

## Report of the Chief Fire Officer

### Reducing Unwanted Fire Signals (UwFS)

#### Purpose of report

1. To provide Members with a review of Unwanted Fire Signals (UwFS):
    - UwFS accounted for 44.4% of all incidents attended by HWFRS over the past 3 years (2019-22).
    - Of the 28 Fire & Rescue services inspected by HMICFRS in tranche 1 and 2 (2021/22), HWFRS was one of twelve Services where unwanted fire signals were identified as an area for improvement.
  2. To consider the benefits and disbenefits of attending in response to automatic fire alarms (AFAs); whether and to what extent this is a problem and provide a range of options for consideration.
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#### Recommendations

##### *It is recommended that:*

*i) HWFRS continue the existing policy of maintaining an effective response to AFAs at all premises where there is a sleeping risk, including:*

- *domestic dwellings; and*
- *other residential premises (FSEC Groups A and B) such as;*

*Hospitals*

*Care Homes*

*Houses in multiple occupation*

*Hostels*

*Hotels;*

*ii) a risk-based call filtering methodology be introduced during the lower risk periods 08:00-18:00 hrs for AFAs at commercial premises within Fire Service Emergency Cover Groups C and D (but excluding public buildings and places of further education and schools) i.e.*

*Shops*

*Factories*

*Offices*

*Other Workplaces; and*

*iii) the previous decision taken in September 2013 of not charging for false alarm AFAs on the grounds that the cost of recovery measures were likely to exceed the income generated, be reaffirmed.*

## **PART 1 - Introduction and Background**

3. **Unwanted Fire Signals (UwFS)** are calls that very often will result in the classification of a 'false alarm' arising from automatic fire detection and fire alarm (AFA) systems, which are passed through to the Fire Service. These can originate from a variety of sources, such as; dedicated Alarm Receiving Centres (ARCs), responsible persons at the premises, or from members of the public hearing a fire alarm activating and calling the Service.
4. **Automatic Fire Alarms (AFAs)** are electronic systems that range from commercial fitted systems to small domestic smoke detectors. They 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, or where the occupants may not be able to respond to, or detect in its early stages (e.g. illness, infirm, or asleep).
5. AFAs should be activated by smoke, however they can also be actuated in other ways by many common airborne materials that can be mistaken by the system for smoke, such as; dust, insects, steam, aerosol products, and also by electronic faults with the system. As a result, a high proportion (96.8%) of the calls to AFAs that HWFRS attend turn out to be classified as false alarms (an average of 2,465 incidents annually).
6. In HWFRS, false alarms over the past 3 years (2019-22) has accounted for 44.4% of all incidents attended, around 3.4% higher than other FRSs in England.
7. HMICFRS reported in their 2021 Tranche 1 inspection that HWFRS hasn't taken enough action to reduce a consistently high number of UwFSs. It gave the recommendation that 'the Service should ensure it effectively addresses the burden of false alarms'. However this 'burden' does have some operational benefits, which HMICFRS are not taking into account in their judgement.
8. A comprehensive review of UwFS from 2009/10 to 2021/22 has been undertaken and considered by the Service's Strategic Leadership Board (SLB). This is available on the Service website at ([link here](#)) and members are encouraged to refer to this for further detailed analysis.

### **UwFS in HWFRS**

9. On average, over the past 13 years the Service has attended around 2,547 AFAs annually, of which 96.8% (or 2,465 incidents) turn out to be a false alarm. AFAs which raise a genuine alarm include those that resulted from special service calls such as flooding, which account for 0.3% of AFAs (7 incidents annually), and fire which account for 2.9% of AFAs (approximately 75 incidents annually).
10. Those AFAs that ultimately result in fires vary in severity, from those that are extinguished prior to the HWFRS's attendance to those requiring HWFRS resources. Of the relatively small number of incidents where an AFA response was subsequently recorded as a fire:

- 68.9% or approximately 52 incidents annually occurred in dwellings/other residential premises,
  - 29.8% (around 23 incidents annually) occurred in non-residential premises, and
  - the remainder attributed to outdoor structures / vehicles.
11. During the 13-year period from 2009-22, an annual average of 10 casualties were reported at AFA incidents. 92% of these incidents where casualties were involved occurred in domestic dwellings and other residential premises (i.e. in Fire Service Emergency Cover categories A and B).
  12. In HWFRS during 2009-22, the vast majority of false alarm AFA incidents are responded to by wholetime station on duty crews, thus not incurring additional revenue pay costs for on-call staff. Over the last two years (2020-22) the average duration of an AFA including travel time has been 32 minutes 47 seconds. Annually, approximately 1347 hours are spent by crews attending AFAs, which turn out to be an unwanted fire signal.

