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Fire Sprinkler Association

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Yearbook 2025/26

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British Automatic Fire Sprinkler Association Yearbook 2025/2026

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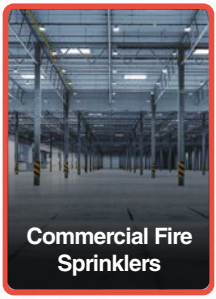
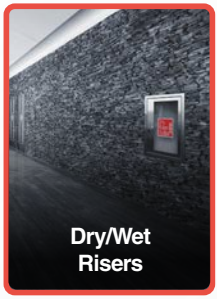
Are You at Risk?

Without full product traceability, how can you be sure of the quality, compliance, and safety of your materials?

Unknown origins mean unknown risks
putting your projects, reputation, and even safety on the line.





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Welcome to the 2025/26 BAFSA Yearbook

As we reflect on our growing membership and the vital role BAFSA plays in representing and promoting the water-based fire suppression industry, it's important to reaffirm our core purpose: to support the industry's progress and to grow alongside it.

With continued expansion across market sectors, it is essential that BAFSA strengthens its presence in all areas - engaging actively with every segment of our membership. By doing so, we can ensure the industry speaks with one voice, influencing policy and shaping standards that reflect our shared goals.

Through collaboration with members and key stakeholders, BAFSA remains a trusted source of expertise and insight across the fire suppression and fire safety community. This yearbook is one way we deliver that value by bringing together critical information and industry knowledge in a single, accessible resource. A full directory of our 200+ members can be found at the back of this edition, or online via our website www.bafsa.org.uk

We are also proud of the ongoing development of the BAFSA Information Files (BIFS) and the expansion of our training and development offerings. These initiatives are designed to support career pathways, attract new talent, and address the resource challenges facing our growing industry.

We hope you find this yearbook to be an essential reference and a valuable tool in your professional journey within the fixed water-based fire suppression sector.

Russell Dixon
Chair
September 2025

British Automatic Fire Sprinkler Association
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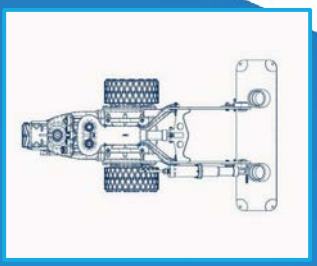

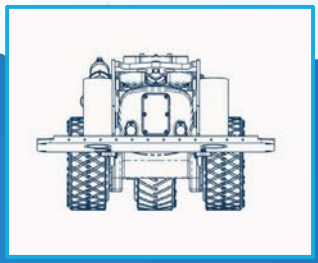

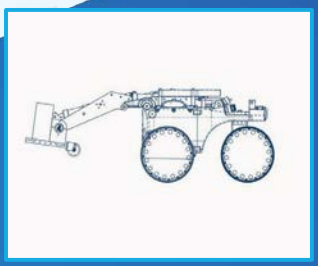

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From the chief executive

The past year has been a particularly active one for both the sprinkler industry and BAFSA. Our dedicated consultants and council members have worked diligently to support and represent our members. This update aims to highlight the breadth of our collective efforts, the progress we've made, and the important work that continues.

Raising the bar on competence

Competence continues to be a critical theme across the construction industry, particularly for those involved in life safety systems such as fire sprinklers.

BAFSA continue to play a key role in shaping the national approach to competency. As a member of the Industry Competence Committee (ICC), and chair of both the Active Fire Suppression Working Group and the Fire Sprinkler Group, I am driving the development of robust, sector-specific frameworks. The Fire Sprinkler Group includes representation from BRE, Part B, IFC, and the RSA – a significant and positive step toward cross-industry engagement that we are proud to support.

BAFSA's Learning Centre

Under the leadership of Ruth Oliver, our Skills and Development Advisor and Head of the BAFSA Training Centre, we have made significant strides in improving both the content and delivery of our training.

One of the key developments was the redesign and relaunch of the ABBE Level 2 Certificate in Fire Sprinkler Installation, which is now delivered directly through BAFSA. This move has allowed us to maintain full control over quality, consistency, and learner support. Within the first six months, enrolments were four times higher than anticipated — a clear sign of growing industry recognition for high-quality, structured training.

This increased demand has been reflected across all programmes, as Alan Crichton continues to refine existing BAFSA-owned courses and develop new ones. Recognising that competence is not static, BAFSA has also launched a suite of Continuing Professional Development (CPD) courses, including:

- Awareness of Automatic Fire Sprinkler Systems (AFSS)
- Principles and Practices of Automatic Fire Sprinkler Systems
- The Owners & Occupiers Guide to Automatic Fire Sprinkler Systems

The AFSS course alone attracted more than 600 registered learners in its first nine months.

To support the growing demand for online learning, BAFSA has also launched a dedicated e-learning portal. This platform enables users to register and pay for courses, track assessments, manage communications, and access tools to streamline administration and support.

Strengthening our digital presence

A cornerstone of our communication strategy this year was the complete redevelopment of our website. This project included a full review and clean-up of outdated content, alongside the introduction of a modern, intuitive platform designed to reflect BAFSA's values and better serve our members.

Alongside this, we launched a new e-portal for booking courses and events, bringing a more efficient and user-friendly experience for both members and non-members.

Promoting BAFSA and the sprinkler industry

Our work to promote the value of sprinklers continues to gain momentum. A key part of this has been the UK Sprinkler Saves initiative, led by Nick Coleshill. By documenting verified incidents — including in care homes, schools, factories, and residential buildings — we're demonstrating the life- and property-saving value of water-based suppression systems. In each case, I write to the local MP, Chief Fire Officer, and the All-Party Parliamentary Group on Fire Safety and Rescue to ensure these successes are recognised.

We've also developed a knowledge-sharing partnership with the Chartered Association of Building Engineers, helping to challenge common myths about sprinklers among architects and building control officers. In addition, we're strengthening links with the Institute of Fire Safety Managers and Local Authority Building Standards Scotland, including participation in their training hub.

Where BAFSA once paid for article placements in industry publications, we are now regularly invited to contribute content — a sign of growing influence and respect within the wider construction sector.

Led by Claire Mahoney, our evolving communications strategy is continually improving and strengthening our voice across the industry.

Technical leadership and progress

Our new Technical Chair, Richard Cebreiro, has now fully settled into the role, with the Technical Committee continuing to be a cornerstone of BAFSA's work.

BAFSA remains committed to ensuring the UK plays an active role in the CEN process and the ongoing revision of BS EN 12845. We've established a dedicated pipework working group, bringing together industry experts to explore the potential impact of proposed changes and to develop a well-informed UK response.

A significant milestone was the introduction of a legal requirement for sprinklers in all new care homes in England — a goal BAFSA and others in the fire sector have long campaigned for. In Scotland, BAFSA was represented on the Building and Fire Safety Expert Group, which was set up in the wake of the Cameron House Hotel Fatal Accident Inquiry. We hope this work leads to sprinklers being mandated in all historic buildings converted into hotels.

Our technical team continues to respond to a wide range of queries from members and stakeholders, led by Joe McCafferty, with support from Ritchie O'Connell in Wales and others across the team.

BAFSA Council and governance

The BAFSA Council continues to meet six times per year, providing governance and strategic oversight of our five-year plan.

Over the past year, we've introduced several council working groups, including:

- A Monetary Steering Group
- A Pipework Group (focusing on BS EN 12845 revisions)
- A Membership Working Group, currently reviewing our membership categories

We also responded proactively to the closure of the FIRAS scheme, engaging with stakeholders including UKAS, IFCC, BRE and Part B to help ensure the continued availability of accredited third-party certification across the UK.

Supporting our members and looking ahead

BAFSA remains in a strong financial position, supported by our bookkeeper Toni Maddox. This financial stability has enabled us to invest in:

- Our new website and online training portal
- Development of new training and CPD courses
- Setting aside funding to part-fund a retrofit sprinkler system in a care home

Our membership base continues to grow, thanks to the work of Victoria Cuff, our Membership Secretary, and we remain committed to delivering greater value year on year.

Thank you to all our members for your continued support. BAFSA exists to serve you, and we look forward to building on this progress together in the months and years ahead to promote this fantastic lifesaving industry.

Ali Perry
Chief Executive Officer
BAFSA
September 2025
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Balconies and fire risk

BAFSA's Welsh representative Ritchie O'Connell looks at the fire safety issues raised by balconies and the building safety regulations that apply to them.

As the demand for housing continues to grow and space for development becomes increasingly limited, it is likely that balconies will continue to become an increasingly common feature of the urban landscape.

Whilst balconies become ever more popular amongst developers, home buyers and schemes such as BREEAM, which awards credits for appropriate balconies - there is growing concern regarding their fire performance and potential to contribute to fire spread in multi-occupied residential buildings.

There has been a significant number of fires on balconies in recent years, both in the UK and abroad. A recent study by Alideck[1] reported 220 balcony fires in the UK during the 2023-2024 period. With the New Providence Wharf building in Blackwall experiencing three fires originating on balconies since 2021.

Balconies come in a variety of shapes, sizes, and terminology. They may be recessed enclosed, projecting enclosed balconies, projected open balconies, recessed enclosed or recessed open balconies.

Projected balconies are usually attached to the face of the building and project outwards beyond the external envelope, supported by structural beams or brackets or cantilevers.

Recessed balconies are built into a building's facade, creating a niche or recessed area, characteristically not extending beyond the building's exterior walls and providing a partially weather protected outdoor space.

An enclosed balcony also known as a 'winter garden' is fully enclosed, typically with glass or other panels and may be considered as habitable rooms, whereas other forms of balcony are not.

The way in which balconies are arranged also needs to be taken into consideration.

They may be for example:

- **Stacked** – where they are vertically aligned one above another
- **Staggered** – not aligned vertically one above the other, rather they are offset vertically.
- **Random** – as it suggests balconies are not aligned either horizontally or vertically but placed at different locations across the building

The principal cause of balcony fires is smoking and/or the careless disposal of smoking materials with London Fire Brigade[2] (LFB) reporting that of 130 dwelling fires on balconies between 1st August 2023 and 31st July 2024, 64 of those fires almost 50% of the total were due to smokers not disposing of smoking materials safely. Other known causes were barbeques - identified as the cause of 17 fires, whilst electrical faults were responsible for seven incidents. Other causes listed by LFB[3] included fireworks (seven incidents) e-vehicles, candles and tea lights

In an effort to reduce the incidence of fires starting on balconies some social landlords such as Lambeth Council[4] have expressly prohibited the use of barbecues or patio heaters on, or directly beneath, balconies in their tenancy agreements.

What is abundantly clear is that when fires on balconies occur, they have the potential to assist in rapid spread of fire from one flat to another via adjacent balconies or into the building via the flat the balcony is attached to.

Where combustible materials have been used in the balcony or external wall system, it is possible that fire may spread rapidly across the facade. This risk is increased if combustible materials are present on the balconies in the form of furnishings décor or storage, or if combustible materials are used extensively in the construction of the balcony. The arrangement of balconies can also compound this risk with stacked balconies posing a greater risk than other geometries.

All balconies on new buildings with a storey 11m or more above ground level should now be constructed of class A2-s1, d0 (or better) materials, A2-s1,d0 products have no significant contribution to fire, and will produce little or no smoke and no flaming droplets.

Where enclosed balconies are adjoining enclosed balconies to other flats, the fire resistance and the compartmentation between balconies is required to be the same as the fire resistance required for the building ie it is treated as a room within the flat for compartmentation purposes.

BS 9991:2024 also recommends that stacked balconies (shown below and as defined in BS 8579[5]) on buildings of any height should be constructed of class A2-s1, d0 or better materials.

The Fire Safety Act 2021 clarified that where a building contains two or more sets of domestic premises, the RRFSO (2005) applies, identifying balconies as a 'specified attachment,' stating that

> *"…where a building contains two or more sets of domestic premises, the areas to which the Fire Safety Order applies including The building's structure and external walls (including windows, balconies, cladding, insulation and fixings) and any common parts"*

Whilst this was a significant development which emphasised the growing concern over balcony fires, the legislation and associated guidance stops short of requiring fire risk assessors to specifically consider the fire loading present on the balcony.

"Whilst steps have been taken to reduce the the risk of fire spread between balconies on new buildings, and there is a growing recognition that fire load plays a key role, little thought appears to have been given to the role of sprinklers in mitigating the risk of fire occurring on balconies."

Owners of existing buildings which have balconies constructed of or incorporating combustible materials must be certain that they are aware of and understand the materials used in the construction of existing balconies, irrespective of the building height. The fire risk assessment must take into account the risk of external fire spread and this risk should be robustly managed.

In assessing the level of fire risk from balconies fire risk assessors are required to consider the extent of use of combustible materials, the geometry of combustible materials in balconies and external walls and whether there are large spans of combustible material which may assist horizontal and/or lateral fire spread.

They may also comment on the level of combustible storage or other fire hazards on balconies, if they are able to observe them. But this can be difficult in practice. For example. they may not be able to gain entry to the flat and the level of fire loading on balconies on upper floors may not be apparent from ground level outside the building.

Watching the RHS Chelsea flower show on television recently I was interested to see the balcony and container garden exhibits. The balcony gardens were designed to fit within a 2m x 5m space and were very imaginative and provided outdoor spaces anyone would be proud to own.

Whilst the balconies on show featured plants in containers, including green walls, these gardens had the benefit of being designed by experts, well-tended and watered plants (minimising the potential for fire). Those less green fingered may be inspired to replicate what they saw and

create similar green spaces on their balconies using artificial foliage including green wall panels would in most cases give no thought to the flammability of these items.

Any 'green' or 'living' walls that are used in external wall cladding must be rigorously tested in accordance with BS EN 13501-1[6], and in a similar vein Building Regulations specify the fire performance of wall and ceiling linings in internal rooms. But neither of these strictures extends to unenclosed private balconies. Therefore there is little to prevent unaware householders from cladding their balcony in flammable plastic plants and screening.

Neither BS 9251: 2021 nor BS EN 16925: 2018 require sprinklers on balconies. BS 9251 specifically omits external balconies permanently open to the outside from the requirement to fit sprinklers to meet that standard.

If anything PAS 9980[7] appears to damn the idea of sprinklers controlling fires starting on balconies with faint praise, asserting *"…although sprinklers can provide viable mitigation, consideration needs to be given to the likelihood of any fire scenarios that sprinklers would not control (e.g. fires involving combustible balconies, balcony storage or external fuel loads)"*

In contrast NFPA 13R require balconies serving dwelling units to be protected with sprinklers in buildings of Type V construction *(Type V: Structural elements, walls, arches, floors, and roofs of wood or other approved material. A large proportion of residential construction in the USA is Type V.)*

Whilst I agree with the PAS that when the external wall system is involved in a fire there would be little benefit to sprinklers, and although there may be technical challenges, frost protection etc to be overcome, I would argue that there is a fairly high likelihood that sprinklers on balconies would in many cases limit the fire to the original item ignited and would, to a great degree, mitigate the presence of combustible fire load - an aspect of the problem that is difficult to manage. This would not be a perfect solution. There would still be fires occurring on balconies, but the severity and impact of many of these fires would be mitigated, preventing fire spread to the external wall system.

