

Fire False Alarm Reduction – South Wales Fire and Rescue Authority

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Summary report

Summary

What we reviewed and why

- 1 We reviewed the Authority's approach to the reduction of false fire alarms in non-domestic premises. Our audit included reviewing the Authority's policy, how it was developed and is being implemented, how false alarms are monitored, and how performance is managed and evaluated.
- 2 We examined false alarms due to the significant numbers responded to by Welsh Fire and Rescue Authorities (FRAs). This means that they have a significant operational, financial, and environmental impact. They are also a key area for improvement within the Fire and Rescue National Framework 2016¹, set by the Welsh Government.
- 3 We undertook the review during the period November 2022 to March 2023.

What we found

- 4 Our review looked to answer the question: **Is the Authority doing all it can to reduce the prevalence and responses to non-domestic fire false alarms?**
- 5 Overall we found that: **The Authority has made progress in its approach to managing fire false alarms. Making better use of data and learning from elsewhere will identify opportunities to better manage performance and risks.**
We reached this conclusion because:
 - whilst the Authority's management information system supplies a strong basis for their approach, greater use of the data is needed to fully understand impacts and potential benefits. This is not helped by data gaps.
 - the Authority has an appropriate, locally focused approach for false alarms that is rooted in the balance of local risks. However, it lacks broader stakeholder involvement, as well as formal targets or indicators that help assess progress.
 - as the Authority lacks comprehensive suite of performance indicators it is difficult to evaluate and monitor all aspects of performance. Whilst overall figures are regularly reported, these lack detail in key areas.
 - the volume of false alarms has increased in recent years. While there has been a reduction in calls from health settings, this has been replaced by a growth in other automated alarm signals.

¹ Welsh Government, [Fire and Rescue National Framework 2016](#), November 2015

Recommendations

Exhibit 1: recommendations

The table below sets out the recommendations that we have found following this review.

Recommendations	
Approaches	
R1	We recommend that the Authority explore and assess other approaches taken elsewhere to identify opportunities to strengthen its management of and performance in reducing false alarms. This should be informed and include the utilisation of data held by the Authority.
R2	We recommend that the Authority improve how it communicates and involves key stakeholders to ensure partners align their work to support a reduction in false alarms.
R3	We recommend that the Authority facilitate the sharing and discussion of good practice internally through the Unwanted Fire Signal Champion scheme.
Data	
R4	We recommend that the Authority revise its coding system for recording false alarms to reduce the volume of 'unknown' causes to help target prevention work.
Reporting	
R5	We recommend that performance reporting on false alarms is strengthened by: <ul style="list-style-type: none">• aligning performance monitoring and reporting to the four-stage policy approach; and• providing a detailed commentary of the approaches taken and detailed trends over time to help members scrutinise activity.

Detailed report

Fire and rescue services face the most challenging financial and operational environment in a generation

National framework expectations

- 6 The Welsh Government's National Framework for Fire identifies the reduction of false alarms as a key efficiency saving available to FRAs². It notes that responding to false alarms incurs significant financial and opportunity costs, both for FRAs and building occupiers, whilst yielding no benefit whatsoever. This is especially impactful as there are more false alarms than actual fires. At present, 46% of total incidents responded to by the Authority are false alarms, which illustrates the significant burden they place on the limited resources available. Consequently, the Welsh Government requires FRAs to: 'Identify the main sources of false alarms and take all reasonable and practical steps to reduce their incidence.'
- 7 In shaping their approach, FRAs must also demonstrate the Sustainable Development Principle under the Well-being of Future Generations Act 2016. FRAs are required to show how they are taking a long-term view to improvement that focuses on prevention, involving people, and integrating and working collaboratively with key partners and stakeholders.
- 8 Therefore, the expectation of the Welsh Government is to see a reduction in responses to false alarms, in order to free both resources and capacity. This would also put FRAs in a stronger position to realise the Welsh Government ambitions, set out in recent reports.

Growing the role of the firefighter

- 9 Reducing false alarms is required to provide the additional capacity needed to meet the Welsh Government's policy expectations.
- 10 Since the National Framework was published in 2015, the Welsh Government has set out a broader policy direction for FRAs. This involves expanding the role of firefighters to support the health and social care system, such as responding to non-injured falls. This was approved by the Cabinet in 2020.
- 11 In 2021, the Welsh Government published its assessment of whether the role of firefighters could be expanded without causing detriment to the core fire and rescue service. Even without delivering a broader role, the review concluded that a 'fundamental review of station work routines is required to ensure that activity is appropriately scheduled to maximise output'. Analysis found that there was no unallocated capacity during the day shift of wholetime crews, which would coincide

² Welsh Government, [Fire and Rescue National Framework 2016](#), November 2015

with peak hours of demand for the Welsh Ambulance Service Trust (WAST) between 7 am and midday³.

- 12 A lack of adequate training time was also identified by the Welsh Government and led to a second thematic review focused on operational training⁴. It concluded that there was insufficient training time available, particularly to firefighters under the Retained Duty System (RDS). The report recommended that FRAs ‘undertake an unconstrained analysis of the amount of time required for firefighters to train’.
- 13 Consequently, a reduction in false alarms responses would support creation of added capacity needed to help grow role of the fire fighter. This is alongside other requirements, such as leadership from senior officers and members, effective collaboration, robust data analysis, and effective scrutiny.