### **HWFRS current approach to responding to AFAs**

13. The current approach taken by the Service in response to all AFAs includes the mobilisation of normally only one appliance, usually at road speed, subject to life and known (Intel) risk.
  - Attendance (speed and weight) increases if the intelligence of premises and their risks indicates the need.
  - When a responsible person confirms any previous call as being a false alarm, there is a 'return en-route' policy, crews will not attend and will become immediately available and released from the incident.
14. During extreme (spate) conditions, e.g. during severe weather events, the Service has approved alternative mobilising guidance. Following call filtering, no attendance to any AFA can be made unless a fire is confirmed or unless it is a high-risk premises.
15. There are approximately 8 instances per month on average of repeat (3 or more) false alarm AFAs to the same premises. All of these are routinely followed up by Protection Fire Safety Inspectors to improve Fire Safety compliance and reduce UwFS, thus 'repeat offenders' are already being addressed. The sanction of non-attendance at these premises, unless a fire is confirmed, remains a viable option.
16. This current approach 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 per year) of the total annual incidents HWFRS attended.
  - Mobilisation of a single appliance to all AFAs ensures a timely response and intervention, without committing excessive resources. Additionally, Fire Control operators will re-route any fire engine attending an AFA call to a higher risk call if necessary, and if the fire engine going to the AFA is the nearest resource.

- The extant emergency driving graded response policy mitigates risk to the safety of crews and members of the public on the road, when travelling under blue-light emergency response conditions starting from a non-emergency response and allowing crews to scale-up the speed of response based on potential risk and information available.

### **Benefits of operational fire crews attending AFAs**

17. There has been an increasing national stigma around responding to AFAs that has developed over years, which seems to imply that all calls to AFAs are purely a waste of time and resources; however, this is not necessarily a fair assessment. Whilst AFAs arguably make up too large a proportion of HWFRS operational response activity, there are a number of key benefits from attending these calls;
- Attendance and therefore familiarisation at a range of premises that fire crews may not ever otherwise visit. This can lead to new Intel information being produced and finding previously unknown risks and processes that help crews prepare and respond better when a real incident occurs.
  - Attendance at commercial properties enables crews to evaluate fire safety measures and management in the event of fire, and pass concerns onto fire safety inspectors for further consideration.
  - Attendances at domestic premises for AFAs (46.6% annual average) enable crews to evaluate the need for Home Fire Safety Visits (HFSVs), identify vulnerable people that we may not otherwise be signposted to, and to assess whether there are any safeguarding concerns.
  - Attendance enhances topographical knowledge for crews of their local area, and increases Service visibility and contact in supporting communities and businesses.
  - Often AFAs are a result of genuine concern, or a system operating correctly and within operating parameters, therefore it is important that our communities respond to these alarms and do not ignore them, is often underpinned by the attendance of the Fire Service.
  - Many AFAs are at premises, which would be deemed to be a higher risk in the event of fire for loss of life, or from critical or highly important buildings (hospitals, heritage, schools etc.). Being able to tackle a fire early in the unlikely event it should occur could be the difference between a relatively minor repair and the entire loss of a building. Whilst a very low proportion, around 75 AFAs per year result in a fire where a fire engine is in attendance earlier than it would have been if the AFA had not been responded to.

### **Disbenefits of responding to AFAs**

18. The consequences of responding to AFA's which subsequently turn out to be UwFS are:
- AFAs can disrupt programmed activities such as prevention and protection visits or training.
  - AFAs incur running costs (fuel etc.).

- AFAs will on 2.6% of occasions incur salary costs for On-Call staff (estimated £5000 per annum).
- AFAs add to vehicle movements on our roads.

### **What other Services do**

19. The HMICFRS Tranche 1 and 2 inspection reports noted other Services typically use a range of measures to reduce UwFS, including;
  - Consistent application of an UwFS policy.
  - An effective risk-based approach towards UwFS reduction.
  - Effective and consistent call filtering at Fire Control based on risk.
  - Working with businesses to highlight the importance to managing their alarm systems to prevent unwanted calls.
  - Working with Alarm Receiving Centres (ARC) and building owners to identify false alarm causes and seeing what can be done to reduce further unwanted activations.
  - Attendance where there is a reasonable belief a fire has broken out or where there is a risk to life.
  - Ability to recover costs for attendance at sites, which are unable or unwilling to reduce calls from UwFS.
20. These principles could be seen as 'best practice' and have been taken into consideration in preparing the recommendations in this report.
21. Nationally, none of those Services which were inspected by HMICFRS within Tranche 1 and 2 (2021-22) had a blanket non-attendance policy towards AFAs. Instead, using a risk-based approach, some Services have chosen to implement a non-attendance policy to certain premises during specific times of day, or to have an exemptions list of premises types where an attendance would be made. Call filtering is used to determine each response.