Although some progress has been made in addressing this issue, I would argue that we are not doing everything possible until we adopt a more holistic approach - one that goes beyond passive methods and management strategies to also consider the potential role of sprinklers as part of the solution.

Notes

1 https://www.alideck.co.uk/balcony-fires-report/
2 https://www.london-fire.gov.uk/news/2024-news/october/brigade-backs-stoptober-campaign-in-bid-to-curb balcony-fires/
3 London Fire Brigade *Freedom of Information request reference number: 899*4.1 29 August 2024
4 Lambeth Council *Fire Safety on Balconies Guidance* March 2021
5 BS 8579:2020 *Guide to the design of balconies and terraces* BSI
6 BS EN 13501-1:2018 *Fire classification of construction products and building elements - Classification using data from reaction to fire test*s BSI
7 PAS 9980:2022 *Fire risk appraisal of external wall construction and cladding of existing blocks of flats – Code of practice* BSI

Ask Joe

Joe Mc Cafferty at BAFSA Technical Support, gathers together some of the varied technical queries submitted to BAFSA over the last 12 months.

Question: We have been asked to replace a booster pump for a domestic sprinkler system. It was installed many years ago. Do we have to upgrade the system to the current standards, or can we replace like for like?

Joe: Old sprinkler systems, whether domestic or commercial, are designed to the set of rules/ standards that are current at the time of installation. This means that they probably satisfied all the AHJ's at the time of installation and commissioning. It may have a certificate of conformity. Should any part fail there is no retrospective requirement to bring the system into compliance with whatever the current rules requirements are. This would only happen if any of the AHJs asks for an upgrade and can justify it because there is, say, a change of use or occupancy of the building. You can replace like for like, BUT I would suggest that the sprinkler maintenance company does a re-run of the system water and flow requirements. NOTE: If any competent person who works on the sprinkler system notices that something is wrong with the system, it would be their responsibility to inform the client. It is then up to the client to arrange whatever remedial action is required.

Question: Can you explain why BS EN 12845 paragraph D.3 Requirements for Zoned Installations allows 6000m² area per zone and paragraph F.2 Subdivision into zones only allows 2400m² area?

Joe: BS EN 12845 Annex C is for Zoned Installations when the sprinklers are installed for 'Property Protection' for example, when a fire insurer is demanding sprinklers. This allows for zones of up to 6,000m^2 or about 500 sprinklers. Annex F is for subdivision into zones when the sprinklers are installed for 'additional measures to improve system reliability and availability (in previous editions of BS EN 12745 this was referred to as 'Life Safety' systems). These are the type of systems that Building Control/Approved Document B would want to see installed to satisfy their requirements. This reduces the maximum zone size to 2,400m^2 or about 200 sprinklers so that very large areas are not shut down for say maintenance, repairs or alterations. Have a look at the 'NATIONAL FOREWORD' of BS EN 12845. It mentions the new thinking on 'life safety'.

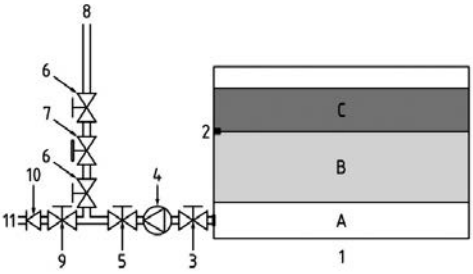
Question: I have been asked by my manager to liaise with a sprinkler contractor who is going to install a sprinkler system in our building. What sort of procedures do they carry out from when they get the work to completion?

Joe: This a very general description as all jobs/sites can vary. However this is usually the procedure

- Sprinkler design drawings and hydraulic calculations are produced.
- Sprinkler design drawings and hydraulic calculations are approved by any AHJs involved ie insurers, building control etc.
- When the drawings and calculations are approved then the pipework pre-fabrication and the physical site installation can start. (Note all safety procedures/HSE requirements should be in place by this stage).
- First fix pipework is installed and maybe the flexible drop pipes for sprinklers to roof/slab.
- When ceiling grid is fitted then the sprinkler heads are installed to tile centres (the cover plates of the sprinklers may not be installed yet in case they get damaged). There may be a red protective cap on the sprinkler heads. Note: The sprinkler installer may cut the holes in the ceiling tiles for the sprinklers or advise the ceiling installer on what's needed.
- When all the pipework and the pump/tank is completed, the system can be hydraulically/pneumatically tested for pipe/fitting/heads integrity. A visual inspection of the system is advised before proceeding. Any leaks or anomalies should be fixed, and the test repeated. (Note: All necessary warning notices should be in place when testing).
- On successful completion of hydraulic testing the red protective covers can be removed from the sprinkler heads and the sprinkler cover plates can be installed.
- The system 'flow/pressure' test can now be done to prove that the water supplies are supplying the calculated flows at the correct pressure.
- If any of the sprinkler system electrical alarms are connected to a central control station these should be checked and confirmed as working.
- If all goes well a completion/compliance certificate can be issued along with O+M documentation.
- Any necessary training for the client's personnel should then take place.

Question: Can we supply the fire sprinkler system from our domestic water booster pump and tank?

Joe: A water storage tank and domestic water supply pump can be used and shared for sprinkler system designed to BS 9251:2021. This is a sketch extracted from BS 9251:2021 Figure 6 on page 27:



NOTE: The Priority Demand Valve - item 7 on the domestic supply

Key

1	Shared water storage tank
2	Low water level alarm trigger position
3	Lockable tank isolation valve
4	Shared pump set
5	Shared pump set isolation valve
6	Domestic stop valve
7	Priority demand valve
8	Domestic water supply
9	Lockable sprinkler stop valve (monitored, where necessary)
10	Back flow prevention device
11	Sprinkler system supply
A	Unusable water
B	Sprinkler capacity
C	Buffer volume

Question: In a multi-story block of flats does each flat need to have a water flow switch?
Joe: In BS 9251:2021 Paragraph 5.18.3.2 it's an either/or situation and states the following:

A sprinkler flow switch should be provided for:
a) every dwelling to signal the actuation of the sprinkler system within the dwelling; OR
b) a sprinkler alarm zone, rather than each individual dwelling, provided the following recommendations are met:
1) the sprinkler alarm zone should cover no more than a single floor; and
2) sprinkler flow switches should be connected to suitable control and indicating equipment so that a signal is sent to management and any emergency action plan initiated. In multi-staircase buildings, the control equipment should clearly indicate the floor level and appropriate staircase (where staircases serve different zones).

NB: Each individual flat will have fire (smoke/heat) detection that will indicate location of fire as well.

Question: Is it still acceptable to use a direct connection from a 'town's main' to supply a sprinkler system?
Joe: Towns' mains are still allowed in BS EN 12845. The water authority may not do a 'full' water test, but may offer hydraulic calculations that show what is available. Best to check with any AHJ if they find this acceptable.

However BS EN 12845 states:
9.2 Town mains
The town main shall be capable of satisfying the requirements for pressure, flow and duration taking into account any extra flow required for manual firefighting purposes (hydrants, hose reels, etc.) A pressure switch shall be installed and shall operate an alarm when the pressure in the supply drops to a predetermined value. The switch shall be positioned upstream of any non-return valve and shall be equipped with a test valve (see Annex I and H.2.5). In some cases, the water quality makes it necessary to fit strainers on all connections from town mains. Strainers should have a cross-sectional area of at least 1,5 times the nominal area of the pipe and should not allow objects greater than 6 mm diameter to pass.

NOTE 1 The water demand for manual firefighting purposes are usually determined by the authority. It might be necessary to take into account extra flow required for fire brigade purposes.

NOTE 2 The agreement of the water authority will usually be required for town main connections.

Question: Are sprinkler systems necessary in cold storage warehouses with racking?
Joe: Cold storage warehouses are just as suspect able to fire as any other type of warehousing. Visit the National Fire Protection Association (NFPA) to read an article cold store fire risk: www.nfpa.org/news-blogs-and-articles/nfpa-journal/2019/03/01/cold-storage-safety

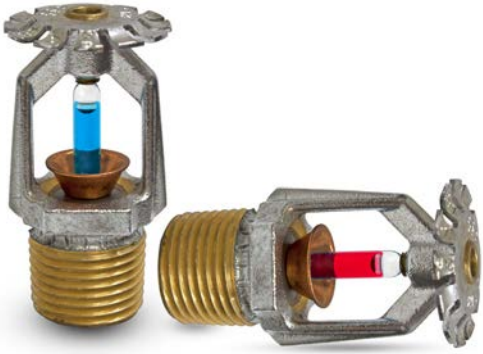
There are many instances on the internet of catastrophic cold store fires. You should speak to the fire insurers and get their opinion on what they find acceptable. In the long-term sprinklers provide a reassurance that any fire is contained and greatly reduces business disruption. The decision is the owners on whether they wish to spend the money at an early stage of construction to install sprinklers. It will be a lot more costly and disruptive if they must be installed when the business is in operation.

Question: Do engineers who carry out maintenance/servicing on sprinkler fire pumps need any formal qualifications?
Joe: Sprinkler systems can have electric motor or diesel engine driven fire pumps or both. They can be centrifugal, split case, multi-impeller, multistage and for water mist systems, may be positive displacement. The maintenance (ie diesel engine and electric motor maintenance etc) is normally done by companies sub-contracted by the sprinkler installer company. Their engineers will be fully trained in maintenance of this type of equipment and will probably have been through an apprenticeship and gained qualifications like an electrician and or diesel pump maintenance. Besides the equipment maintenance, they also need to be aware of how the sprinkler system operates, so that it can be safely isolated and reinstated after the work has been completed. Many sprinkler systems are installed for 'life safety' of residents, the public etc and are demanded by local and national regulations. These life safety requirements carry a further responsibility that the work is done by 'competent' persons.

Question: Is there a statutory requirement for the height that a landing valve must be above the floor?
Joe: BS 9990 is the standard for wet and dry risers, and it states the following: In all cases a landing valve should be installed with its lowest point about 750mm above floor level.

Question: Is there a specific requirement for clear spaces around water mist nozzles. I have seen a job where they have hung large notice boards from the ceiling near the nozzles?
Joe: Obstructions to water spray can have a detrimental effect on the capability of the nozzle. The system designer must take these obstructions into account at design stage and space the nozzles to minimize the impact of the obstruction. The nozzle manufacturer's data sheet will probably have specific requirements about obstructions and spacing. If obstructions are added after the mist system is completed and the installer has left site, then it should be picked up at next the maintenance/inspection visit and corrected. The building owner should be made aware that hanging things from the ceiling may have a detrimental effect on the firefighting system. The water mist design standard BS 8458 mentions obstructions in Paragraph 6.10.3.

Question: Who is responsible for specifying the automatic sprinkler system hazard category for the building. Is it the specialist fire engineering firm or the sprinkler contractor or some other company/body?
Joe: Sprinkler contractors commonly work with fire engineering companies at the very early and planning stage of contracts. This may give them the possibility to tender for the contract, though this is not guaranteed.



During these early stages they can advise on the hazard classification and any complexities about the contract. So basically, some fire engineers may make use of this free service offered by the sprinkler contractor. The fire engineers may have their own people capable of classifying the risk. Some of the larger fire engineering firms will have people very capable of defining the hazard classification without any further assistance from the contractor.

When the contract is at the early/planning stage the contractor must specify the sprinkler rules being used, the hazard classification and many other aspects on tender drawings and the sprinkler specification. If the hazard classification is not disputed by any AJHs or fire insurers, then the responsibility lies with all concerned.

All AHJs and fire engineers have an opportunity at the very early stage to dispute classification and I think most sprinkler installers would get this agreed before work commences. As for BAFSA, it can only have an opinion based on what the sprinkler rules specify. These are clear, but the list of 'authorities having jurisdiction' is not very extensive. I have come across lots of jobs where the hazard classification has been dictated by, say a fire engineer or maybe the fire insurers. I have also seen many jobs where the sprinkler contractor sets the hazard classification at tender stage.

This is what *BS EN 12845* states:

4.2 Initial considerations: When preparing the outline design, consideration shall be given to aspects of building design, building systems and work procedures that might affect the performance of the sprinkler system. Although an automatic sprinkler system usually extends throughout a building or plant, it should not be assumed that this entirely obviates the need for other means of fire protection, and it is important to consider the fire precautions of the premises. Account shall be taken of interaction between sprinkler systems and other fire protection measures. Where a sprinkler system or an extension or alteration to a sprinkler system is being considered for new or existing buildings and industrial plant the relevant authorities shall be consulted at an early stage. The authorities should be consulted when the hazard classification is being determined.

BS EN 12845 describes authorities as follows:

3.13 authorities organizations responsible for approving sprinkler systems, equipment and procedures, e.g. the fire and building control authorities, the fire insurers, the local water authority or other appropriate public authorities.

NOTE: None of the descriptions of what/who are classified as 'authorities' mention fire engineers. The description of 'authorities' is who/what organisation/company has a say on whether the building complies with regulations i.e. public authorities and fire insurers. I think where things stand currently is that the contractor may or may not have the hazard classification dictated to them at tender/specification stage.

LPC Sprinkler rules lean more toward having the insurers advise and/or approve the hazard classification. LPC Sprinkler Rules Technical Bulletin 205 mentions the following:

TB205.1 Consultation: It is essential that the fire insurer be consulted at appropriate stages in the planning and construction of a sprinkler system or alteration of an existing sprinkler system where sprinkler protection is a prerequisite of the acceptance of the risk or where property protection is considered in determining the insurance premium. COMMENTARY AND RECOMMENDATIONS ON TB205.1 The insured is required to consult the relevant authorities at an early stage in planning the sprinkler protection (see BS EN Clause 4.2). Following the initial consultations the fire insurer may be prepared to assist an insured with the production of an outline sprinkler system specification, helping to ensure the acceptability of the design concept and uniformity of criteria for any competitive tender. The insured should not overlook their responsibility to satisfy the requirements of other interested authorities.

Question: We have a sprinkler system in our house and were advised that the system was maintenance free for 50 years. Seems a very long time, is that correct?

Joe: I have never heard of a sprinkler system that is 'maintenance free' for any period of time let alone 50 years. I suspect maybe what you were told is that the materials the sprinkler system is made from have about a 50-year life expectancy. There are no sprinkler systems that are maintenance free. All sprinkler system rules/standards have maintenance/testing periods varying from weekly, three monthly, six monthly, yearly and so on. If the system has not recently been maintained then it needs to be urgently checked, tested and maintained and at regular intervals thereafter.

Question: Looking through Approved Document B, the only recognised standard that I can find for non-dwellings is BS EN 12845. There is no mention of NFPA13 or any other standard. Would a building fitted with sprinklers designed to NFPA13 be permitted in the UK. Is NFPA very different from BS EN 12845, can you advise which might be the more onerous?