Reductions in resources and capacity

- 14 FRAs have had to deliver within significantly reduced budgets during years of austerity and, as all public bodies, must continue to adapt to respond to the current financial pressures. Consequently, Authorities have had to maintain their services with fewer resources and have long focused on rebalancing their emphasis from responding to incidents, to preventing fires and improving safety.
- 15 In real terms, the Authority experienced a 16.8% decrease (£15 million) in revenue expenditure between 2009-10 and 2021-22⁵. Over the same period, the calls received by the Authority decreased by 26.9%⁶ and the number of incidents attended by 22.6%⁷. The number of firefighters employed by the Authority has also declined between 2009-10 and 2021-22 (**Exhibit 2**):

Exhibit 2: SWFRA personnel headcount by employment type, 2009-10 to 2021-22

Role	2009-10	2021-22	Change	
Wholetime uniformed staff	918	806	-112	-12%
Retained staff	692	528	-164	-24%
Fire control staff	56	41	-15	-27%
Non-operational staff	307	325	18	+6%
All staff	1,973	1,700	-273	-14%

Source: StatsWales

³ Welsh Government, [Broadening of the role of firefighters in Wales](#), November 2021

⁴ Welsh Government, [Thematic review of operational training within the Welsh Fire and Rescue Services](#), October 2022

⁵ StatsWales, [Revenue outturn by authority](#)

⁶ StatsWales, [Calls handled by fire control watch FTE by call type and financial year](#)

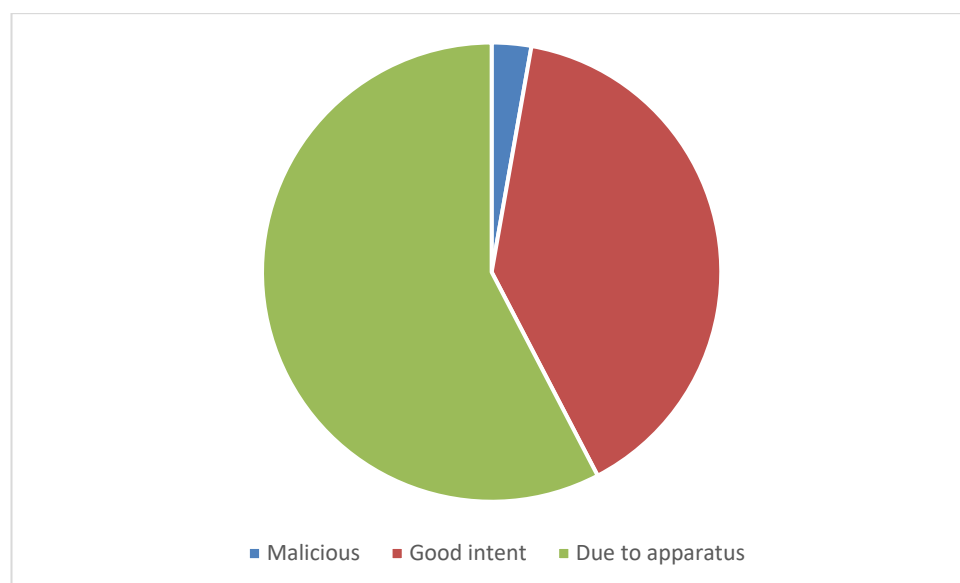
⁷ StatsWales, [Fires, Special Service Incidents and False alarms attended by Fire and Rescue Services in Wales](#)

What are fire false alarms and why are they important?

Definition and types

- 16 Within the Home Office Incident Reporting System (IRS), false alarms are categorised into three types:
- **Malicious** – a call made with the intention of getting a response to a non-existent fire-related event;
 - **Good intent** – a call made in good faith that a response would be needed; and
 - **Due to apparatus** – a call initiated by a fire alarm or firefighting equipment (including accidental initiation).
- 17 **Exhibit 3** shows that, nationally, false alarms ‘due to apparatus’ account for just under 60% of total false alarms.

Exhibit 3: share of total false alarms in Wales by type, 2021-22



Source: [StatsWales](#)

- 18 These are typically caused by Automatic Fire Alarm systems (AFAs), which are networks of detector heads in buildings that are linked to an alarm system. The alarms are then linked to Alarm Receiving Centres (ARCs). Due to technology not requiring on-site management, ARCs can be located anywhere in the world. However, ARCs are required to register with each FRA that they operate with. **Exhibit 4** sets out the AFA process when triggered.

Exhibit 4: Automatic Fire Alarm Process



Source: Audit Wales

- 19 When a false alarm is received from an AFA, it is typically referred to as an Unwanted Fire Signal (UwFS). As UwFS form the largest share of false alarms, they are the key focus of reduction activity across the UK⁸. Consequently, the focus of the Authority's approach and this audit has been on UwFS reduction, whilst also covering other types of false alarms.

False alarms impact the resilience of Fire and Rescue services

- 20 As with any response made by the Authority to any incident, there are financial, operational, environmental, and safety impacts when responding to false alarms.
- 21 When considered together, the impacts generated by the response to false alarms are significant. As a result, any improvement in performance will help the Authority to better manage its resource pressures and increase capacity to undertake additional training and other priority tasks.

Financial

- 22 The total financial impacts of a false alarm response are difficult to quantify precisely. The deployment of an appliance would be the same in responding to a false alarm as a genuine incident with crews deployed in the expectation of having to tackle a genuine fire.
- 23 Authority letters estimate that the cost of deploying an appliance is approximately £400. Costs vary by FRA based on various factors, such as geography, road infrastructure, and rurality, but the Authority's estimate is similar to other UK FRAs, which are estimated around £350 to £400 per hour⁹. Based on the £400 estimated cost, we calculated the financial cost of false alarms in 2021-22 was at least £3.21 million – 4.1% of budgeted net expenditure. This will be an underestimate, as we are unable to calculate the cost based on the duration of responses, mileage, or other variable costs.