### **Call challenging / filtering**

22. Call filtering or challenging has been noted by HMICFRS as an effective means through which to reduce UwFS, however it requires a consistent and clear application of policy to certain incident types and premises and requires individual Control staff to make decisions, and sometimes will vary the proposed response indicated by the mobilising system. Understandably, this requires a degree of confidence and skill, as well as a robust and trusted management policy to ensure the operator is adequately able to make these decisions under emergency response conditions.
23. Calls received from ARCs often lack information about the cause of the activation to accurately determine if the alarm is false, due to the ARC being a remote call handling and monitoring facility. In some circumstances where ARCs are not particularly effective and the premises has a higher degree of risk it may be simpler, quicker and safer to send a fire engine to the scene, especially if the occupant is vulnerable.

## **PART 2 - Options for Consideration**

### **24. Option 1 - Continue to respond to all AFAs as at present**

- This does not address the concerns identified by HMICFRS and would still leave the Service responding to an average 2,465 UwFS per annum. This option is therefore not recommended.

### **25. Option 2 - Implement a blanket policy of non-attendance at AFAs**

- It has been noted above that none of the Services inspected by HMICFRS in Trances 1 and 2 have implemented such a blanket non-attendance policy.
- Of the average 2,547 AFAs received annually, approximately 3% (75 incidents) turn out not to be false alarms. Of these, an average 52 incidents are in dwellings or other residential properties and have accounted for an average of 10 casualties per annum. Whilst a blanket non-attendance policy would avoid a very significant number of UwFS, it would also leave vulnerable people at risk and would be a significant change in the services currently provided across both counties to our communities and businesses.
- Additionally, a recent Regulation 28 coroner's *report* to prevent future deaths published in 2022 highlighted that a residential premises, which was not connected to an ARC, contributed to a delay in attendance at a fatal fire.
- AFAs which resulted in injuries in premises with a sleeping risk suggest maintaining a 24/7 response (usually one fire engine at normal road speed) is proportionate at this current time.
- Whilst this is an option for Members to consider, it is not recommended by Officers that a blanket non-attendance policy be supported.

### **26. Option 3 - Introduce a risk-based call filtering methodology for specific categories of calls**

Adopting a risk-based mobilising model towards AFAs using the nationally recognised FSEC premises risk groupings (see Table 1), would allow the Authority to determine and maintain a prompt response to higher risk premises, and those premises where a refined call filtering process may be applied.

**Table 1: FSEC (Fire Service Emergency Cover) Risk Groupings for Property Types**

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		Licensed Premises		
M			School	
N			Shop	
P			Other Public Building	
R				Factory
S				Office
T				Other Workplace

\*Note: Group C premises correspond to the following premises types;

- Public buildings
- Public Services
- Public Sporting Venues
- Public Places of Worship
- Public Places of Entertainment or Culture

27. Based on an evaluation of premises posing the greatest risk to life, it is reasonable to follow a nationally accepted understanding of risk as per the FSEC categorisation of premises types within Groups A and B, 'sleeping and unfamiliar' and 'sleeping familiar and licenced premises' (Table 1). These principles are extended to include maintaining a response towards all other premises where there is a sleeping risk (i.e. domestic premises).
28. Commercial premises without a sleeping risk represent those premises where the risk to life is lower based upon FSEC grouping and incident data. This would exclude those premises with heightened risk factors such as museums, heritage, and high public value.
29. It should be noted that;
- Maintaining a response to Public Buildings accounts for premises where there is the potential for large numbers of people to be present.

- Maintaining a response to places of further Education and Schools considers the risk to life of the young and vulnerable when occupied, but during the larger period where unoccupied it takes into account the community impact and social costs of the loss of a school building.

### Refining this proposal further

30. Although risk-based call challenging methodology could in theory be applied 24/7, in practice it is likely to be most effective during the daytime, when premises are occupied and the existence or otherwise of a fire can be more readily ascertained by the occupants. Call-challenging in respect of empty premises is unlikely to be effective and so would in practice, still lead to a response being sent.
31. The following 9 response models have been considered and analysed based on historical data for FSEC Groups C and D (see table below).