Joe: I have not heard of using NFPA 13 to comply with ADB but it's a good robust standard that is as good as BS EN 12845. There are differences between NFPA 13 and BS EN 12845 like water supplies, areas of sprinkler operation, selection of water supplies from graphs rather than set tank sizes. But it not particularly onerous in comparison to BS EN 12845. Before you get too deep into NFPA research I would suggest you speak to the relevant building control department in the area to see how they feel about using NFPA13 for compliance with ADB. NFPA 13 is a sound standard that is used quite often in the UK particularly for some American Hotel Groups and probably others. So, Building Control will have come across it. You can have a look at NFPA Standards free online access on their website. NFPA have a Life Safety Code in NFPA 101 that would probably be used by the equivalent of Building Control in the US, it might be worth your while having a look at it online. Maybe you can convince Building Control if you also apply NFPA 101 as well as NFPA13. One of my

BAFSA colleagues advised the following: Building Regulations do allow the use of other standards than the BSEN standards, but they will require assurances that the system installed meets both the requirements of the standard used and the functional requirements of the Building Regulations. This is normally achieved by selecting a designer and installer with the necessary accreditations.

Question: We are refurbishing an old building where we have to install a sprinkler system to satisfy local Building Control requirements. We have employed a plumbing contractor and were wondering if they could also install the sprinklers. The say they have not done this type of work before.

Joe: Can your plumbers install the sprinklers? Yes, they can but if they do not have experience of installing sprinklers there is no guarantee that the system will be done correctly or at worst may not operate in a fire situation. Approved Document B mentions the following: Suitably qualified and experienced construction professionals should also be engaged where necessary. Since Building Control are asking for the sprinkler system, they 'would probably' want to see a 'certificate of compliance' which only a 3rd-party accredited sprinkler installer can provide. Can the plumbing contractor be trained to install sprinklers? Yes, but it's not a quick process. BAFSA have several training courses that you can view on our website: www.bafsa.org.uk

Question: When BS 9990 states: "Fire mains and associated pipework and fittings should be of suitable heavy quality steel to meet the pressure, robustness and durability requirements of the system in question", does it have to be the 'heavy' grade in BS 10255, or can we use BS 10255 'medium' type which is still suitable for the water pressures encountered in the system?

Joe: BS 9990 is clear on the type of pipe it recommends, i.e. heavy. The opening pages BS 9990 states the following:

Use of this document: *As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification, and particular care should be taken to ensure that claims of compliance are not misleading. Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.*

As the use of 'medium' quality steel pipe is an 'action that deviates,' I would expect the installer to justify the deviation by getting written approval from ALL the AHJs that this deviation is acceptable to them. If a client/consultant/other specifies that the system 'must' comply with BS 9990 then the installer must tender on that basis and point out any deviations that are not in full compliance. BS EN 10255 has two main types of pipes i.e. heavy and medium. It is my understanding that when BS 9990 states 'heavy' it means the 'heavy' type in BS EN 10255 or similar in any other standard of pipe.

Question: We have an underground pumproom housing the sprinkler pumps. Can the weekly pump run and inspection be done by using a remote starting device and CCTV monitoring? An annual physical inspection would still be done. Our engineers say this is considered a confined space as it can only be accessed through a ground level access hatch and a ladder.

Joe: According to the confined space regulations a "confined space" means any place, including any chamber, tank, vat, silo, pit, trench, pipe, sewer, flue, well or other similar space in which, by virtue of its enclosed nature, there arises a reasonably foreseeable specified risk. Your

underground pumproom with this singular limited access would be considered a confined space. You would like to test the pumps etc without having to go into the underground confined space pumproom. BS EN 12845 (sprinkler rules) only states the pumps must be run weekly without further elaboration on how to manage this task in a confined space. If there are fire/property insurers involved they should be consulted with a plan of proposals of how testing can be done remotely. They may or may not agree but may give an opinion of what they find acceptable. The Loss Prevention Council Rules (LPC Rules) states the following in on its introduction page: Care and Maintenance of automatic sprinkler systems: Weekly testing has incorporated the need to never leave a pump running unattended.

And in its technical bulleting TB203 it mentions the following: 203.2.2.4 b): The pump shall not be left unattended at any time while testing. The LPC Rules also includes a good booklet titled FPA Guide to working in confined spaces which may be useful reading for you.

Question: Who can install sprinkler fire pumps. Does the company have to have any sort of accreditation, training to do this work?

Joe: Most sprinkler pumps are installed by 3rd party accredited sprinkler installer companies. All BAFSA sprinkler installer member companies are 3rd party accredited. The sprinkler installers use their own engineers to install the pumproom pipework and to secure the pump and its driver on the plinth/base. The pump will have been supplied by a pump manufacturer.

When the sprinkler installer has done his work the pump supplier will come to site and commission the pump/s. They will check pump alignment, pump electrics, diesel engine, electric/diesel panels, signals etc. They will run the pumps to prove that they are achieving their required duties i.e. that the water flow and water pressure are correct and are in compliance with the systems hydraulic calculations.

Many sprinkler systems may have a Certificate of Conformity which means anyone working on the system needs to be 3rd party accredited to ensure the validity of the certificate.

Question: Does a BS 9251 sprinkler system require that sprinklers are installed in all parts of a building like bathrooms and cupboards?

Joe: BS 9251 Paragraph 5.4 describes the part of a building that can have sprinklers omitted (permitted exceptions). The following is an extract from Paragraph 5.4:

5.4 Extent of sprinkler protection

Sprinkler protection should be provided in all parts of the premises; however, sprinkler protection may be omitted from the following areas unless it is required by a fire strategy or risk assessment:

NOTE Where a risk assessment is carried out, it needs to take into account presence of fuel load (e.g. linen), presence of potential ignition sources (e.g. immersion heater) and consequence (e.g. impact upon fire protection to the building or escape routes).

a) bathrooms and shower rooms with a floor area less than 5m^2, with linings in accordance with BS EN 13501-1:2018, Class A1, A2-s3, d2 and B-s3, d2, and which are not prepared for white goods, such as washing machines, dryers, electric showers or water heaters;

b) enclosed staircases containing only materials in accordance with BS EN 13501-1:2018, Class B-s3 or better for construction materials and B(fl) or better for flooring, including sub

categories such as d0, d1, d2 for construction materials and s1 and s2 for flooring, surface spread of flame and constructed as a fire-resistant separation;
c) ceiling voids;
d) enclosed vertical shafts (e.g. lifts or service shafts) containing only materials in accordance with BS EN 13501-1:2018, Class B-s3 or better for construction materials and B(fl) or better for flooring (including sub categories such as d0, d1, d2 for construction materials and s1 and s2 for flooring), surface spread of flame and constructed as a fire-resistant separation;
e) cupboards and pantries with a floor area of less than 2 m^2 or where the least dimension does not exceed 1 m which are not prepared for consumer units or electrical equipment (excluding a single light);
f) uninhabited loft/roof voids;
g) water closet (WC) with a floor area less than 5 m^2, with linings in accordance with BS EN 13501-1:2018, Class A1, A2-s3, d2 and B-s3, d2, and which are not prepared for white goods, such as washing machines, dryers, electric showers or water heaters;
h) attached buildings, such as garages and plant rooms without direct access from within the protected building.
i) crawl spaces; and
j) external balconies permanently open to the outside.

To submit an enquiry or questions to Joe visit the BAFSA website at www.bafsa.org.uk

w: www.rapidrop.com
t: 01733 847510

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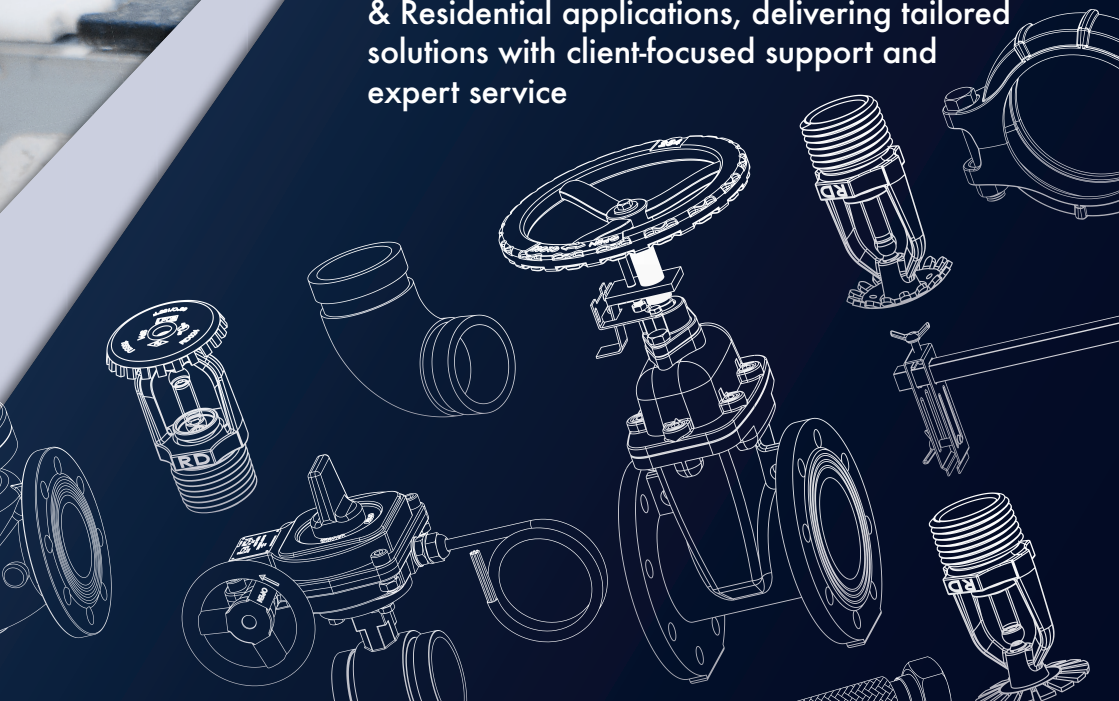


Technical talk

Richard Cebreiro, chairman of BAFSA's Technical Committee takes a look back at a year of progress.

As chairman of the BAFSA Technical Committee, I am pleased to provide this update on the valuable work being carried out by our dedicated team of industry professionals. Our quarterly technical meetings continue to be a vital forum for sharing knowledge, addressing emerging challenges, and shaping the future of our industry. With a strong turnout at each meeting from the 60 committee members representing companies from across the fire sprinkler sector, these meetings are a testament to the professionalism and passion within our community.

Each session is an opportunity for us to stay current with regulations, share best practices, and influence the direction of technical developments. These discussions would not be possible without the tireless efforts of several key individuals who take the time to research and present their expert insights.

I would like to extend a heartfelt thank you to Dale Kinnersley, who continues to deliver in-depth updates on the LPC Technical Bulletins. Dale's clear interpretation of changes and developments in the LPC guidance ensures that our members are always equipped with accurate and practical information to support their work.

Equally, our gratitude goes to to Simon Bird for his comprehensive reports on British and European Standards. With ongoing revisions and the introduction of new standards, Simon's updates are indispensable. His leadership was also instrumental in the Annex D Working Group, where he guided the team in drafting the new design requirements for the EN12845-1 Standard, a task that will have significant impact on system design in the UK.

Our thanks also go to Ruth Oliver, who keeps us informed on Skills and Development within Bafsa. Ruth's efforts ensure that training, certification, and professional growth remain central topics in our discussions. Her updates highlight the importance of investing in the next generation and current sprinkler professionals, and her commitment to supporting continuous professional development is commendable.

"Our quarterly technical meetings continue to be a vital forum for sharing knowledge, addressing emerging challenges, and shaping the future of our industry"

Steve Griffiths deserves special recognition for his ongoing FSA insights of domestic and residential system developments. These systems are an ever-growing focus in our sector, and Steve's insights help ensure our members are aware of both technical clarifications and interpretation of the design standard.

Our gratitude also extends to Stewart Kidd, who provides timely and relevant updates on Watermist, BSI and FIA developments. His knowledge of these increasingly important technologies and the broader regulatory landscape surrounding them adds tremendous value to our discussions.

Beyond these presentations, the committee has seen valuable contributions from a number of focused Working Groups, each addressing critical issues in our field:

The Tank Working Group, chaired by Norman Ross, is working diligently to produce a comprehensive technical guide for the installation and care of sprinkler tanks. This much-needed document will bring clarity and consistency to the design, maintenance, and inspection of tanks across the industry.

The Water Saving Working Group, led by Mark Thewlis, is exploring innovative ways to recycle water used during system operation and testing. As sustainability becomes an increasing priority, this group's work is essential in developing long-term, environmentally responsible solutions.

The Water Heating Working Group, chaired by Ross Livingston, is focused on enhancing the efficiency of diesel engine pumps. Their efforts aim to support more energy-efficient and cost-effective diesel fire protection pumps, with an emphasis on improving energy usage without compromising performance and reliability.

It is inspiring to see the level of commitment and collaboration that each of these groups brings to their tasks. Their work not only supports current best practices but is also shaping the technical landscape for years to come.

On behalf of BAFSA, I would like to thank all the Technical Committee members and contributors for your continued dedication. Your efforts ensure that BAFSA remains at the forefront of technical excellence in fire protection. I look forward to our next quarterly meeting, where we will continue these important discussions.

BAFSA Skills & Development Committee update

Ruth Oliver, chair of BAFSA's Skills and Development Committee and head of the BAFSA Learning Centre, looks at the difference between skills and competence and what BAFSA is doing to support both in the automatic fire suppression sector.

The Skills & Development Committee meets four times a year, in remote format, with their core remit continuing to be *'to develop vocational qualifications and training to ensure competency for persons working within the sector'*. The role of the committee is to understand, review, advise and comment on all training aspects of fire sprinklers in relationship to training needs for the fire sprinkler sector.

Underpinning the BAFSA Skills & Development Strategy is the development of skills and nationally recognised qualifications and CPD accredited programmes, whilst evidencing skills and competence of the workforce continues to remain uppermost in BAFSA vision for the future, along with the challenge of an ageing workforce.

At this point we should remember there is a difference between skills and competence:

- **Competency**: Knowledge, behaviours, attitudes and even skills that lead to the ability to do something successfully or efficiently.
- **Skill**: Learned and applied abilities that use one's knowledge effectively in execution or performance.

Learning and development can play a significant part in the opportunities open to people and therefore the ways they can carve out their career path. Some people will carve out a career path within one company while others will attempt to climb the ladder by moving to other companies.

Alongside skills, learning and qualifications we must bear in mind that industry often requires Skillcard and many construction and site managers request that their workers hold a SKILLCARD before coming on site.

The need to provide evidence of learning and qualifications is becoming more important. The Building Safety Bill requires another step up in competence and compliance.

Over 60,000 engineering professionals across the UK depend on a SKILLcard to prove to site managers and clients that they are trained and fully qualified for the work they do on site.

SKILLcard also covers those with supervisory and managerial responsibilities in the building engineering services industry and is also widely used by self-employed and agency workers and those seeking employment in the sector.

Since its launch in 2001, the application and renewal process has been regularly updated and improved so that today it is an online digital exercise and last year the system went fully paperless.