⁸ For example, see the [National Fire Chiefs Council guidance](#).

⁹ For example, [Devon and Somerset FRS's standard charge](#) of £364.27 or [Buckinghamshire FRS's estimate](#) of £305 plus VAT.

- 24 Additional responses to false fire alarms create additional demand, which impacts on resources and capacity. Although wholetime firefighters deployed in more urban areas deal with greater volumes of false alarms, their attendance has a knock-on effect on the Authority's retained firefighters – eg if they are called to provide fire cover. Around 40% of operational firefighters are employed under RDS¹⁰.
- 25 To counter the financial impacts, some FRAs in England have prescribed charges for premises that produce multiple false alarms. For example, Cleveland FRS charges premises £345 (excluding VAT) from their fifth call¹¹. Similarly, Humberside FRS charges a minimum of £365.75 from the fourth false alarm¹².

Operational

- 26 Any response by the FRA will result in disruption to the planned activities of the responding station. This can divert people from training, prevention work, or premises familiarisation, which are all critical tasks for a crew to maintain operational capability. Disruptions to training are particularly costly, as highlighted by the Welsh Government's most recent report¹³, which notes a risk of staff competencies not being maintained where crews are regularly responding to false alarms.
- 27 The Authority's policy of responding to all calls (**paragraph 44** below) can result in significant disruption to preventative work in the community and to planned training. This is a significant weakness of the current approach, as it uses critical resources in an unproductive manner.
- 28 During interviews, officers justified the use of resources due to the benefits of attending premises. Officers cited familiarisation with buildings as the key benefit, particularly for buildings that fall outside of normal risk assessment procedures. This is a questionable benefit as any learning gained on false alarm calls is not recorded formally, meaning any added intelligence is kept only by the responding crew. False alarm attendance is also not an appropriate mechanism for informing risk assessments of higher-risk buildings, which should already be adequately covered by the existing risk assessment process.
- 29 The Chief Fire and Rescue Adviser and Inspector for Wales also found that the operational impact is also significant for firefighters within the RDS, who usually receive only two to three hours of training per week¹⁴, which may be removed entirely if required to respond to false alarms during training hours.

¹⁰ StatsWales, [Personnel \(headcount\) by employment type and financial year](#)

¹¹ Cleveland FRS, [Fire Alarms](#)

¹² Humberside FRS, [Call out charges 2022-23](#)

¹³ Welsh Government, [Thematic review of operational training within the Welsh Fire and Rescue Services](#), October 2022

¹⁴ Welsh Government, [Thematic review of operational training within the Welsh Fire and Rescue Services](#)

- 30 In addition, as the RDS relies on the goodwill of employers to release staff to attend a call during their work hours, increasing responses to false alarms may deter businesses from supporting their staff to take on an RDS role. This may also negatively affect retainment.
- 31 To counter the operational impact, some FRAs across Great Britain have adopted policies to prevent a response to AFAs. For instance, from 1 July 2023, the Scottish FRS will not respond to AFAs at non-domestic premises unless a 999 call is made or the building has sleeping premises, such as hospitals, care homes, hotels, or domestic dwellings. This decision was informed by a public consultation¹⁵ held in 2021.

Environmental

- 32 As set out in our report into Carbon Emissions Reduction¹⁶ in 2021-22, there are significant environmental impacts in responding to calls. This includes the use of fuel for a response, as well as the likely environmental impact of some retained firefighters travelling to their station to crew an appliance. Consequently, responding to false alarms will not help the Authority to deliver the Welsh Government's target of being net-zero by 2030 and will be challenging without a change in behaviour.
- 33 The Authority's Carbon Reduction Plan 2020-23¹⁷ sets out the massive carbon impact of the deployment of vehicles in the context of a 2018-19 baseline. 2,655 tonnes of CO² were emitted by fleet vehicles in 2018-19 – 27% of total emissions. However, the specific the impact of false alarms on this total could not be quantified by the Authority as it was unable to supply the estimated emissions per response or appliance.
- 34 The plan targets a 50% reduction in emissions by 2030 and identifies possible reductions in journeys as a solution to reducing fleet emissions. It does not, however, consider the specific impact of false alarm responses.

Safety

- 35 False alarm reduction is crucial to reducing safety risks. The prevalence of false alarms also has potentially significant impacts on the safety risks of communities, such as road risk and complacency.
- 36 Road safety risks are present whenever the emergency services respond to an incident. Driving at speed or under blue-light conditions, can generate significant risks to both crews and other road users. This risk is also present at road speed, due to the significant size and weight of fire appliances.

¹⁵ Scottish FRS, [Public consultation on Unwanted Fire Alarm Signals](#), December 2021

¹⁶ Audit Wales, [Carbon emissions reduction – SWFRA](#), February 2022

¹⁷ South Wales FRA, [Carbon reduction plan 2020-23](#)

37 High volumes of false alarms can also lead to complacency among building occupants. Not tackling alarms may lead to a lack of response during a real incident, placing both the occupants and the responding crew in addition danger. False alarm reduction, therefore, helps to reduce the safety risks to both the Authority’s crews and communities.