Option	Enhanced call filtering time	Estimated annual reduction of UwFS	FSEC Group
3.1	09:00 - 17:00	269	C and D excluding public buildings and places of further education and schools.
<b>3.2</b>	<b>08:00 - 18:00</b>	<b>332</b>	
3.3	08:00 - 20:00	374	
3.4	24/7	576	
3.5	09:00 - 17:00	434	All C and D premises.
3.6	08:00 - 18:00	533	
3.7	08:00 - 20:00	597	
3.8	24/7	907	
3.9	No call filtering applied	0	Attend all FSEC groups

32. **Officers recommend Option 3.2 is approved;** that risk-based call filtering in response to AFAs between the hours of 08:00 to 18:00 is adopted by the Fire Authority for Fire Service Emergency Cover (FSEC) categories C and D, excluding public buildings and places of further education and schools. This would achieve an estimated annual reduction of 332 UwFS the Service attends. This is expected to result in a 37% reduction of attendance to UwFS for FSEC categories C and D premises, and a 13.5% reduction in the total UwFS attended annually by the Service. Fire Control operators will be trained to issue supportive advice to those properties not being attended as a result of this proposal.
33. Should the option above be approved the Service will ensure a range of measures are taken to warn and prepare those premises likely to be affected, alongside an increased level of support and information being delivered by Fire Control staff.



### **PART 3 - Cost Recovery for Attendance at Persistent False Alarm AFAs**

34. In accordance with the Fire and Rescue Services Act 2004, the Service has the discretion to make a charge for reports of fire where:
  - a) The report is of fire 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; and
  - 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.
35. The objective of recovering costs from premises, which persistently cause false alarms, is to promote better management of malfunctioning fire warning equipment. Where cost recovery measures prove ineffective, call-filtering measures should be considered.
36. It must be noted that there are currently no premises that could be classified as 'repeat offenders' within the Service area based on guidance concerning detector failure rates. A policy of charging for UwFS is therefore unlikely to be beneficial, other than as a potential deterrent to encourage better management of equipment.
37. In September 2013 the Fire Authority approved a policy of not charging for false alarm AFAs with the cost recovery measures likely to exceed the income generated. This approach was proportionate based on the limited number of problematic premises, and the potential administrative burden in applying a suitable policy.

### **Conclusion**

38. The historical impact of UwFS in HWFRS has been extensively reviewed. With HMICFRS identifying that the Service should ensure it effectively addresses the burden of false alarms, this review is timely and necessary.
39. A risk-based call filtering in response to AFAs between the hours of 08:00 to 18:00 for Fire Service Emergency Cover (FSEC) categories C and D, excluding public buildings and places of further education and schools, would achieve an estimated annual reduction of 332 UwFS the Service attends. This equates to 37% reduction of attendance to UwFS for FSEC categories C and D premises, and a 13.5% reduction in the total UwFS attended annually by the Service. This will allow the Service to determine and maintain a prompt response to higher risk premises (FSEC groups A and B), and reduce attendance at UwFS for FSEC groups C and D.

## Corporate Considerations

<p><b>Resource Implications</b> (identify any financial, legal, property or human resources issues).</p>	<p>UwFS reduction and application of new policy via existing Protection staffing. Any agreements with ARCs affected by any change to mobilising will need to be considered.</p>
<p><b>Strategic Policy Links &amp; Core Code of Ethics</b> (identify how proposals link with current priorities and policy framework and align to the Core Code of Ethics).</p>	<p>UwFS links directly to the Services CRMP, and core Protection Strategy. Other links to consider; existing mobilising guidance / interim AFA policy amendments.</p>
<p><b>Risk Management / Health &amp; Safety</b> (identify any risks, the proposed control measures and risk evaluation scores).</p>	<p>Risks with respect to delayed attendances. Potential for fires resulting from AFAs. Mitigated by targeting and call filtering commercial non-sleeping premises. Communication strategy to commercial premises.</p>
<p><b>Consultation</b> (identify any public or other consultation that has been carried out on this matter).</p>	<p>None.</p>
<p><b>Equalities</b> (has an Equalities Impact Assessment been completed? If not, why not?).</p>	<p>Not applicable.</p>
<p><b>Data Protection Impact Assessment</b> (where personal data is processed a DPIA must be completed to ensure compliant handling).</p>	<p>Data protection around premises / casualty data within reports.</p>

**Background papers:** Reducing Unwanted Fire Signals (UwFS) in Hereford & Worcester Fire and Rescue Service, April 2023 ([link here](#)).