BAFSA has been working with Industry SKILLcard for the past five years to ensure that appropriate SKILLcard will be available to the fire sprinkler workforce.

Currently, the sprinkler system installer is required to hold a Blue (skilled worker) SKILLcard. The card is underpinned by the ABBE Level 2 Certificate in Fire Sprinkler Installation qualification which covers residential and commercial installations. Applicants are also required to hold a current H&SE certificate.

A blue skilled worker card is available to those who work in Inspection and Commissioning of Commercial Fire Sprinkler Systems and a black skillcard for those who work designing residential sprinkler systems.

BAFSA's delivery of ABBE qualification support training leading to the appropriate certification to support applications for the card. Full information on Industry Skillcards can be found at www.skillcard.org.uk/types-of-skillcard

So whilst BAFSA must look ahead and ensure the industry can continue to evidence competency of the workforce through competency based qualifications it must also bear in mind the importance of Continuing Professional Development (CPD).

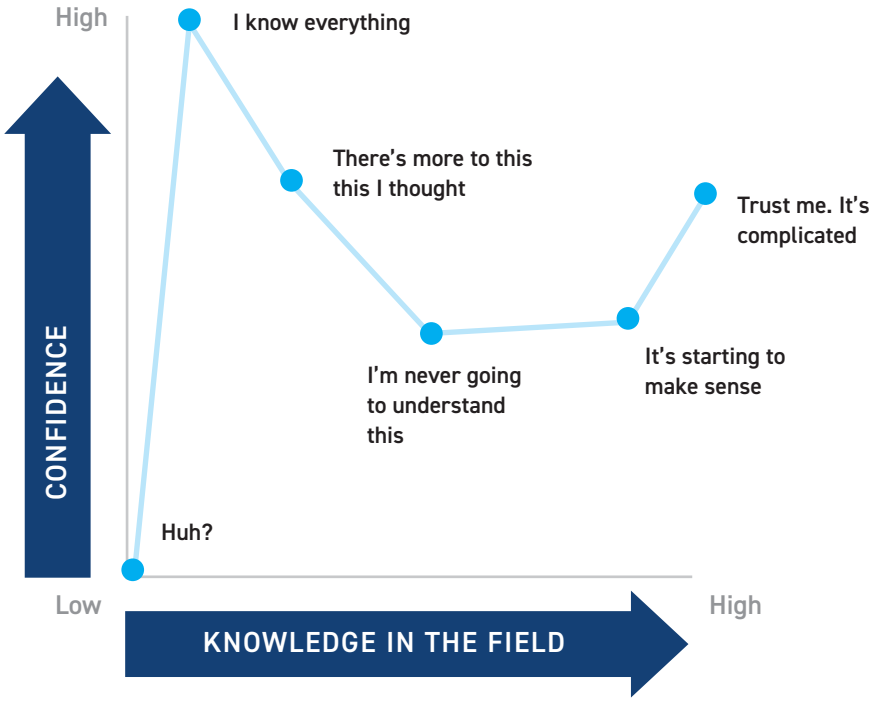
Having gained a qualification many years ago does not necessarily mean you retain competency. How many of us passed our driving test years ago ? Could we pass it now, years on? Change is constant, and in the ever-changing world we live in, it becomes almost imperative to keep progressing in our professional endeavours.

CPD stands for Continuing Professional Development and is the term used to describe the learning activities professionals engage in to develop and enhance their abilities. This year has seen BAFSA established a CPD Committee, drawn from the Skills & Development Committee, who will meet four times a year to consider the requirements for the sector.

So what is Continuing Professional Development (CPD). Continuous professional development refers to the process of training and developing professional knowledge and skills through independent, participation-based or interactive learning.

CPD can help keep skills and knowledge up to date, plug those gaps in knowledge enabling employees to adapt to the fast moving world in which they work. It can boost worker confidence, strengthen professional credibility, and help you become more creative in tackling new challenges.

"There remains an urgent need to attract a new generation of young people into all areas of industry including installation, design, project management and maintenance"



So what does CPD involve?

Formal CPD: This type of CPD involves active and structured learning that is usually done outside the organisation for which you work and can consist of:

- Offline and online training programmes;
- Learning-focused seminars and conferences;
- Workshops and events;

Informal CPD: Informal CPD is also known as self-directed learning, in which the professionals carry out development activities according to their own choice and without a structured syllabus. This form of learning usually consists of:

- Reading industry related articles
- Listening to industry-specific podcasts and following industry-specific news;

BAFSA is working to develop a suggested programme of CPD activity across the sub sectors. Crucially however members, too, need to get involved to ensure that that the suggested

programme encapsulates current CPD activities as well as new opportunities. Currently BAFSA has three CPD programmes:

- Awareness of Automatic Fire Sprinkler Systems
- Principles & Practices of Automatic Fire Sprinkler Systems
- Owners & Occupiers Guide

Labour Market Information Survey

To assist BAFSA establish the 'state of the sector' a Labour Market Information Survey will be carried out in 2025 across BAFSA membership, stakeholders and wider industry. Last undertaken in 2014 the intelligence gained from the survey provides the rationale for future qualification developments and is a necessary requirement to understand the requirements of the sector. ABBE, BAFSA preferred Awarding Organisation, will look to the survey report as evidence to support qualification development.

The survey will explore area such as but not limited to:

- Companies main business activity
- Number of employeers
- Age of the workforce
- Employee Skills
- Challenges to industry
- Industry growth
- Recruitment
- Hard to fill vacancies
- Skill gaps
- Skills Development
- CPD activity

The future

BAFSA remain aware of one continuing challenge for the future. The aging workforce, workers retiring from the sector, taking their skills, knowledge and vast experience with them.

There remains an urgent need to attract a new generation of young people into all areas of industry including installation, design, project management and maintenance. In doing so we will be ensuring that the workforce remain fit for purpose and ready for the challenges ahead.

To assist us establish the way forward with recruitment materials BAFSA has established a 'Next Generation' Focus Group where discussion with young installers, design and first line managers provided areas for BAFSA to consider surrounding the use of technology, such as You Tube Videos to provide recruitment information to the sector and development of an interactive career map being available on the website.

Continuing to develop and offer learning across the sector is imperative as is the industry raising its profile to encourage those looking for job opportunities that the Fire Sprinkler sector remains a career to look forward to.

Skills & Development Committee meetings are generally attended by 10-12 members and new recruits to this group would be most welcome.

For further information on the Skills & Development Committee or the CPD Committee please contact qualifications@bafsa.org.uk

BAFSA Learning Centre

BAFSA has established a Learning Centre where a candidate can view learning programmes available through BAFSA and enrol on their chosen qualification or CPD making their electronic course fee payment at the time of enrolment.

Current learning programmes available through the e-portal:

- ABBE L2 Certificate in Fire Sprinkler Installation – Residential
- ABBE L2 Certificate in Fire Sprinkler Installation – Residential & Commercial
- ABBE L2 Certificate in Fire Sprinkler Installation – Commercial
- ABBE L3 Award in Inspection & Commissioning of Commercial Fire Sprinkler Systems
- ABBE L5 Diploma in Classification & Pre Calculated S
- Awareness of Automatic Fire Sprinkler Systems (CPD Accredited programme)
- Principles & Practices of Automatic Fire Sprinkler Systems (CPD Accredited programme)
- Owners & Occupiers Guide (CPD Accredited programme)

Supporting those within the industry and those wishing to gain general knowledge and skills of the fire sprinkler industry BAFSA has developed Industry Videos, freely available from the e-portal.

It's really quite simple, fire sprinklers save lives.

- Sprinklers will protect your home 24/7 even when you're not there.
- Sprinklers are proven to be the quickest and most effective way to control or extinguish fires.
- When buildings are protected with correctly certified sprinkler systems, 99% of fires are controlled by the sprinkler.
- We offer fully certified sprinkler design, installation and servicing in accordance with BS 9251 and BS EN 12845.

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Sprinkler Saves

April 2024 – March 2025

A sprinkler save case study has been chosen for each calendar month focusing on a broad range of buildings and environments where sprinklers were reported as present and having an impact.

April 2024 – Norfolk domestic living room fire

- Occupancy: Dwelling.
- Fire Rescue Service: Norfolk Fire and Rescue Service. (NFRS)
- Incident: Muti-seated fire.
- AWSS: Sprinklers

The decision taken by the social landlord to install a domestic sprinkler system within a dwelling protecting a vulnerable community member from fire as part of a package of fire safety measures should be applauded following a multi seated fire.

On arrival, fire crews identified that one concealed sidewall sprinkler head actuated within the bathroom, extinguishing a fire within a bath tub involving textiles and, clothing. The tenant was helped to a place of safety.

A further seat of fire was identified within the living room which was extinguished by firefighting crew using firefighting media. It was established that the resident had tried to extinguish the fire within the living room by removing the textiles/clothing which were alight to the bath tub in the adjacent bathroom.

Bathtub containing textiles/clothing
Credit: ReCom fire protection ltd

The circumstances regarding the activation of the sprinkler system are not conclusive as limited fire growth was reported within the bathroom allowing the sprinkler head to activate. It is reported that the tenant was physically trying to silence the premises' fire alarm before the arrival of NFRS. It seems the occupier mistook the alarm for the sprinkler head, causing it to activate.

The benefits following the activation of the sprinkler system.

1. Reduced the heat output from fire by reducing its growth, containing, controlling or in this case extinguished the fire within the bath tub.
2. Initiated the appropriate emergency response as the sprinkler system was connected to an alarm receiving centre allowing the FRS to be mobilised.
3. Allowed more time for the occupant to be assisted from the dwelling by firefighters.

May 2024 – Stowmarket residential block of flats open sided car park fire

- Occupancy: Car park.
- Fire Rescue Service: Suffolk Fire and Rescue Service. (SFRS)
- Incident: Motorbike fire.
- AWSS: Sprinklers.

The dangers of car park fires are well documented following the high-profile incidents involving both The Liverpool Echo Arena and London Luton Airport multi-storey car park fires which resulted in both buildings being demolished following the fires where sprinklers were not fitted.

BAFSA is aligned and supports the NFCC view that:

- AWSS are the most effective way to ensure fires are controlled/contained or in some cases extinguished before the arrival of the FRS within car parks.
- The provision of AWSS should be made mandatory for new enclosed car parks including open sided, basement or automated, lobbying for a change in national guidance and legislation.
- The existing recommendations for fire safety measures in the construction of car parks, as outlined in Approved Document B of the Building Regulations does not currently mandate the inclusion of sprinkler systems. Instead, reliance is place upon smoke ventilation either natural or mechanical.

Basement car park fire Credit BM Image Sprinklers (image taken following reinstatement of the sprinkler system)

SFRS were mobilised to a fire involving a motor bike in an open sided basement car park below a residential block of flats. On arrival It was identified that six sprinkler heads activated supressing the fire preventing further fire spread, fortunately no other motor vehicles were located adjacent to the motor bike with minor fire damage reported to light fittings, electrics located above the seat of the fire. No injuries were reported.

It was reported that sprinklers were installed due to SFRS recommending that a sprinkler system was included in the design within the dwellings and car park as a compensatory trade off measure as the guidance within Approved Document B for, B5 could not be complied with. This incident provides further evidence on the benefits of installing sprinklers for car parks.

June 2024 – London housing bathroom fire

- Occupancy: Specialised Housing.
- Where: London.
- Fire Rescue Service: London Fire Brigade. (LFB)
- Incident: Bathroom fire.
- AWSS: Sprinklers.

This incident reaffirms the effectiveness of AWSS providing a high level of fire protection as part of a fire safety strategy tailored for vulnerable residents and long-term older individuals. Future-proofing residents' accommodation is essential to accommodate the potential effects of aging on mobility, sensory faculties and cognitive abilities.

Fire crews were dispatched to a fire within a three-story specialised housing scheme comprising of 35 flats. Upon arrival, it was determined that the fire originated within a bathroom/toilet, activating the residential sprinkler system.

The sprinkler system head that activated was installed on the same floor as the fire, not in the room of origin. One resident required further medical attention, the cause of the fire is pending the findings of the fire investigation team.

BAFSA recommends that sprinklers are installed in accordance with the guidance contained in BS9251:2021. This standard extends the provision of sprinklers to certain bathrooms, shower rooms, and toilets.

July 2025 – South Wales tall building fire

- Occupancy: Purpose built block flat 10 or more storeys.
- Fire Rescue Service: South Wales Fire and Rescue Service. (SWFRS)
- Incident: Kitchen Fire.
- AWSS: Sprinklers.

Catherine Love, Bron Afon Director of Operations and Deputy Chief Executive said, "Sprinkler systems are the most effective way of fighting fire and preventing loss of life. We are proud that this work is setting an example as the most challenging of its kind in the UK."

The Bron Afon Community Housing Association should be commended for its pioneering leadership in fire safety. In 2011, they made the decision to retrofit sprinklers in one of their

high-rise residential blocks, following lessons learned from previous fires in high-rise residential blocks.

This initiative set a precedent in Wales, inspiring other housing providers to adopt similar measures.

Thirteen years later, the sprinkler system within this 12-storey residential block of flats activated following a fire.

Upon arrival, the incident commander (IC) determined that the fire was confined to a flat on the first floor of the building. Upon entering the dwelling, operational crews ascertained that a fire within the kitchen involving a chip pan had been contained, controlled and extinguished by the activation of one single sidewall sprinkler head.

Two residents voluntarily evacuated their flat prior to the arrival of the SWFRS with no injuries reported. Minimal fire and smoke damage was reported within the compartment of origin.

This incident once again refutes the misconception that residential sprinklers should not be used as an extinguishing medium for chip pan fires.

August 2024 – Brighton flat fire

- Occupancy: Assisted living complex.
- Fire Rescue Service: East Sussex Fire and Rescue Service. (ESFRS)
- Incident: Bedroom fire.
- AWSS: Sprinklers.

Station Manager Louisa Curtis, of East Sussex Fire and Rescue Service, Brighton & Hove Fire Safety Team Manager, said: "ESFRS have consistently promoted for the installation of sprinklers, it is a simple, cost-effective way to save more lives and reduce the risks to firefighters. Fire sprinklers are the only active fire system which detects a fire, suppresses a fire and raises the alarm. This incident demonstrates sprinklers provide protection from fire damage but most importantly provide time for people to safely self-evacuate if there is a fire."

This was the third reported flat fire within this complex in the space of 29 months. Each time the fire was contained and controlled or extinguished with limited fire damage, and no injuries reported.

On arrival fire crews established a fire within a flat bedroom had been contained/ controlled by the activation of one concealed sprinkler head. The seat of the fire involved the bed mattress/bedding, which was extinguished by firefighters.

The cause of the fire was determined to be an electrical fault involving the electric heat pad that caught fire, igniting the mattress and bedding which was contaminated with emollient.

This is the second reported fire sprinkler activation reported to Sprinkler Saves UK,

Credits: ESFRS

where it was identified that the resident used emollients that are easily transferred from skin to clothing and items such as towels and bedding. On both occasions the fire was either contained, controlled or extinguished by the activation of the sprinkler system.