What others are doing

- 38 FRAs across the UK have devised different solutions to address the volume of false alarms. They are a significant burden on the local stations and limit the time that can be spent on other issues. Home Office research¹⁸ found that 63,000 hours were wasted in England during 2017-18 due to responding to false alarms.
- 39 As a result, English services have developed a range of approaches to help reduce the number of false alarms attended, which vary in their usage (**Exhibit 5**).

Exhibit 5: example approaches taken by English FRAs in 2018

Approach	Description	Proportion of English FRAs adopting the approach in 2018
Call challenging	Where fire control staff ask questions to those making a call to confirm if a fire is real to prevent a first response.	93%
Education and information initiatives	Information or materials are given to building occupants on the need to reduce false alarms.	93%
No confirmation needed	A normal response is sent without confirmation.	76%
Adapted responses	An immediate response is made but reduced from the Pre-Determined Attendance (PDA), eg one appliance is sent to investigate rather than three.	74%

¹⁸ Home Office, [Trends in fire false alarms and fire false alarm policies](#), November 2022

Approach	Description	Proportion of English FRAs adopting the approach in 2018
Requiring confirmation (or 'double knock')	A response is only sent if a call to confirm a fire is received, or if multiple alarms are triggered.	60%
Enforcement action	A legal enforcement action is taken against premises that often trigger false alarms, such as a fire safety audit or fine.	33%
Fines	A monetary charge is made for premises with repeat false alarms.	24%
Non-attendance	After a warning, the no-response is made to premises that repeatedly trigger false alarms.	13%

Source: [Home Office research](#)

40 The National Fire Chiefs' Council has published a toolbox¹⁹ to support FRAs with their management of false alarms and the potential options to be considered.

These include:

- no response being made to AFAs during daytime hours unless there is a higher level of risk (eg sleeping risk or high-risk premises like a hospital);
- charging the occupants of a building that repeatedly cause UwFS;
- requiring premises to register their AFAs to enable enhanced monitoring to help call handlers make better informed decisions;
- establishing thresholds for an adapted response based on the number of detector heads in a building (eg a building with 500 heads would get a full response with ten UwFS, whilst a building with 100 heads would not);
- prioritising work on educating and informing people of their responsibilities and having dedicated officers to help facilitate change in buildings/organisations with high numbers of false alarms; and

¹⁹ National Fire Chiefs Council, [Unwanted fires signals toolbox](#)

- engagement with ARCs to improve call handling and encouraging bodies to undertake visual checks to confirm there is a fire.

Both the toolbox and research demonstrate the breadth of approaches available for an FRA to utilise that reflects their local circumstances and risk appetite.

Managing false alarms in SWFRA

Current policy

- 41 For many years, the Authority has responded to most AFA calls. When receiving a call, control staff are encouraged to filter them by challenging the caller or seeking confirmation from the premises on the nature of the incident and whether there is an actual fire. This can then enable either escalation, recall, or complete attendance prevention.
- 42 For calls received between 8 am and 6 pm, only one appliance is deployed at regular road speed rather than the regular Pre-Determined Attendance²⁰ (PDA). This enables the crew to confirm whether a fire has occurred, to escalate the response, be stood down enroute, or to record the call as an UwFS.
- 43 The Authority has had a working group with responsibility for reducing UwFS since 2015, which is made up of a lead officer for false alarm reduction, Business Fire Safety (BFS) officers, data staff and others. It meets every six to eight weeks.
- 44 A new policy for targeting UwFS reductions from high-volume premises was adopted in 2020. This created a four-stage system for monitoring, building on data recorded by attending crews. Each stage is based on the volume of alarms a premises has generated in the preceding rolling 12 months (**Exhibit 6**). The UwFS working group supports interventions to reduce the volume of alarms from repeat offenders.
- 45 When a UwFS is recorded, it is entered into both the IRS and the internal management information system, BMIS. Each call is logged against a unique premises code and has added details recorded, such as specific location and cause.
- 46 As UwFSs are logged against specific premises, the Authority can generate reports that show the total volume of false alarms in a rolling 12-month period. The Authority's policy then classifies each location into one of four stages and describes the suitable responses by either the local incident or station commander, or centrally by Business Fire Safety (BFS) officers (**Exhibit 6**).

²⁰ There are exceptions to the policy, such as domestic premises, and the ability to escalate to a blue-light response based on the Incident Commander's assessment.

Exhibit 6: SWFRA four-stage policy for UwFS reduction

Stage	Volume of alarms in past 12 months	Local actions	Business Fire Safety team actions	UwFS Working group actions
1	1	<ul style="list-style-type: none"> Investigate the cause(s) Provide the building's responsible person (RP) with a reduction leaflet 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> None
2	5	<ul style="list-style-type: none"> Meet the RP to discuss causes and potential remedial actions Provide the RP with a reduction pack Consult with relevant BFS team 	<ul style="list-style-type: none"> Support station commander actions 	<ul style="list-style-type: none"> None
3	10	<ul style="list-style-type: none"> Meet the RP to discuss causes and potential remedial actions Liaise with relevant BFS team Consider referral to the working group 	<ul style="list-style-type: none"> Support station commander actions Complete a note for the premises BFS file Consider sending a letter to the RP and a fire safety audit 	<ul style="list-style-type: none"> Review local recommendations Inform a discussion with Heads of Service

