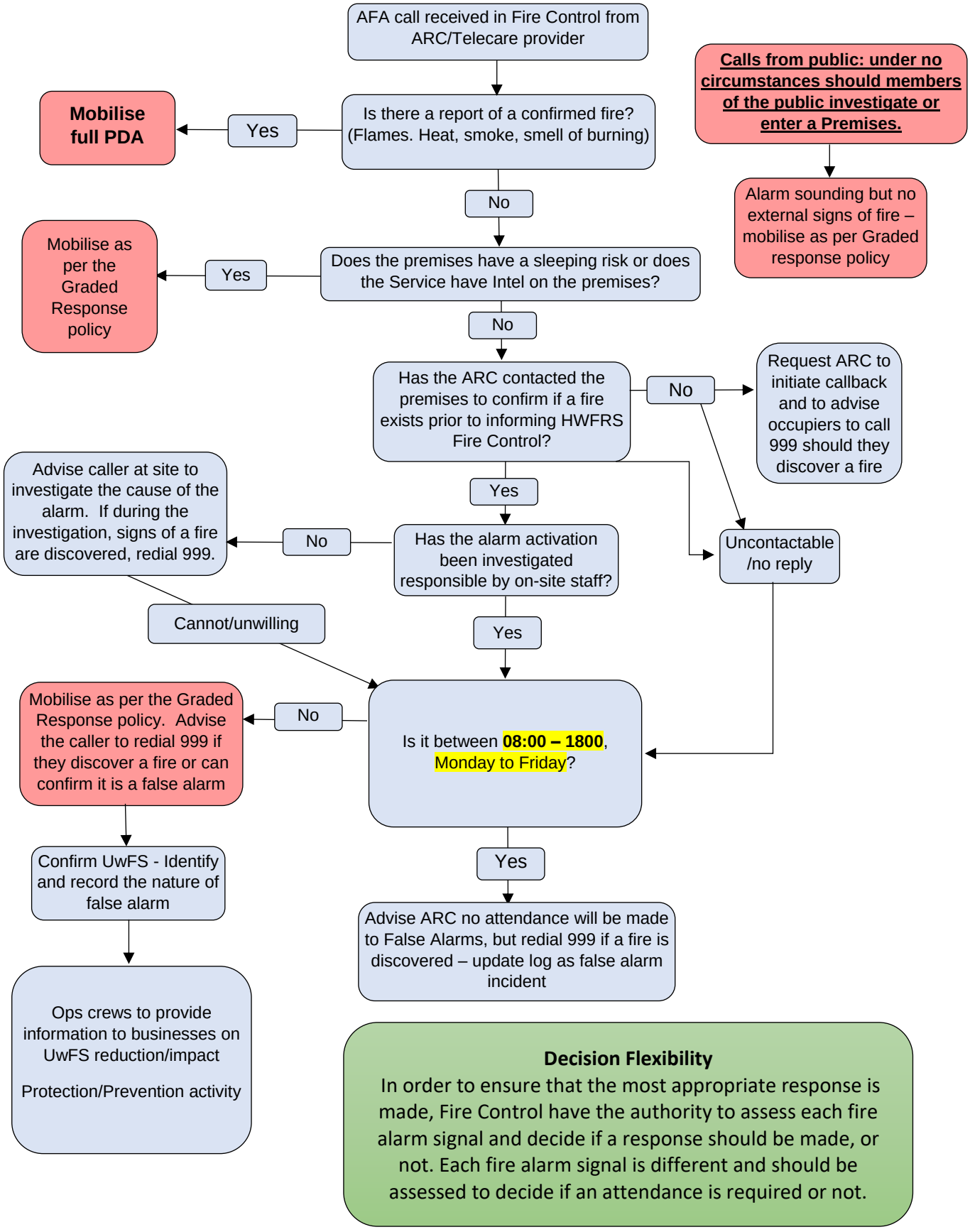
New Customer Information Form.dc

ExDir Contract w.out numbers.doc

Appendix 5: Example mobilising flowchart for calls received from the premises



Appendix 6: Example mobilising flowchart for calls received from ARCs or Telecare providers



Appendix 7: Potential Revised Template for Standard Agreements with Alarm Receiving Centres and Telecare service Providers

HEREFORD AND WORCESTER FIRE AND RESCUE SERVICE
and
<<name>>

STANDARD AGREEMENT FOR: ALARM RECEIVING CENTRES AND TELECARE SERVICE PROVIDERS

(The 'Agreement')

THIS AGREEMENT is executed as a deed the <<date>> BETWEEN:- (1) HEREFORD AND WORCESTER FIRE AUTHORITY, SERVICE HEADQUARTERS, HINDLIP PARK, WORCESTER, WR3 8SP ('the Service')
and (2) <<name>>, <<address>>, ('the Operator'):
together being 'the Parties'

WHEREAS:- (A) Calls received from the Operator will be monitored by Hereford and Worcester Fire and Rescue Service to ensure system reliability. Where reliability falls below the level specified by the Operator and the premises that they represent, steps will then have to be taken to reduce the number of false alarms passed to the Service by as a result of automatic fire detection systems.
(B) Use of the Authorities emergency telephone line is subject to conformity with the terms and conditions described below.