The risk arises when these emollients are absorbed into fabrics and then exposed to naked flames or heat sources. Scientific testing has shown that fabric burns quicker and hotter when contaminated with emollients. These fabrics include clothing, towels, bandages, and bedding. FRSs are actively promoting the need for awareness of the dangers of using emollient creams within their local communities

September 2024 – Greater London reported sprinkler activations

- Occupancy: Purpose built flats – 10 or more storeys
- Fire Rescue Service: London Fire Brigade (LFB)
- Incident: Tall building residential fires
- AWSS: Sprinklers.

Our gratitude to LFB for their ongoing support, playing a key leadership role in promoting the benefits of AWSS. Actively supporting the NFCC who encourage fire services to collate, provide fire data and case studies to Sprinkler Saves UK. Reporting incidents taken from the Incident Recording System (IRS) where sprinklers were reported as present and having an impact in Greater London.

Two incidents were reported involving residential purpose-built block of flats where sprinklers had an impact. On each occasion the fire was either contained, controlled or extinguished by the sprinkler system. Demonstrating that a correctly designed and installed sprinkler system can detect, raise the alarm and control, or in this case, extinguish a fire at an early stage of development.

Fire crews were mobilised to a fire within a second floor flat, on arrival the IC established that a fire within the living room had been extinguished by the activation of one sprinkler head. The cause of the fire was identified to involve a tea light/candle setting light to textiles confining fire spread to the item first ignited, one person received minor injuries.

The second incident involved an apartment fire on the second floor which was contained/controlled by the activation of one concealed sprinkler head, the fire was extinguished on arrival be firefighters using a main jet. The seat of the fire was identified to be within a cupboard and thought to be electrical in origin, with fire spread limited to the item first ignited.

October 2024 – London kitchen fire

- Occupancy: Temporary accommodation.
- Fire Rescue Service: London Fire Brigade. (LFB)
- Incident: kitchen fire.
- AWSS: Sprinklers.

The landlord should be applauded for implementing a package of fire safety measures prioritising the installation of sprinklers in its temporary accommodation building property

portfolio providing a further layer of protection from fire for their most vulnerable residents of their communities.

This decision was justified following a kitchen fire involving cooking which was contained to the room of origin following the activation of one sprinkler head which extinguished the fire with no injuries reported.

When comparing this incident to a non-sprinklered tall building fire in Croydon used for temporary housing in October 2022, the outcome was so different. London Fire Brigade reported that 100% of the three roomed flat on the second floor was damaged by fire with 50% of the second-floor common ways damaged by fire. Ten people evacuated before the arrival of the brigade, fire crews wearing breathing Apparatus rescued two woman and one child using fire escape hoods.

November 2024 – Doncaster bedroom fire

- Occupancy: Purpose built block flat 10 or more storeys.
- Fire Rescue Service: South Yorkshire Fire and Rescue. (SYFR)
- Incident: Bedroom Fire.
- AWSS: Sprinklers.

Roger Brason, SYFR sprinkler advocate, “We’ve championed the use of sprinklers, particularly in high-rise buildings, for quite some time, so we’re delighted that all of the blocks in Doncaster now have them.”

“These devices not only help protect life but help protect property too. In most cases, they will extinguish a fire completely and prevent it from spreading any further. The fact that people living in high-rise buildings across Doncaster now have such a high level of fire protection really is excellent news”

Fire crews were mobilised to reports of a fire involving a tall residential building. On arrival the IC established that the seat of the fire was within a third floor flat which had been contained/controlled by the activation of one sprinkler head.

The tenants were unable to self-evacuate from the flat as the fire had compromised their means of escape, proceeded to sought refuge on the external balcony following fire survival guidance received from SYFR control until rescued by fire crews.

The fire, which started in the bedroom, was caused by an electric heater placed too close to the bed/bedding, activating the sprinkler head which contained the fire to the room of origin. Minor superficial fire, heat damage was sustained to the room of origin with no further firefighting required.

December 2024 – Gloucestershire bedsit fire

- Occupancy: House of multi-occupancy.
- Fire Rescue Service: Gloucestershire Fire and Rescue Service. (GFRS)
- Incident: Lithium Battery Fire.
- AWSS: Sprinklers.

Obi Selassie, GFRS Station Manager "If it was not for the activation of the sprinkler system extinguishing the fire before the arrival of the fire service, we could be discussing a different outcome for this incident, The benefits of sprinklers should not be underestimated they save lives and reduce injuries, protect firefighters."

The growing risk of e-bike and e-scooter fires involving lithium batteries should not be underestimated. These fires can spread rapidly and develop into larger fires within a short period of time, potentially leading to significant uncontrollable runaway fires.

Fire crews were mobilised to a fire within a ground floor studio bedsit. Following the completion of a dynamic fire risk assessment the IC identified that one sprinkler head had activated containing/ controlling and extinguishing the fire involving a e-bike lithium battery which had been left on charge. 10% fire/heat damage was reported in the vicinity of the fire and the resident had self-evacuated from the premises prior to the arrival of GFRS.

This incident provides further evidence that the main functional objectives of a life safety sprinkler system were achieved.

- Reducing the rate of heat and smoke, containing and controlling the fire
- Reducing the likelihood of a fire spreading beyond the room of origin
- Firefighters operated without due risk to either effect rescue or assist evacuation
- Prevent conflagration

A similar fire reported by LFB resulted in a e-bike battery explosion which destroyed a family home days before Christmas highlighting the catastrophic consequences that can occur if e-bikes and e-scooters are not charged or stored safely. Sprinklers were not installed.

Footage from a doorbell camera captures how quickly the property became engulfed in fire. Three people were inside the house when the e-bike battery burst into flames on the first floor. One person escaped unharmed through the front door, but two others in a converted loft were forced to climb through a skylight on to the roof. One male fell from the roof and suffered serious injuries, while a woman slipped but was caught by a firefighter and later treated for smoke inhalation.

Despite sprinkler protection of lithium batteries being outside the scope of current sprinkler design standards, this incident demonstrates that a sprinkler system can contain and help, control a e-bike lithium battery fire.

January 2025 – Warwickshire commercial fire

- Occupancy: Supermarket
- Fire Rescue Service: Warwickshire Fire and Rescue Service. (WFRS)
- Incident: Toilet fire.
- AWSS: Sprinklers.

Matthew Pardoe, Warwickshire Fire Rescue Service Station Manager says:

"If it was not for the prompt activation of the store sprinkler system containing, controlling and in this case extinguishing the fire, we could be discussing a different outcome for this incident. These types of premises contain high fire loading with unique fire hazards due to the large amounts of stock stored on site increasing the risk of rapid fire spread in the event of a fire. The benefits of sprinklers should not be underestimated they save lives and reduce injuries, protect firefighters."

Two fire appliances were mobilised to reports of a fire within a large retail supermarket, discovered by staff in the vicinity of the first-floor toilets. The alarm was raised by staff manually activating the premises fire alarm system. The store was evacuated with no injuries reported before the arrival of WFRS.

On arrival the IC established that the fire had been extinguished on the first floor of the premises by the sprinkler system, enquires are ongoing by Warwickshire Police to establish the cause of the fire.

Disappointingly, no mention was made in the local press regarding the positive role of the sprinkler system which allowed a successful conclusion to this incident. The danger of retail supermarket fires should not be underestimated Firefighters in Gloucester were put at risk when tackling a superstore fire in 1996 in Staple Hill which sadly resulted in the loss of life firefighter Fleur Lombard, on this occasion sprinklers were not fitted.

Credit: Hampshire & Isle of Wight Fire and Rescue Service

At present regulatory guidance indicates the use of fire sprinkler systems in new single-storey supermarkets and superstores with an uncompartmented area greater than 2000m$^{2.}$

February 2025 – Fleet residential electrical cupboard fire

- Occupancy: Converted flat/maisonette, multiple occupancy.
- Fire Rescue Service: Hampshire and Isle of Wight Fire and Rescue Service.
- Incident: Electrical cupboard fire.
- AWSS: Sprinklers.

A small fire in an electrical cupboard was contained, controlled by the passive and active fire safety measures. The closed electrical cupboard fire door prevented the fire from spreading from the room of origin, one sprinkler head activated within the cupboard controlling and extinguishing the fire before the arrival of the emergency services.

The sprinkler system reduced the fire's heat output and growth, providing more time for the occupants to escape to safety or be rescued. No further firefighting media was required with no injuries reported.

When you compare this incident to a similar electrical flat cupboard fire in a residential block of flats London in May 2021 involving a residential tall building where sprinklers were not installed, the outcome was far different. The fire on that occasion resulted in the attendance

of 20 pumps with 80% of the flat damaged by the fire and 67 residents' self-evacuating prior to arrival of the FRS. Major incident declared by LFB resulting in the mass evacuation of the block.

March 2025 – London Commercial Kitchen Fire

- Occupancy: Pub/wine bar/bar
- Fire Rescue Service: London Fire Brigade (LFB)
- Incident: Kitchen fire
- AWSS: Drencher

A fire within a commercial basement kitchen involving a cooking pan left unattended resulted in the attendance of 25 firefighters to control, extinguish the fire which damaged the kitchen and the ducting. It is reported that a drencher system was present having an impact containing controlling the fire.

The benefits of fixed firefighting systems controlling a fire has been proven to protect property, business and jobs with the impacted business operational within hours, avoiding the economic and social costs.

Further enquires would have to be made with LFB regarding the IRS primary fire data recorded for this incident as a drencher system is designed primarily for exterior fire protection. Typically, in commercial kitchens fixed firefighting systems such as wet chemical systems are used for object protection, kitchen areas, fryers, oil cookers etc and not used for area wide protection of a building.

Credit: Hampshire & Isle of Wight Fire and Rescue Service

The benefit of installing wet chemicals is that they provide excellent flame knockdown and surface cooling the scope of kitchen protection should include all appliances that are capable of catching fire and not just the deep fat fryers, protection should cover ventilated ceilings/hoods, plenums and duct entrances and should be activated simultaneously.

Focus on common fire locations: student accommodation, kitchens and schools

by Nick Coleshill

Nottinghamshire student accommodation sprinkler saves

Background

Student accommodation is undoubtedly a challenging environment from a fire safety perspective predominately due to the occupancy. University life brings independence, social opportunities as well as the academic challenge. It is also associated with a lifestyle with a reduced level of caution when it comes to appreciating risk or identifying the importance of fire safety. This combined with the distractions of student life, significantly increase the risk of fires in the kitchen area.

The increased risk from fire for this occupancy was demonstrated following the high-profile tall building student accommodation fire in Bolton involving the premises known as the 'Cube' in 2019. The incident report completed by Greater Manchester Fire and Rescue Service referenced the fire spread rapidly and posed a real risk to residents' safety. Two residents were trapped in their flats by fire, heat and smoke, one was pulled from a sixth-floor window by a firefighter on a high reach aerial platform while the second was assisted by firefighters to escape from a second-floor window using ladders.

It is reported that some students didn't start evacuating in response to the premises fire alarm sounding because they had grown accustomed to regular false alarms going off almost daily. Thankfully on this occasion there were no fatalities but highlighted the current failings of the building regulations as fire sprinklers are not a mandatory requirement in all buildings where people sleep such as student accommodation which you may find surprising.

Despite the new fire safety rules reducing the threshold height of sprinklers for new build residential purpose block of flats from 30m to flats to 11m, you must ask yourself why this does not apply to student accommodation or other building types providing sleeping accommodation. Will it take another Cube fire or another Grenfell fire for the government to act?.

Following a freedom of information request for IRS data relating to primary fires in England for the financial years 2018/19 to 2023/24. Only 21 incidents were captured where AWSS were present having an impact, reflecting current government guidance that AWSS are not required in student accommodation in England.

Fire start location, twelve incidents involving the Kitchen followed by bedroom/bedsitting with six, others accounting for the remaining three.

It is no surprise that kitchen fires accounted for the highest number of fires following the findings identified by LFB for cooking related fires for this occupancy who reported that over

the past five years London firefighters have attended more than 1,200 cooking-related fires and false alarms in university students' halls involving kitchen activities, People living in rented or shared accommodation are seven times more likely to have a fire involving unattended cooking.

The benefits of installing sprinklers for this type of occupancy was reinforced following three fires reported by Nottinghamshire Fire & Rescue Service (NFRS) within the space of 12 months which were either cooking related or involved incense candles. On each occasion the fire was contained, controlled or extinguished by the sprinkler system, demonstrating the benefits of sprinklers.

Reinforcing why BAFSA are calling for all buildings where people sleep such as student accommodation to be protected from fire by the installation of a sprinkler system as part of a package of fire safety measures.

Credit: Nationwide fire sprinklers

The incidents

September 2024 – cluster flat bedroom fire

Group Manager Jonathan Holford Head of Fire Protection

"Nottinghamshire Fire & Rescue Service (NFRS) supported the 2020 changes to Approved Document B requiring sprinklers to be installed in all residential buildings over 11m. The benefits of these changes were seen at a recent incident in a medium rise residential building in Nottingham. A small accidental fire was contained to the room of origin allowing our crew to extinguish the fire with minimal equipment. This reduced the hazard to our Firefighters whilst also creating a significantly safer environment for occupants to evacuate promptly. NFRS also welcome the publicised changes to ADB coming into force on 2nd March 2025 requiring sprinklers to be installed in all new care homes."

Fire crews were mobilised to reports of a confirmed fire within a six-storey purpose-built student accommodation block. Upon arrival the IC ascertained that one concealed sprinkler

head within a cluster flat bedroom had actuated containing/controlling the fire to the room of origin. This allowed tenable conditions for the resident to make their way to a final place of safety. They were unaware of the fire until the bedroom door was opened by the resident exposing the seat of the fire.

Minimal firefighting was required by NFRS to extinguish the fire with only superficial flame, heat, and smoke damage sustained within the room of origin. It was determined that the cause of the fire was due to embers from a stubbed out lit incense candle which were blown on to clothes within a washing basket which subsequently caught light.

As part of the building process sprinklers were required to be installed to comply with Approved Document B requiring sprinklers to be installed in all residential buildings over 11m in height. However, during the build the decision was made by the developer to change the use, occupancy of the building to purpose group 2b, halls of residence which benefitted from the previous decision for the installation of a residential sprinkler system to comply with building regulations.

If this had not been case the outcome of this incident could have been so different, if the building had originally been proposed as student accommodation sprinklers may not have been included as part of the design build for the building.

October 2024 – Electrical cooking extractor hood fire

Fire crews were mobilised to a fire involving an electrical cooking extractor hood within a communal kitchen. On arrival the IC established that the fire had been extinguished by the activation of one sprinkler head within the room of origin. Superficial fire, heat and smoke damage was reported within the compartment of origin.

Credit: Dorset & Wiltshire FRS

February 2025 – Kitchen air fryer fire

Group Manager Chris Emmott who attended this incident, said: “Sprinklers are one of the most effective methods of fire protection, offering automatic activation to suppress fires before they spread.