Stage	Volume of alarms in past 12 months	Local actions	Business Fire Safety team actions	UwFS Working group actions
4	20	<ul style="list-style-type: none"> Meet the RP to discuss causes and potential remedial actions Liaise with relevant BFS team Refer to the working group 	<ul style="list-style-type: none"> Support station commander actions Complete a note for the premises BFS file Consider sending a letter to the RP and a fire safety audit 	<ul style="list-style-type: none"> Review local recommendations Inform a discussion with Heads of Service

Source: SWFRA Operating Policy 09.008

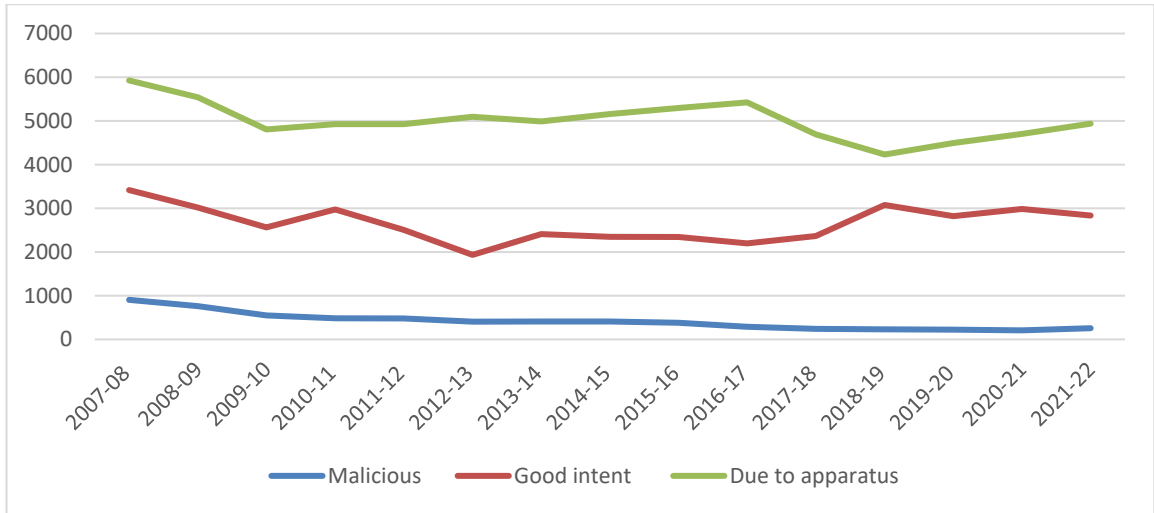
- 47 Within this policy, actions are devolved to the local level, which can serve both as a strength and weakness. Whilst it enables false alarms to be considered in the local context and risk profile, it also increases the potential for different approaches to be taken. This may be problematic for businesses or organisations that work across the Authority’s communities, where one station recommends a fire safety audit whilst another makes more informal engagement.
- 48 A locally focused approach also means that false alarms will vary in prioritisation, despite forming most of the Authority’s responses (**Exhibit 8**). This risk is minimised by the requirement for station commanders to log activity in their monthly station audit, although when presented during fieldwork this varied in depth and detail.

Current performance

- 49 Since 2007-08, the volume of total false alarms has fallen by 22% to a total of 8,028 in 2021-22 (**Exhibit 7**)²¹. This is primarily due to a significant fall in malicious calls (-72%) and calls due to apparatus (-17%). However, since 2018-19, the volume of false alarms due to apparatus has begun to increase.

²¹ Note – this includes both domestic and non-domestic false alarms responded to, due to how data is reported.

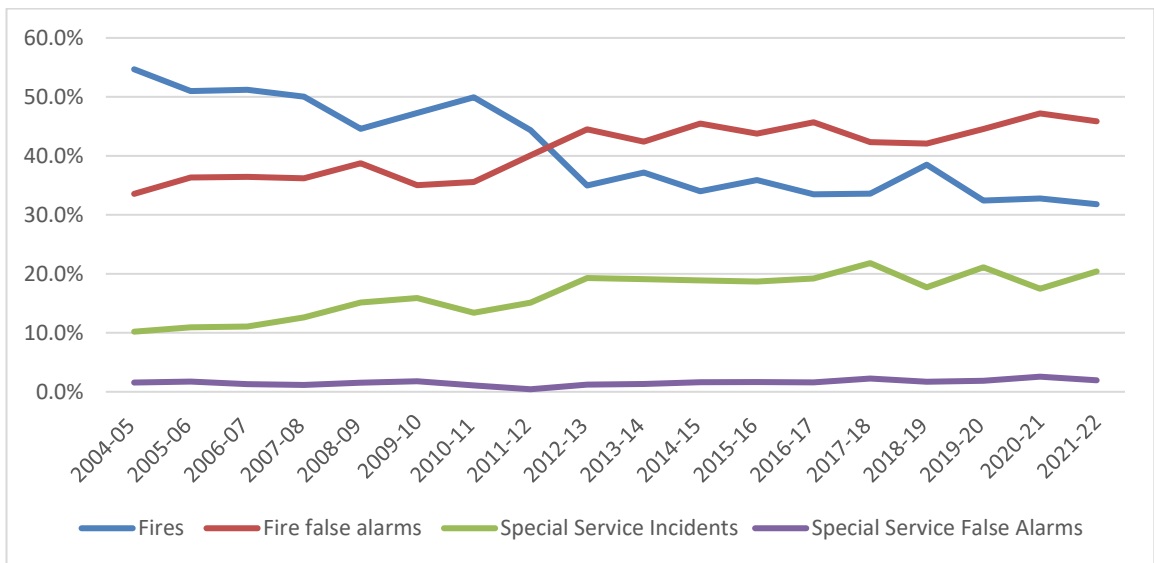
Exhibit 7: false alarms of all types reported by SWFRA, 2007-08 to 2021-22



Source: [StatsWales](#)

50 In 2021-22, total false alarms attended were 31% greater than actual fires attended (5,566), and they are now the single largest reason for incident attendance by crews (**Exhibit 8**). This is in line with the trend since 2012-13, which is worsened by the decline in the actual number of fires that saw a 60% reduction between 2004-05 and 2012-13, but has been broadly consistent since.