NOW IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES as follows:

1. Subject to the guidelines and procedures described in the second schedule, the provider for a period ('the Term') commencing on the date of this agreement ('Commencement Date') agrees to allow the Operator the use of the provided emergency line ('the Emergency Line') to the control of the Service. The Emergency Line may only be used in to allow the Operator to alert the control room of the Service in the event of a triggered fire alarm at monitored premises and in compliance with the requirements outlined in the second schedule.

2. In consideration whereof, the Operator hereby agrees as follows:

2.1 To send the Service, on request, the details of any subscriber to the Operator including the full name and address, contact name and telephone number.
2.2 Before use of the Emergency Line, the Operator will attempt to contact the Responsible Person ('RP') at the premises from which the signal has been generated. The Operator should confirm with the RP if there is a fire and if this can be confirmed the details will be passed to the Service using the Emergency Line.
2.3 Where immediate confirmation of a fire cannot be given by the RP the Operator will request that confirmation of the fire be sought, and the RP call the Service using the 999/112 system if the presence of a fire is confirmed.
2.4 Where the Operator is unable to make contact with the RP at the premises from which the signal has been generated, the Emergency Line will be used to inform the Service of the alarm activation. The Service will then either wait for a 999 call to confirm a fire at the premises, dispatch a response to investigate the alarm signal. This decision will be made by the Service using risk assessment principles and pertinent information relating to the premises.
2.5 The Operator should identify and have immediately available information for the Service as to whether the premises is domestic or commercial, and whether the premises is used for sleeping.
2.6 Where the Operator is unable to make contact with any occupier at the premises, a key holder should be informed and requested to attend to investigate the cause of the alarm.

3. A person who is not a party to this Agreement has no rights under the Contracts (Rights of Third Parties) Act 1999 to enforce any terms of this agreement.

4. The Parties agree the Agreement shall terminate:

4.1 In the event of any breach of the Agreement which is capable of remedy, on the party not in breach giving the other party written notice to remedy the breach and if within 30 days the other party shall have failed to remedy the breach to the reasonable satisfaction of the party not in breach, the party not in breach may then terminate the Agreement by giving the other party 28 days notice in writing.
4.2 In the event of any breach of the Agreement which is not capable of remedy, by the party not in breach giving the other party 28 days notice in writing.
4.3 By either party giving the other not less than 28 days notice in writing.

5. Information Sharing
5.1 When required to do so by the Service, the Operator shall assist the Service at no additional charge in meeting its obligations under the Freedom of Information Act 2000 or any statutory modification or re-enactment thereof of any related guidelines or codes of practice in relation to this act.
5.2 The Operator confidentially protect all information belonging to or provided by the Service in connection with this contract and shall not disclose it to any third party without the express consent of the Provider or except to the extend permitted by law.

6. Both parties shall be released from their respective obligations in the event of a national emergency, prohibitive governmental regulation or if any other cause beyond the reasonable control of either parties renders them unable to conform to this Agreement.

7. If any provision of this Agreement is declared by any judicial or competent Authority to be void or illegal, the remaining provisions of this Agreement shall remain in full force and effect unless in the opinion of the Service the effect of such a declaration defeats the original intention of the parties, in which event the Service shall be entitled to terminate this Agreement by giving the Operator 28 days notice in writing.

8. This Agreement supersedes any prior arrangement between the parties whether written or oral and any such prior arrangements are cancelled as of the Commencement Date.

9. All notices and amendments given under this Agreement shall be in writing. Each notice shall be addressed to the address of the party concerned set out in this Agreement or to such other address as that party shall have previously informed the sender.

10. This Agreement and all rights under it may only be assigned or transferred by the Service.

11. This Agreement shall be governed by English law in every particular including formation and interpretation and shall be deemed to have been made in England. Any proceedings arising out of or in connection with this Agreement may be brought in any court of relevant jurisdiction in England and Wales.

12. The failure by either party to enforce at any time or for any period any one or more of the terms or conditions of this agreement shall not be a waiver of them or of the right at any time subsequently to enforce the terms and conditions of this agreement.

13. The Operator shall not assign or sub-contract and of the responsibilities laid out in this Agreement without the prior consent in writing of the Service. This consent is not to be unreasonably withheld.

14. The Operator shall notify the Provider in writing immediately if the Operator enters administration, makes the decision to wind up, or the court makes an administration of a winding up order.

Signed for and on behalf of the Service ……

Date ……

Signed for and on behalf of the Operator ……

Date ……

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HEREFORD & WORCESTER
HWFR
FIRE AND RESCUE SERVICE

HWFire

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05/2023