“We are thankful that this building had a working sprinkler system in place. This could have been a much worse situation, but thanks to the prompt response from the sprinklers, we were able to extinguish the fire quickly and keep everyone safe.”

An electric air fryer caught light in a communal kitchen within a tall building. On arrival the IC established that the premises residential sprinkler system had activated impacting the growth of the fire,

extinguishing the fire to the to the compartment of origin by the activation of two sprinkler heads.

Fire damage was confined to the electric air fryer, kitchen worktop, cupboards, The occupants self-evacuated with one casualty treated on the scene for smoke inhalation. It is reported that following the building control process and, consultation with NFRS, that sprinklers would be included as part of the design build as the premises was of timber framed construction.

When comparing this incident to a similar air fryer kitchen fire in Weymouth in December 2024 where the premises was not sprinkler protected, the difference is startling. The kitchen was severely damaged by the fire.

These incidents, demonstrate the benefits of installing a life safety sprinkler system within buildings providing sleeping accommodation.

- Rapidly reducing the rate of production of fire, heat and smoke preventing flash over.
- Allowed extra time for the occupants to escape to safety or be rescued.
- Internal fire spread contained, controlled and extinguished within the room of origin, preventing fire spread to the common ways.
- Integrity of the means of escape maintained.
- Reducing the risk to firefighters.
- Prevented a major protracted incident, allowing FRS resources to be released, redeployed to attend other emergency incidents.

Wales primary school sprinkler save

When you read real life tangible examples of where fire sprinklers have actuated containing, controlling or even in some cases extinguishing school fires, you must ask yourself why sprinklers are still not mandatory for newly constructed school buildings in England.

It is a requirement in Scotland and a condition of government funding in Wales, but despite the [3]rising number of school fires since the lockdowns of 2020/21 there is no requirement in England or Northern Ireland for the installation of sprinklers in schools. A freedom of information request by insurer Zurich[3] in February 2021 found just 8.5% of new schools built in England since 2015 were sprinkler protected.

The NFCC report that in May 2021, the government announced a proposal to make the installation of sprinklers mandatory in new schools over 11m in height, However, given that only a few schools currently meet this threshold, the benefits of this proposal are likely to be limited. When replying to the consultation on these proposals, NFCC was clear that their strongly held belief is that they constitute a lessening of standards from previous guidance.

The original guidance, when first released in 2007, acknowledged the important role of sprinklers and stated that “all new schools should have fire sprinklers installed except in a few low-risk schools.” The proposed changes in the guidance are a retrograde step and represent a real lessening of standards in this area.

Now approaching over 4 years since the government first consulted on a revised version of Building Bulletin 100: design for fire safety in schools, we are still waiting for a decision to be announced.

January 2025 – Wales primary school storeroom fire

The benefits of protecting schools with sprinklers were reported by Mid & West Wales Fire & Rescue Service following a malicious act resulting in a fire within a storeroom. The fire which was successfully contained, controlled and extinguished within the room of origin by the activation of one sprinkler head with no injuries reported, no further firefighting media was required by the FRS on arrival.

The impact of the fire on the school was minimal due to the positive outcome of installing a sprinkler system which allowed the school to maintain a business-as-usual approach reopening the following day with no impact on the student's education.

When you compare this to the three major school fires which were not sprinkler protected in Derbyshire, which were all severely damaged by fire in May/October 2020, the outcome of the fires was so much different.

These fires have resulted in the agreement of a statement of intent, between Derbyshire Fire and Rescue Service, and Derbyshire County Council for sprinklers to be installed in new-build schools and those undergoing renovation, which should be applauded.

Gavin Tomlinson, Derbyshire's chief fire officer at the time of the fires - who has been campaigning for a change in legislation concerning sprinklers - said school fires "rip into the heart of a community".

"This year I have witnessed three separate schools destroyed by fire despite the best efforts of my firefighters," he said.

"Sprinklers are an effective fire safety measure that can extinguish a fire or contain it until the arrival of fire crews."

This incident clearly demonstrates the importance of protecting educational premises with sprinklers. With the benefits they bring, protecting the.

- School, in terms of life safety/property.
- Environment reducing CO_2 emissions.
- Students course work, teachers teaching aids, resources
- local community resource.

For change, we need the evidence to support the fire sector and, sprinkler industry's campaign, lobbying government for more buildings in the built environment to have sprinklers. Notable success has been achieved in England following recent government consultations.

- Reducing the height threshold of sprinklers in new residential block of flats to 11m
- All new purpose-built care homes irrespective of height to be fitted with sprinklers

But we still have a journey to influence policy makers to emulate the policies in the devolved governments in other UK jurisdictions.

- Scotland, sprinklers are required to be installed in new-build care homes, blocks of flats, social housing and schools.
- Wales has required sprinklers in all new single dwellings, care homes, student halls of residence, schools, boarding houses, and certain hostels.

Full reviews of all the above-mentioned sprinkler saves and many more can be found by visiting www.sprinklersaves.co.uk.

Progress in Europe

Alan Brinson executive director of the European Fire Sprinkler Network (EFSN) gives a round-up of sprinkler related activities in Europe.

It has been another good year for sprinklers and for the European Fire Sprinkler Network, which has a record membership. Our campaigns continue to make gains, so that despite a turndown in construction activity, European sprinkler shipments in 2024 were only slightly down on 2023, while the first half of 2025 was the best half for two years.

Strong sprinkler markets are partly due to a greater proportion of buildings being protected with sprinklers, as regulations and practice evolve to include them. I am glad to report that our campaigns have again made useful progress across Europe. As in the UK there is often reluctance to make positive regulatory changes, with powerful vested interests resisting any measure that will increase the cost of construction. Nevertheless we are winning, increasing support among fire officers, consultants and officials and that is yielding results:

- Belgium – in Flanders there is a regulatory incentive to fit sprinklers in care homes
- Netherlands – drafts of a design standard for large compartments and of guidance for wooden buildings contain important incentives for sprinklers
- Poland – the government published a proposal to require sprinklers in multi-storey underground car parks, with more requirements publicly suggested by an official
- Spain – the revised industrial code was published with some tightening of the requirements for sprinklers in warehouses (the area threshold for sprinklers is much lower than in the UK). New government guidance provides a route for local authorities to accept designs and products without a CE mark that are approved by recognised laboratories (e.g. FM)
- Sweden – new incentives for sprinklers in the revised fire safety building code include a doubling of the acceptable fire brigade response time, an increase in access road distance to the building from 50 m to 80 m, extended travel distances for escape and reduced fire resistance. Many of these were commonly used in fire-engineered designs but they are now codified
- UK – here sprinklers are now required in new care homes in England & Northern Ireland and in blocks of flats with a floor above 11 m in NI. I was on the panel that revised BS 9991, which has introduced more incentives to fit sprinklers in blocks of flats lower than 11 m.

Looking ahead we expect our campaigns to make further progress as regulators grapple with the challenges of the widespread prevalence of batteries, an ageing population and the desire to make greater use of wood and other combustible construction materials.

Unusually, the European Commission has published some fire safety guidance. It was on enclosed car parks for electric vehicles and, thanks to our input, it made positive comments about sprinklers.

A key constituency for our campaigns is the fire service. Its regulatory status varies by country but it is always influential. If fire officers are to support sprinklers they need some knowledge of them and so in France and Spain we give official training courses to fire officers (since 2010 in France). We are looking to start in Italy, where the fire service writes and enforces the fire safety regulations!

We work closely with BAFSA and others in different countries and this year for the first time we brought together those who lead the sprinkler campaigns in six countries, including the UK, to exchange experiences. The event went very well and next year we hope to have representatives from eight countries.

Research has supported our campaigns in the past and we are open to new proposals, as is the International Fire Suppression Alliance. IFSA is currently co-funding research on modern methods of construction and measures needed to enable it to contribute to net zero. It is led by Professor Jim Glockling, whom many BAFSA members will know. Meanwhile in Spain the EFSN will fund some residential fire testing, which we hope will generate a positive report in Spanish that can be used to inform thinking there.

Standards are central to our efforts. If a regulation, code or guidance is to call for sprinklers in a building it is standards that define what that entails, for the regulator, building control, specifiers and contractual parties. EFSN provides the secretariat for the CEN sprinkler working group. In the past year the list of open items has become shorter, with EN 12845 part two on ESFR and CMSA design and part three on earthquake bracing published. Likewise EN 12259-15 on large k-factor and extended coverage sprinklers has been published, as has EN 17451 on pump sets. We hope to send EN 12845-1, the revised EN 12845, to a second CEN enquiry (comment) this winter. Meanwhile a quick amendment to the current EN 12845 (2015 edition) will reference the above new standards, so that they can be called up more easily in contracts. Water mist standards also made huge progress, with most of the 16 fire test protocols in the EN 14972 series now published and publication of the remaining few imminent. An amendment to EN 14972-1 will introduce guidance on application of the test protocols, while the EN 17450 series of component standards has clarified what is expected of key water mist components such as nozzles, filters and check valves, with standards on deluge valves, actuators and pressure switches to follow.

The EFSN also keeps track of other, non-sprinkler standards produced by different CEN technical committees, including for fire engineering, the delivery of remote services and fire protection of battery energy storage systems. While containerised BESS in a field may not be provided with suppression systems, where BESS are in buildings I believe that suppression should be required to control what could otherwise become very powerful fires.

BAFSA works very hard to maintain high levels of quality in the UK sprinkler market, with LPS 1048 as a reference. An equivalent is lacking for water mist and the EFSN has been working with relevant parties to introduce one. Such a scheme would enable those who want quality to specify

it and provide accredited installers with the means to demonstrate their competence. Third party certification schemes for water mist installers and installed systems exist in The Netherlands (where certification is required for all systems installed to meet building regulations), in France and in Germany (for decades) and in some Nordic countries. I hope next year in this publication there will be more to say about water mist third party installer accreditation and system certification in the UK.

Fire Sprinkler International (FSI)

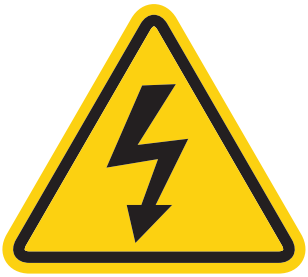
Fire Sprinkler International was held in Salzburg this year with around 460 delegates and over 60 stands. Some 270 delegates stayed for the gala dinner and entertainment in the Stiegl-Keller, a traditional Austrian venue with views over the city.

FSI is an opportunity to catch up on the latest developments in a highly efficient manner, and of course to network. Bringing so many like-minded people together also helps to give the sprinkler industry an identity.

In Salzburg we not only heard about innovations, research and updates to standards, there was also an environmental thread throughout. Part of this related to the environmental impact of sprinklers. Some countries now require a carbon life cycle analysis for new buildings, which in turn requires environmental product declarations for sprinkler system components. Until fire is considered, sprinkler systems will be seen to increase the carbon loading of construction. We need to ensure the LCAs include the reduction in carbon emissions from fires due to the presence of sprinklers.

Remote inspection and testing was also widely covered in Salzburg. This could reduce the cost of ownership of sprinkler systems, as well as provide owners and insurers with evidence that periodic testing has been performed. It could even generate data to support changes to the frequency of testing (if a diesel pump were tested every fortnight instead of every week that would hugely reduce its carbon impact – see LCAs above). That said, many remain to be convinced that remote testing will pick up as many problems as in-person testing. Standardisation and approvals can provide reassurance. NFPA and a couple of national initiatives in Europe are working on standards, while FM Approvals has approved two manufacturers of pump testing systems.

Fire Sprinkler International will be in Paris 22-23 April 2026
visit www.firesprinklerinternational.com
for more details



Electrical risk from sprinklers – BAFSA outlines its position

by Stewart Kidd

The oft-expressed concerns about the dangers of water and electricity usually relate to possible risks of electrocution while using a fire extinguisher. The theoretical risk (we can find no reports of any actual such injuries being incurred since 1945) relates originally to portable water extinguishers which produce a 'straight jet' and if this was to come into contact with a live conductor, there is a theoretical possibility that electricity could be conducted back down the stream to the person holding the extinguisher, especially if they are standing on a wet floor. No examples of this happening have been recorded in the UK Public Domain and the HSE have confirmed in a FoI request that no accidents involving fire extinguishing equipment and electricity have been reported[1].

The reality is of course, that all power generation and transmission companies make extensive use of installed, automatic, water-based, fire suppression systems (including sprinklers). These protect key plant such as turbo-alternators, switchgear and transformers operating at voltages up to 400kV and at significant current - typically 20,000 amps.

Possibility of injury

A little thought regarding the way automatic sprinkler systems operate would appear to confirm the improbability of injury resulting from water being applied to plant even in the vicinity of three phase systems.

The rationale is:

1. Sprinkler heads only actuate in the presence of heat, typically 68C, and as they are invariably ceiling or high wall mounted it is likely that the temperature and smoke emission in the room where the sprinklers are about to operate will already be inimical to a continued human presence.

2. All new build properties with domestic electrical distribution systems will be fitted with current protection devices in the form of MCBs and RCD/RCCBs which operate to disconnect the mains supply should an earth fault be detected. RCD or similar devices have been widely installed since 2007 and mandatory under BS 7671 18th edition and Approved Document P of the Building Regulations since 2018
3. Given that such devices usually operate at a maximum of 30mA the speed of disconnection (<300 ms) must significantly reduce the risk of injury to anyone still in the vicinity.

BS 9251 Fire sprinkler systems for domestic and residential occupancies — Code of practice (2021)

It is worth noting that BS 9251 and its previous iterations have been in widespread use in all parts of the UK for 25 years and before this, domestic and residential sprinkler systems had been installed to BS 5306 Part 2 since 1990 and no concerns regarding interactions between sprinkler operation and electricity have been reported.

Clause 5.4 of BS 9251 sets out areas where sprinkler protection can be safely omitted and quotes Clause 15 of BS 5306-0 (2020) regarding the use of sprinkler protection in the presence of electrical equipment and concludes it is generally safe to do so. Where there might be significant hazards at high voltages (>1000v AC) then Clause 5.1.3(c) of BS EN 12845-1 can be used to justify the omission of sprinklers in switch rooms, server rooms and transformer chambers.

Damage to equipment

The fear of damage to electrical equipment referenced in the question may also be overstated. Given that MCBs or RCDs will trip early in a fire and certainly as soon as the sprinkler system operates, the equipment affected will be no longer be live and spraying it with water is unlikely to be harmful, indeed many computer machine rooms and server rooms are presently protected by sprinkler systems which have successfully operated efficiently and safely in fires.

Conclusion

The BAFSA technical committee believes that concerns expressed by the providers of electrical connections to new residential developments can be satisfied by a small change in guidance. The BSi committee responsible for BS 9251 will be considering an addendum to the standard:

"It might be inappropriate for spaces in dwellings protected by water-based sprinkler systems to contain intake service equipment owned by distribution network operators or meter equipment operators. When locating sprinkler heads in utility or service cupboards in dwellings as recommended by this British Standard, early consultation with electricity network operators is advisable, as they might require their equipment to be located elsewhere".