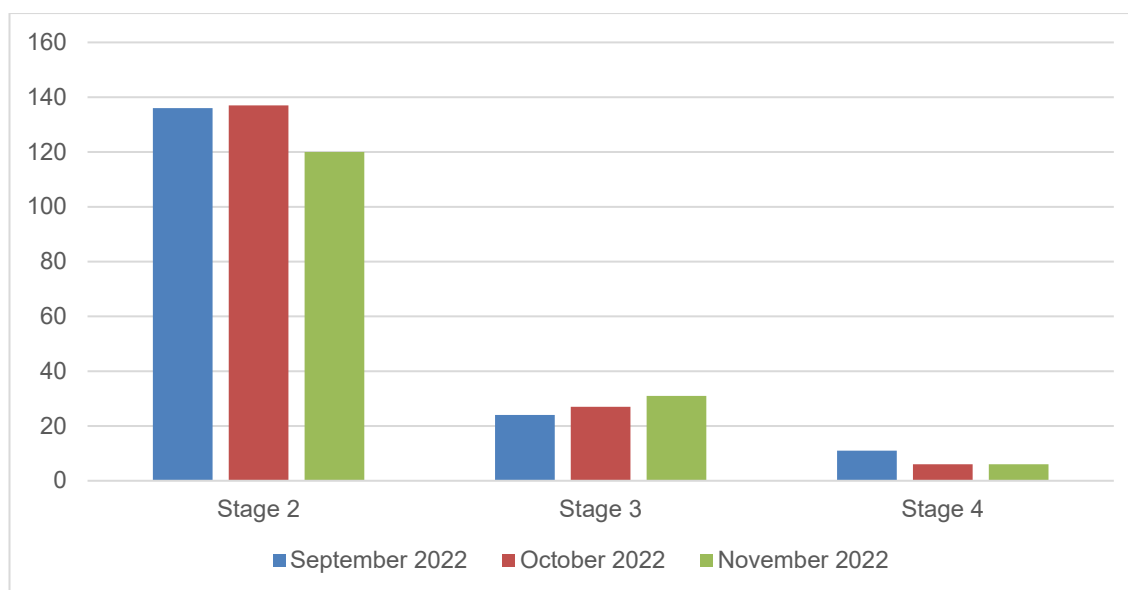
Exhibit 8: fires, special service incidents, and false alarms attended by SWFRA, 2004-05 to 2021-22



Source: [StatsWales](#)

- 51 In explaining the recent upturn, officers have cited the increased volume of AFAs installed in buildings following the Grenfell Tower fire and changes in British Standards. However, we were unable to assess this, as data is not collected on the number of AFAs installed or the number of premises connected to each ARC. This makes it difficult to quantify this explanation with evidence. In addition, as alarm systems become increasingly more sophisticated and normalised, this explanation is increasingly weakened.
- 52 As the introduction of the four-stage policy is relatively recent, it is difficult to draw meaningful conclusions about its impact. Data was provided for premises in stages two to four over the three-month period September to November 2022 (**Exhibit 9**). It shows that whilst the total number of premises has declined, there has been some escalation in the third stage as premises fall out of stage four. This appears to be a positive trend; however, a longer period of data would be needed to make a more definitive assessment.

Exhibit 9: number of premises at stages two to four, September to November 2022



Source: SWFRA, BMIS IT System

- 53 The health sector has generated the largest volume of false alarms for many years. In November 2022, all stage-four premises were NHS facilities. NHS Wales reported 793 UwFS from the three health-board areas²² covered by the Authority in 2021, a fall of 8% from 2020. However, South Wales NHS UwFS accounted for 57% of the NHS total in 2021, showing the scale of the issue for the Authority.

²² This includes Aneurin Bevan, Cwm Taf Morgannwg, and Cardiff and Vale UHBs. It does not include Velindre NHS Trust.

- 54 The Authority has a dedicated team to manage engagement with health to build relationships and to tackle issues, such as false alarms, directly. During interviews, officers felt that the recent reduction was due to more constructive and positive relations, as well as the usage of more sophisticated detector heads in hospitals. Similarly, interviewed health board staff described positive, constructive relationships that they felt had supported them to reduce false alarms.
- 55 Healthcare has specific challenges that can trigger greater numbers of false alarms, such as procedures that produce spray and challenging patient behaviour. The significant demands on NHS staff also lead to false alarms due to spaces being adapted for breaks that have not been designed for cooking or distractions leading to food being burnt. This makes the ability of the Authority to reduce alarms completely very challenging in the present climate.

Use of data and risk assessment

- 56 Data is crucial for informing the approach taken by the Authority, but it is not currently being fully utilised. This includes the single appliance response timings, which are not informed by risk or data. This may expose the Authority to more unknown risk.
- 57 In addition, the approach does not reflect premises-specific levels of risk. Currently, a blanket approach is applied to all non-domestic premises with a single appliance response to AFAs. However, as risk varies between each building, client, and community, a risk-based approach could be used to adapt responses. This could lead to withholding responses until an alarm is confirmed or to the regular PDA for riskier premises. This would also enable the Authority to respond to new work patterns as they develop post-pandemic.
- 58 A key factor when setting policy is the Authority's risk appetite, but it is not clear whether the Authority has made an informed decision concerning the acceptable level of risk based on a full understanding of all aspects of performance nor has it involved stakeholders in deciding this. Modelling of different policies has also not been completed to assess the impacts of different policy choices. Whilst challenging, utilising data to consider alternative approaches would help assess potential benefits and risks.
- 59 For example, hospitals are 24:7 services with significant numbers of staff located throughout buildings who, when an alarm is triggered, confirm if a fire has occurred. In 2021-22, 60% of healthcare false alarms occurred between 8 am and 6 pm – core service hours, when the number of staff and visitors at premises would be high.
- 60 Consequently, the Authority could assess the current policy of a single appliance attending against a policy of non-attendance until a false alarm is confirmed due to the risk of a confirmed fire being low. Both would lead to a delayed full PDA if a fire is confirmed, as a single appliance would be insufficient to tackle a fire in a complex environment, such as a hospital. In deciding on an approach, these factors, alongside stakeholder views, should be clearly considered.

61 Likewise, to target interventions, accurate and timely data is required to understand the causes and trends. However, a significant proportion of alarm records do not include the reason for activation. For instance, in 2021-22, 20.2% of non-domestic false alarms due to apparatus had an ‘unknown’ cause recorded in BMIS. This limits the value of the data and impedes the Authority’s ability to use real time information to help improve performance.

Response prevention

62 The AFA policy sets out that call filtering ‘is an important factor in the reduction of UFS incidents and, consequently, also road and community risk’²³. Yet only a small proportion of false alarm calls are prevented from generating a response by a crew. This includes both a complete prevention in response and recalling appliances already enroute.

63 BMIS data shows that the Authority attended 8,028 fire false alarms (both domestic and non-domestic) in 2021-22. Of these, 4,937 were due to apparatus, which mostly relate to AFAs²⁴. Call filtering prevented 2,020 attendances to AFAs in 2021-22 – 29% of total false alarms due to apparatus. Overall, 19% of total false alarms received by the Authority were recalled in 2021-22.

64 Up to November 2022, the performance in 2022-23 has been of a similar proportion (**Exhibit 10**). This highlights that, despite being a key factor, call filtering is not resulting in significant reductions in responses. This may be due to the risk such a policy places on individual call handlers, who must balance being challenging, keeping a relationship with ARCs, and accepting the risk that an incident may have occurred.

Exhibit 10: number of false alarm calls received and their resulting attendance, 2021-22 and 2022-23

	2021-22		2022-23 ²⁵	
Attended false alarms	8,367	80.6%	5,887	79.3%
No attendance	1,214	11.7%	906	12.2%
Recalled	806	7.8%	635	8.5%
Total false alarms	10,387		7,428	

Source: SWFRA, BMIS IT System

²³ SWFRA, SOP-6.18 Automatic fire alarm incidents

²⁴ Data provided related solely to AFAs and does not split between domestic and non-domestic alarms.

²⁵ Data for 2022-23 is for an eight-month period only. Figures include special service false alarms also.

- 65 ARCs are inclined to request a response to pass the risk from themselves to the FRA. This follows incidents, such as the Weston-Super-Mare Pier fire, where ARCs have been found to be negligent and fined for not alerting emergency services.
- 66 The Authority should ensure that their policy is informed and shaped by the reality of the environment that it operates within. If call filtering is not an effective means of reducing attendance, the policy should focus on more effective solutions to provide the capacity needed for other priorities.

Managing and evaluating performance

- 67 Whilst it is for officers to develop the Authority policy and manage operational responses, members must scrutinise activity and be satisfied that the Authority is effectively managing potential risks and maximising potential benefits.
- 68 Members receive quarterly performance reports including a brief narrative of actions and headline data within the Business Plan Actions Report. Data covers:
- total false alarms attended overall with comparison to target and last year;
 - a breakdown of performance by type with comparison to last year; and
 - a breakdown by local authority of total false alarms and types of false alarm by month and compared to last year.
- 69 We found that the current focus of reporting does not mirror the Authority's four-stage policy. This means that members cannot assess the performance of the current approach. Instead, they are supplied with headline figures that offer little insight into the performance, such as total false alarms by local authority area. This is not a meaningful measure and limits the potential benefits of member scrutiny. Given the Authority has a wealth of data and a clear, incisive management information system, there are clear opportunities to strengthen current monitoring and evaluation to ensure data is used to assess how effective the Authority's policy is being applied.
- 70 Targets are similarly not aligned. Targets are set based on previous years, rather than as an improvement goal, with local variances between local authority areas without being informed by the local risk environment. This approach focuses on an assessment of the overall count rather than evaluating whether the Authority's intervention with higher-frequency premises is working.
- 71 Greater insight would be provided by introducing meaningful targets for both local stations and the Authority overall. In conjunction with the data-led appraisal of other approaches and stakeholder involvement, this would enable a more informed assessment to be made, which considers a balance of benefits and risk.
- 72 These steps should also better equip members to hold officers to account for their performance and to be more informed of different approaches, their strengths, and risks. At present, discussions of false alarms during committees are limited, with little reference in minutes. Improving performance reporting will support members to hold officers to account and assess the effectiveness of the policy.