Notes

1 '(The HSE) have confirmed that none of the incidents involved the use of firefighting equipment' (5/9/17). A second request for an update has been sent to the HSE.

Real data, real fires, real protection

Nick Coleshill of BAFSA's Sprinkler Saves project explains the importance of providing evidence of real sprinkler activations to make the case for automatic fire suppression systems.

In the face of growing fire safety challenges, the role of Automatic Water Suppression Systems (AWSS) has never been more vital. The BAFSA Sprinkler Saves Project is a unique initiative that shines a light on how these systems are protecting communities across the UK, using real incident data to tell powerful, evidence-based stories of fire prevention in action.

At its core, the project aims to raise awareness of how the destructive effects of fire can be mitigated, and in many cases, prevented entirely through the use of sprinklers and water mist fire suppression. These are real cases from real buildings: care homes, tower blocks, schools, warehouses, and more. Each one demonstrating how early water suppression can make the difference between a minor incident and a catastrophic loss.

Through the Sprinkler Saves website (www.sprinklersaves.co.uk), BAFSA works closely with Fire and Rescue Services and the wider sprinkler industry to encourage the reporting of every activation, no matter how small. These reports are carefully documented to show the precise impact and benefits of the sprinkler system in use.

The project also highlights the role AWSS play in protecting the most vulnerable. In high-risk environments such as care homes, specialist housing, and residential blocks, sprinklers are often the first line of defence. By slowing the spread of heat, smoke, and flames, they allow more time for occupants to escape or be rescued.

During the 2024/2025 reporting year, 72 fire incidents involving sprinkler activations were submitted to the Sprinkler Saves Project. These incidents occurred across a diverse range of building types and occupancies where AWSS were present.

To put these figures into context, a comparison can be made with broader data collected via the national Incident Recording System (IRS). Between 2018/2019 and 2023/2024, a total of,

72 INCIDENTS SUBMITTED

50%+ RESIDENTIAL BUILDINGS

764 primary fires were recorded in which AWSS were reported as both present and effective. That equates to an average of 294 AWSS activations per year across England, Scotland, and Wales Based on this the 72 sprinkler saves reported to the Sprinkler Saves Project for 2024/2025 represent roughly 24% of all known fire incidents where AWSS were reported as having had an impact during that year. This highlights the importance of continued and consistent reporting, as well as the potential for even more comprehensive data capture in future reviews.

Out of those incidents, over half of the activations took place in residential buildings (42) with 27 of those being in purpose-built flats. This is followed by 14 in commercial buildings, eight in industrial, four in domestic and four in retail settings.

Between 2010 and 2023, watermist systems were reported in around 11% of primary fire incidents involving AWSS, though sprinkler activations continue to dominate the data. As watermist systems become more widely installed especially in heritage and specialist buildings BAFSA hopes that increased awareness will drive more consistent reporting in this area.

There are strong reasons to believe that reporting will continue to rise. Regulatory changes now require AWSS in a growing number of settings, including all new residential care homes in England and purpose-built blocks of flats over 11 metres in height. Retrofitting programmes are also expanding, driven by renewed attention to fire safety in the wake of the Grenfell Tower fire and issues surrounding RAAC cladding removal.

With the majority of sprinkler activations taking place in multiple occupancy residential buildings, such as students halls or blocks of flats and it is no surprise to learn that kitchen fires accounted for the highest number of these fires. London Fire Brigade, for example, has reported that over the past five years London firefighters have attended more than 1,200 cooking-related fires and false alarms in university student halls involving kitchen activities.

If we look at some examples from the report - Nottinghamshire Fire & Rescue Service (NFRS) reported three such incidents within the space of 12 months, which were either cooking related or involved incense candles. On each occasion the fire was contained, controlled or extinguished by the sprinkler system.

In September last year fire crews were mobilised to a confirmed fire at a six-storey, purpose-built student accommodation block. On arrival, the incident commander quickly identified that a concealed sprinkler head in a bedroom within a cluster flat had activated. The sprinkler successfully contained and controlled the fire, confining it to the room of origin.

Thanks to the early suppression, conditions remained tenable, allowing the resident, who was unaware of the fire until opening the bedroom door, to safely evacuate. Firefighters from Nottinghamshire Fire and Rescue Service (NFRS) were able to quickly bring the fire under full control, requiring only minimal intervention. The damage was limited to superficial heat, smoke, and flame effects within the affected room.

Following the incident, investigators determined the cause to be embers from a lit incense candle that had been stubbed out but was still smouldering. A draft had blown the embers onto clothing in a nearby washing basket, which ignited and started the fire.

The building had been fitted with a residential sprinkler system during construction to comply with Approved Document B, which mandates sprinkler installation in new residential buildings over 11 metres in height. Initially intended for general residential use, the building's classification was later changed to Purpose Group 2b – Halls of Residence, a use type that, at the time, did not necessarily require sprinklers under building regulations.

Crucially, the developer chose to retain the sprinkler system that had already been included in the original plans, an informed decision that likely prevented far more serious consequences. Had the building been proposed solely as student accommodation from the outset, it's possible that sprinklers would not have formed part of the original design, and the outcome of this fire could have been drastically different.

This incident serves as a compelling example of how forward-thinking decisions during construction, even those made before final occupancy use is determined, can significantly enhance fire safety and protect both lives and property.

The effectiveness of sprinklers in the Nottingham student accommodation incident stands in sharp contrast to the 2019 fire at The Cube, a privately operated student residence in Bolton. According to the incident report byGreater Manchester Fire and Rescue Service, the fire at The Cube spread with alarming speed, posing a significant and immediate risk to life.

Two students became trapped in their flats by advancing fire, heat, and smoke. In a dramatic rescue, one was pulled from a sixth-floor window by firefighters using a high-reach aerial platform. The other was assisted to safety from a second-floor window via ladders. These life-threatening situations highlight how rapidly fire can escalate in the absence of effective early suppression.

The report also revealed a troubling behavioural factor: many students delayed evacuating when the fire alarm sounded, having grown accustomed to frequent false alarms that had become

a near-daily occurrence. While, fortunately, no lives were lost, the incident served as a powerful wake-up call about the gaps in current building regulations - specifically the fact that sprinklers are still not a mandatory requirement in all residential buildings where people sleep.

The Cube fire underscores the crucial difference a properly installed and functioning sprinkler system can make, not just in terms of limiting fire damage, but in preventing dangerous rescues and protecting occupants before conditions become life-threatening.

Sprinkler Saves also saw a number of incidents reported involving air fryers. In fact insurance company Aviva issued a statement earlier this year saying that nearly one in five UK adults (19%) have encountered potential or actual fire hazards in their homes due to air fryers. Two recent incidents reported to Sprinkler Saves involved them.

Nottingham Fire & Rescue Service Firefighters were called to a fire in a student accommodation block involving an electric air fryer located in an open-plan communal kitchen in February of this year. On arrival, crews found that the fire had already been largely suppressed by the activation of two sprinkler heads, which had quickly brought the flames under control before they could spread.

All occupants self-evacuated safely, with one individual treated at the scene for smoke inhalation. The heat intensity was sufficient to activate a third sprinkler head, though only the cover plate was dislodged, and no further water discharge occurred.

Thanks to the prompt operation of the sprinkler system, fire damage was contained to the immediate area around the air fryer - limited to the kitchen worktop, surrounding cupboards, and the appliance itself. A CO_2 extinguisher was later used by firefighters to address a small residual hot spot beneath the kitchen units.

Another incident was reported to us by Avon Fire & Rescue Services which involved an air-fyer in May of this year. This one occurred in a residential block in an open plan flat. When fire fighters entered the premises they found that the fire had been contained and controlled by the activation of three concealed sprinkler heads. There was minor fire and smoke damage confined to the air fyer itself, the work top and the kitchen wall units directly above the seat of the fire.

Looking ahead, the Sprinkler Saves Project will continue to work hand-in-hand with FRS and industry stakeholders to ensure that these systems receive the recognition and regulation they deserve. The ultimate goal is to influence policy change, promote public understanding, and embed AWSS as an essential, non-negotiable part of every comprehensive fire safety package.

You can download a full copy of the report free from the BAFSA website www.bafsa.org.uk by visiting the Sprinkler Saves section or by going directly to the www.sprinklersaves.co.uk website.

Awareness Of Automated Fire Sprinkler Systems

FREE COURSE

A free online course has been developed by BAFSA to educate those with an interest in fire safety on the vital role AWSS play in protecting people and property.

It includes details of the benefits, types of system and components used and how these are matched to meet the individual requirements of the buildings, contents and people they will protect.

You can register to take the course at the BAFSA Learning Centre https://www.bafsa.org.uk/bafsa-training-centre where you can also find details of other sprinkler resources and industry qualifications

sprinkler saves uk

WE NEED YOUR HELP

Sprinkler Saves UK documents sprinkler activations across the UK to provide a body of evidence to show that sprinklers save lives, protect people, property and the environment.

You can assist by informing us about a sprinkler activation at a fire that your FRS has attended by requesting your sprinkler ambassador/ or media manager to report it to Sprinkler Saves UK.

You can report a save at www.sprinklersaves.co.uk or contact Sprinkler Saves co-ordinator Nick Coleshill nick.coleshill@bafsa.org.uk

New care home legislation (England)

By bringing in mandatory sprinkler systems for new build care homes, England has taken necessary, proactive step toward safeguarding some of society's most vulnerable.

Care home residents frequently require assistance to evacuate due to limited mobility, sensory impairments, or cognitive limitations. This elevates their risk in the event of a fire especially when smoke or flames spread rapidly.

Sprinkler systems are a proven line of defence, typically activating early and confining fires to their origin point. This not only buys vital time for evacuation but also gives fire responders a better chance to control the situation.

In one case documented by BAFSA – from South Wales in December 2024 – a concealed sprinkler head successfully contained a fire started by a toaster in an extra-care flat, enabling firefighters to rescue the occupant without injuries and limiting evacuation to that single flat. Such real-world evidence underscores how sprinkler systems can genuinely curb loss of life and property.

The National Fire Chiefs Council (NFCC) has repeatedly highlighted the life-saving value of sprinklers. According to NFCC, sprinklers are 99% effective at either extinguishing or controlling fires and also help reduce property damage and environmental impact. Their position is clear - fire sprinkler systems should be mandated in all new care home builds, regardless of height, and retrofits encouraged during refurbishment of existing facilities and BAFSA agrees.

Regulatory shift

From 2 March 2025, all new care homes in England, regardless of height or size, are legally required to include sprinkler systems as part of their fire safety measures. This change aligns with updates to Approved Document B. The legislation arose from a consultative process beginning

in December 2022, culminating in the formal amendments to Approved Document B and the UK Government response published by March 2024. This regulatory shift reflects a broader push to raise fire safety standards in environments housing vulnerable individuals, informed in part by the Grenfell Tower Inquiry and ongoing reviews of fire safety provisions. The updated BS 9991:2024, released in November 2024, specifically addresses care home fire safety within its revised scope.

Alongside the sprinkler mandate, the regulations phased out BS476 fire classification system in favour of the more rigorous EN 13501 European standard. The April 2025 changes also states that assessment based on expert opinions, rather than direct testing, will no longer be accepted. Fire resistance evaluations must be based on formal classifications under EN13501-2, relying on direct testing or specific application rules outlined in the EN15269 series.

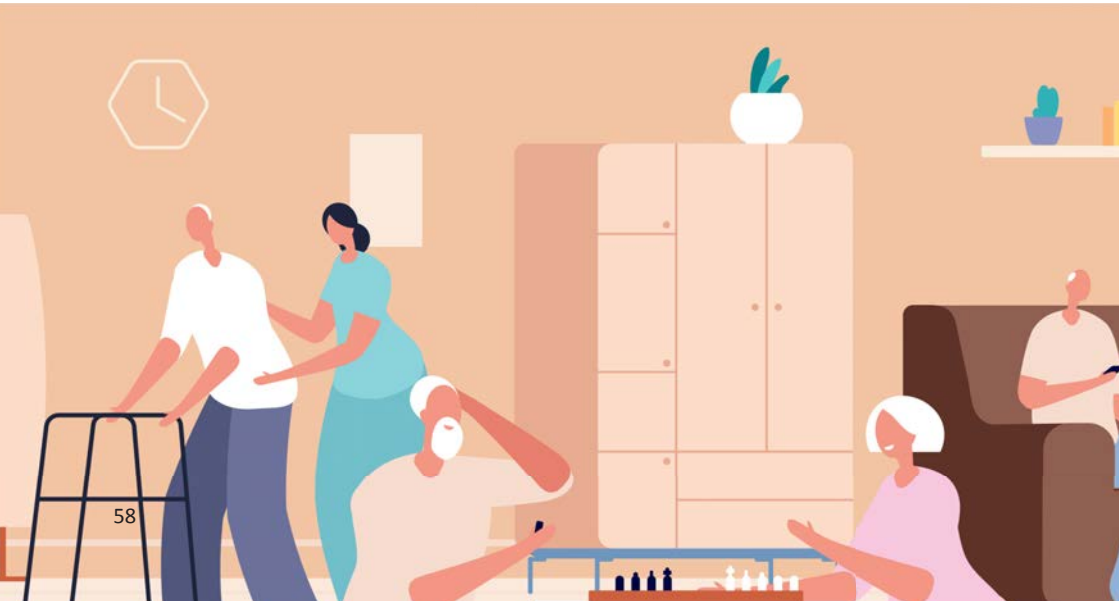
Not only will this give rise to enhanced safety for care home residents it will have design implications going forward as architects and developers must now account for sprinkler infrastructure, impacting budget, layout, and integration with other systems like alarms and compartmentation. Existing care homes are not legislatively required to retrofit sprinklers but are strongly encouraged to do so especially during refurbishments or fire safety updates.

Why care homes need sprinklers

- Highly effective in containing fires early
- Critical for protecting vulnerable residents
- Proven in real incidents to save lives and reduce evacuation scope

What the March 2025 legislation does

- Makes sprinklers mandatory in all new care homes in England from 2 March 2025
- Updates Approved Document B and aligns with new British Standard BS 9991:2024
- Moves passive fire safety to EN 13501 European standards



“This regulatory shift reflects a broader push to raise fire safety standards in environments housing vulnerable individuals, informed in part by the Grenfell Tower Inquiry”

For care home stakeholders

- New builds: Plan now to integrate compliant sprinkler systems.
- Existing facilities: Conduct fire risk assessments and explore retrofits during renovation.
- Engage fire safety professionals to ensure seamless integration and compliance.