Reviewing and strengthening performance

- 73 A key area for improvement is the inclusion of learning from elsewhere. The Home Office research and NFCC toolbox above illustrate the range of alternative approaches and policies in place in England. These can be tailored to reflect local circumstances and the risk appetite of each Authority.
- 74 During interviews, officers have explained that their focus has been internal, prioritising implementing the new policy and ensuring compliance. Whilst this is critical, it does mean that the Authority is not taking the opportunity to benchmark performance and identify other approaches that support improvement. This would deliver a more informed, wider analysis for officers and members to assess their policy's suitability and effectiveness.
- 75 The approach could also be strengthened through, for example, making better use of station level information and sharing good practice more widely. For instance, where a station has had success in reducing false alarms from an office building, this could be shared for others to learn from.
- 76 The primary forum for sharing examples is the network of UwFS champions selected at each station. These firefighters can find approaches that have been successful and promote them to other stations. It may also enable discussion between peers to consider new, innovative approaches. The network can also serve to reduce the potential for significantly varying approaches, in addition to the oversight role of the UwFS working group for premises in stage three or above.

Greater involvement and communication with stakeholders

- 77 Understanding public and stakeholder expectations is critical to ensuring that the Authority meets their needs. Involvement of stakeholders when shaping plans is also a crucial way of working to show the Authority's commitment to the Sustainable Development Principle of the Well-being of Future Generations Act. In developing the current policy, it is unclear whether stakeholders were actively involved in shaping the policy.
- 78 During interviews, both members and officers said that the public expects a response from the Authority when an alarm is actuated. However, except for NHS partners, the Authority has not undertaken any recent research or engagement with partners to identify opportunities to revise the policy and reduce demand on its services. Involving stakeholders may result in significantly different conclusions.
- 79 For example, the Scottish FRS consulted stakeholders on three options to change their policy towards false alarms. They found that 60% of respondents agreed that an appliance should not automatically be sent to an AFA²⁶. This was then followed by a virtual event to bring together building duty holders to discuss the new plan and how to reduce UwFS. As a result, they are introducing a revised policy in July

²⁶ Scottish FRS, [Automatic fire alarm consultation outcomes and analysis report](#), December 2021

2023. The consultation also found that some duty holders has very little knowledge of their responsibilities to minimise false alarms. This underlines the importance of clear, persuasive communication with stakeholders to influence change.

- 80 SWFRA supplies both leaflets and document packs to crews to give to premises when they attend false alarms. Packs include a letter explaining the impacts of unwanted AFA actuations, including complacency, a loss of crew time, and a financial cost of £400 per response.
- 81 However, this information is not always up to date and has some key gaps. The pack includes a pan-Wales booklet on UwFS reduction, which was last updated in 2016-17. The UwFS leaflet provided to crews dates from 2012 and includes data that significantly underreports false alarms, stating around 9,700 false calls are received annually, when the total figure for 2021-22 was 15,230 – a 58% difference. In addition, the QR code supplied to enabled people to find further information does not work. Taken together, these issues reduce the persuasiveness of the literature.
- 82 Officers also do not attend stakeholder network events nor engage with representative bodies to promote false alarm reduction. This is a missed opportunity to raise the profile of false alarm reduction.
- 83 While the Authority can show working closely with the NHS to target reductions, this has not been replicated with others. Many causes of false alarms are sector-specific and occur more often in different settings, such as social care or manufacturing. Adopting tailored approaches to different sectors will help raise the profile of reduction work and enable collaboration with sector networks and representative bodies that may offer further gains.
- 84 Similarly, many of the organisations and sectors that produce false alarms in South Wales also operate in other areas of Wales. This strengthens the potential influence that could result from Welsh FRAs collaborating more closely. This may also produce efficiency gains for shared-control facilities.

Appendix 1

Approach

Our approach was to understand the Authority's approach to fire false alarm reduction, focusing in particular on non-domestic settings. The review sought to answer the question 'Is the Authority doing all it can to reduce the prevalence and responses to non-domestic fire false alarms?'. Our focus was on the actions of the Authority, not the actions available to building managers or responsible people.

We completed our fieldwork across all three Fire and Rescue Authorities separately, using the same team across all three. This enabled insights to be drawn into each Authority, as well as informing a forthcoming national output.

We sought to be flexible to fit around officers when organising and delivering our fieldwork, ensuring that our work did not detract from the operational work of the Authority.

Methods

Our review was completed between November 2022 and March 2023. We used a range of methods to draw conclusions for our review:

- document review – we reviewed policies and documentation provided by the Authority, as well as reviewing their published information, such as their website. In addition, we also reviewed documentation from the Welsh Government, NHS Shared Services Partnership (NWSSP), and representative groups.
- data analysis – we analysed both data provided by the Authority and publicly available data. This included management data, Incident Recording System (IRS) data, and other available data from StatsWales.
- local interviews – we interviewed officers nominated by the Authority that covered a range of different areas, both corporately and locally. This included the lead officer for false alarms, Business Fire Safety (BFS) officers, and senior officers.
- national interviews – we interviewed representatives of local health boards, the NWSSP, and the National Fire Chiefs Council (NFCC).
- survey – we designed a survey for building managers and responsible people to gauge their views of false alarms and the Authority. We encouraged the Authority to send this to organisations in their area, as well as promoting it through professional networks, such as the NHS Estate Managers group. Unfortunately, too few responses were made to use this evidence to draw conclusions.



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