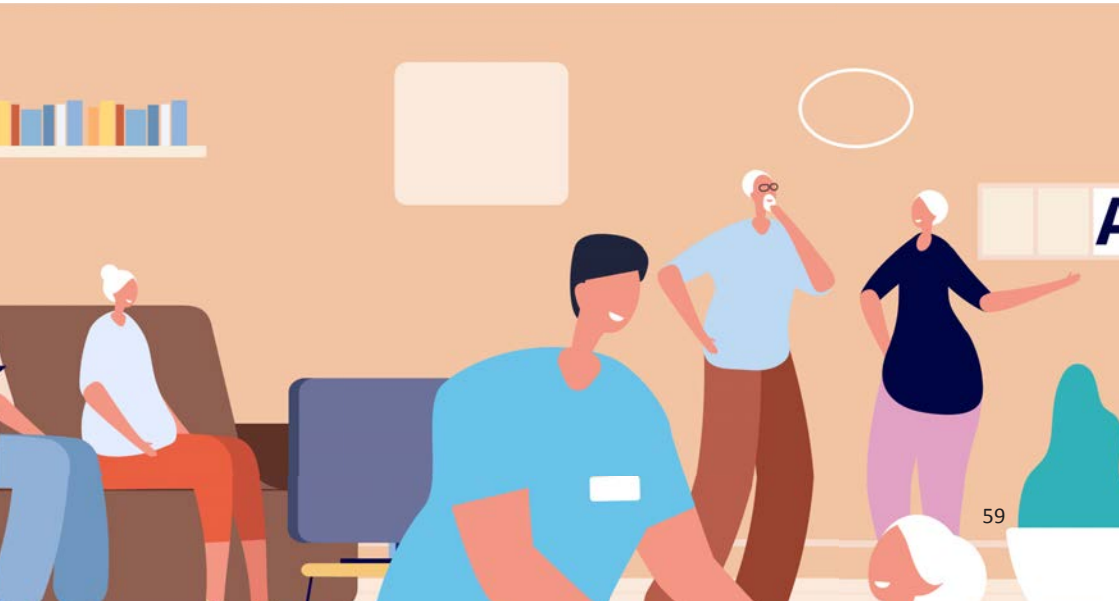
Ritchie O Connell, BAFSA’s Wales representative commented in the Autumn 2024 issue of *Sprinkler Focus* magazine:

“The changes as laid out do not appear to apply to other forms of specialised housing, of which there are many, and there will no doubt be those who seek to exploit this seeming loophole by redefining the nature of proposed premises, nonetheless this represents a significant step forward in improving the safety of care homes.

The change however is also overdue. Sprinklers were reported as cost effective in care homes as long ago as 2015, when a BRE report for the DCLG concluded (inter alia)

“The following building types would be expected to experience a net cost benefit from the installation of sprinklers for buildings much less than 10 storeys (30 m) in height:

- *Care homes*
- *Places of lawful detention*
- *Hostels*
- *Blocks of flats(comparison control group).”*



Automatic fire suppression systems – A guide for owners and occupiers

Several obligations are placed on the owner or occupier of a building or structure which is fitted with a sprinkler system. The advice given also holds true for watermist systems. Yet home owners or those living in houses or protected by sprinkler systems are unlikely even to notice them. Owners or occupiers of industrial premises need to take routine steps to ensure that their sprinkler protection is always available to control or suppress any fire which might occur.

Once a sprinkler system has been handed over to its owners, the responsibility for the equipment will rest with them. Whether or not the system will operate as designed will depend on whetherthe correct maintenance procedures are carried out. UK legislation imposes significant liabilities on employers and/or commercial and industrial property owners who fail to maintain fire safety equipment intended for the protection of life from fire.[1]

In the UK, sprinklers in non-residential premises should be designed, installed and maintained in accordance with BS EN 12845. Some systems may be installed to other international standards or to those specified by FM Global. Section 20 of BS EN 12845 specifies maintenance requirements. The Standard recommends that the testing, servicing and maintenance be carried out by the system installer or a similarly qualified company but there is no reason why weekly test procedures cannot be carried out by an owner or occupier providing that the person undertaking the work is competent to so do.

Given that a sprinkler system not only protects property but life and is often 'mission critical', the value of following appropriate procedures cannot be over- emphasised. Of particular importance is the need to verify that all valves are left in the correct position and that the system is fully operational on completion of any test procedure.

BAFSA recommends that where these tests are carried out in-house a second person be present to verify that this has been done. Best practice would require that the second person be trained to the same standard to ensure consistency and resilience.

Where sprinkler are installed to meet insurance company requirements then additional rules apply in the form of the Technical Bulletins of the LPC Rules for Automatic Sprinkler Installations[2]. TB 203 reiterates the importance of appropriately trained personnel carrying out the testing procedures and the need for approved companies to carrying out servicing and inspections. This document also emphasises the need for documentation of the testing and servicing and pays particular attention to the need to have in place procedures to be implemented in the event of a shutdown of the system together with the actions to be taken in the event of an alarm signal being received from the installation. BS EN 12845 requires that the installation is visually checked each week and that action is taken to activate the water-driven motor alarm.

In the case of an installation supplied by pumps,the simulation of the sprinkler head activation will cause the duty pump to be operated and provide the opportunity to witness pump performance and the alarm signal activation. Where a pump is diesel powered, the engine should be run for 20 minutes and checks on the cooling system, oil pressure, batteries and fuel should also be made. In winter it is essential to check that any anti-frost measures such as trace heating, pump-house heating and tank immersion heater are functioning correctly.

The reliability and efficacy of sprinklers demand systems which are:

- Designed strictly in accordance with published national and international standards
- Installed by competent contractors who hold third party certification from an independent, third party certification body
- Subject to regular inspections and maintained in accordance with national and international standards
- Subject to a programme of review to ensure that the system remains compliant for the fire risks present

BS EN 12845 also requires a quarterly inspection of sprinkler heads, pipework and pipe supports and mandates a flow test be carried out on the water supplies. Section 203.3.2.2 requires that a review of the hazard is carried out on a quarterly basis to ensure that there have been no changes of structure, occupancy, storage configuration, heating, lighting or other parameters that would change the hazard classification of the risk or render the installation in any way inadequate. The

hazard review may be undertaken by any competent person provided that a report on the findings is submitted to the sprinkler servicing contractor. BAFSA however strongly advises that at least one hazard review each year is undertaken by a certificated installer.

BS EN 12845 also requires any pumps to be tested at a 'full load' condition on a yearly basis. Additional checks are required on water storage facilities. Tanks should be visually externally checked for corrosion every three years and refurbished as necessary and all storage tanks should be cleaned and examined internally by a competent person not less than 3/10 yearly depending on the type of tank installed.

System non availability

If a sprinkler system should become non-operational, for example, because of maintenance work then it is essential that several actions are undertaken. There is advice on this in Annex J of BS EN 12845 and TB 203. BAFSA would suggest that the following summarises the actions to be taken in the event that a system will be impaired for any significant period - say for more than one hour.

There are two principal, specified duties which will be a feature of all insurance policy wordings where the presence of sprinklers is mandated or where a premium discount has been allowed in respect of the fitting of sprinklers. In the event of an impairment, the insured must advise the local fire and rescue service and inform the insurers.

Actions which should be taken in the event of planned or unplanned shutdowns:

1. Inform building users, other occupiers and anyone else who might need to know.
2. Implement the planned shutdown procedures
3 Minimise the possibility of a fire occurring
4. Patrol the area affected continuously
5. Subject all hot work to a permit system
6. Prohibit smoking and naked lights in the vicinity
7. Reduce the possibility of a fire spreading
8. Close fire doors and shutters
9. Make ready extinguishers and hosereels with sufficient trained personnel available to handle them

BAFSA would go further than Annex J and suggest that the following obligations should be complied with in the event of prolonged sprinkler system impairment:

1. Make sure there is a formal, written procedure in place to deal with any impairment of the fire protection systems
2. Cessation of hazardous activities including all hot work and any routine maintenance activity
3. Limit operation of power equipment including cranes, conveyors, fork lift trucks etc - especially recharging
4. Notification of interested parties including insurers/tenants

Minimising water damage

Owners and occupiers should be alert to the potential for water damage in the event that the system operates to deal with a small fire which is swiftly extinguished. Under no circumstances should the main sprinkler stop valve be operated in a fire situation without the authority of the

fire service incident commander. However, if only one or two heads have opened and it is clear that the fire is out, consideration can be given to minimising the further flow of water by blocking the sprinkler head with a sprinkler stopper (if one is available) or using a wooden or rubber wedge cut to size.

In larger premises the maintenance and security personnel should be trained to understand how the sprinkler system operates and how to take action in the event that a sprinkler head operates following mechanical damage. Following the operation of sprinkler heads the system should be reinstated as soon as possible by the nominated sprinkler maintenance contractor.

Living with a domestic sprinkler system

Sprinkler systems require little maintenance with the exception of an annual inspection which should be undertaken by a competent person.

However, occupiers of sprinklered homes should be aware of how the system works and what to do in the case of faults or actuations.

To assist with this the installer should have provided a logbook[3] containing:

- Details of the system design, waters supplies and components
- A statement of compliance with the BS9251:2014 or other appropriate standard
- Results of the commissioning tests
- Details of authorities consulted
- A routine inspection and maintenance programme
- A 24 hour emergency contact number which can be used to obtain assistance

Where systems have self-monitoring pumps, occupiers should be aware that the system will test itself each week and will sound a local alarm if any faults occur during the self-test. Some systems may automatically report faults to the installation company.

You should know where the sprinkler system shut-off valve is - this will enable firefighters to shut the system down once they are sure that the fire has been extinguished.

You should also be aware of measures which may compromise the operation of the system:

- Do not paint the sprinkler heads and/or their cover plates
- Do not hang anything on the sprinkler heads
- Make sure that tall items of furniture or ornaments do not shield the sprinkler heads or obstruct the flow of water.
- No modification should be made to any sprinkler equipment except in accordance with BS9251:2014 or any other standard utilised.
- Reinstatement of the system following maintenance or actuation should only be undertaken by a competent person and the log book suitably annotated.
- Sprinkler systems must be protected from freezing, external pipes may be protected by trace heating, internal pipes will be protected by central heating systems, so these should be left on if the house is unoccupied during periods when extremely low temperatures are predicted.

The above is available to download as an BIF (Bafsa Information File) from the BAFSA website and is also available to take as an online CPD progrmme. visit the Bafsa Learning Centre at www.bafsa.org.uk to find out more.

Notes

1 Article 17, Fire Safety Order 2005. Scotland and Northern Ireland regulations have similar requirements.
2 Or in the case of insurer FM Global, their data sheets.
3 If you can't locate this ask your house builder or landlord or contact the installer whose name and phone number should be on a tag near the system's controls.

New certification service

Doug MacKinnon, Associate Director, explains how PartB has established a new 3rd Party Certification scheme for installers of fire suppression systems

PartB Group has been providing a wide range of fire related consultancy services, from fire strategies, fire risk assessments, forensic surveys, expert witness cases, training courses and fire testing since 2020.

It was therefore a natural progression to provide a full suite of fire related services by establishing 3rd Party Certification of Installer Schemes for installers of fire suppression systems in 2024.

Although we follow the exact same stringent certification processes as other third party certification bodies, we pride ourself on efficient response to our members throughout the surveillance year and have the support of wider fire related consultancy services within the PartB Group, if required.

We also believe that industry training is crucial and are involved with training providers for Level 2 Installer and Level 3 Design.

The PartB Certification team consists of Associate Director Doug MacKinnon, Scheme Manager Martin Scott and the support our Quality Control Manager and a dedicated administration team. We also have the support of qualified fire engineers within our 100 plus strong team at PartB Group.

Collectively, we have over 45 years qualified experience in the fire suppression industry, from design, project management, insurance surveying and certification. Both Doug MacKinnon and Martin Scott have a combined 10 years of experience in certification in our previous roles.

We are currently midway through our pursuit of UKAS accreditation to ensure that the certification we provide aligns with ISO standards, further reinforcing the credibility and reliability of the certification we provide. With future plans to expand into passive fire protection, we aim to continue to enhance certification offerings, ensuring comprehensive solutions for the fire safety industry.

“BAFSA recognises the importance of ensuring the availability of Third-Party Certification (TPC) within the sprinkler industry, enabling members to demonstrate they meet defined standards of competence, quality, and reliability. Where membership of BAFSA requires TPC, this must be obtained from a certification body accredited by the United Kingdom Accreditation Service (UKAS). BAFSA is currently supporting PartB in securing UKAS accreditation and applications from new members certificated by PartB will be accepted when this accreditation has been achieved.”

Ali Perry, BAFSA Chief Executive

Assessment of competency has always been at the core of certification; now more than ever. Legislation has not made certification mandatory, however, the construction industry itself has driven the need for certification, particularly on large scale projects. The installer contractors themselves are not only seeing the benefits of being third party certificated, but are proactive and take pride in achieving it.

Sprinklers in hotels and heritage buildings

The need for historic building conversions to comply with current fire safety standards has always been controversial. It's not just a matter of cost and aesthetics. The impact on historic fabric also causes concern from listing authorities and the amenity lobbies, *writes Stewart Kidd.*

It has been argued that as fires in UK hotels are relatively rare, the need for expensive fire safety measures should be considered on a cost/benefit basis. However, the very rarity of multiple fatalities means that when these do occur, this tends to amplify the horror felt. For example, in the case of the January 2025 fire in a Turkish ski resort where 78 people are reported to have lost their lives in the Grand Kartal Hotel. Reports suggest that none of the expected fire safety measures were present, or if they were, they were not working.

Sadly, Scotland has suffered two serious fatal fires in hotels in 'traditional buildings' in the past 10 years. The first in the Cameron House Hotel in December 2017. A luxury hotel on the shores of Loch Lomond it consists of the original 19th century B-graded structure and several modern extensions. On 18 December 2017 a serious fire destroyed much of the older part of the house and killed two guests.

On 2 January 2023 another serious fire in Scotland broke out in the 19th century New County Hotel in Perth where three residents died. Both fires occurred during the nighttime and in both cases reports suggest that statutory fire safety standards were not being complied with and that recommendations from the fire service had not been complied with.

Regulatory reform

It has long been recognised that hotels present a special risk in terms of fire and life safety.

Many of the greatest death tolls in fires internationally have resulted from fires in hotels. Fires in hotels and similar sleeping accommodation have been subject to special controls in the UK for

many years – these being finally codified in the Regulatory Reform (Fire Safety) Order 2005 and the Scottish and NI equivalent.

In fact, the Fire Precautions Act 1971 was influenced by public concern following the fire at the Rose & Crown, Saffron Walden on 26 December 1969 which killed 11 people. There have been no further very large life loss UK hotel fires in the past 50 years compared with other countries.

While there have been several serious fires resulting in the virtual destruction of quite modern hotels – for example, the 2019 fires in the Holiday Inn, Willenhall and the Premier Inn, Bristol, there was no loss of life in either fire. To some extent, these two fires have resulted in a degree of complacency in official circles – 'Surely,' the argument goes, 'the fact that there were no casualties proves that the present fire safety regime works'. Despite the loss of both buildings and all that entails.

Reasons for concern

The reasons why the potential for large scale life loss is a concern in hotels is implicit in their function and operation. If we consider the key life risk factors for all buildings as set out in Government guidance, all of the prescribed factors are likely to be present.

In the case of heritage or historic buildings the usual FRA criteria should be augmented by consideration of the heritage, aesthetic and cultural value of the property and its contents as well as factoring in the impact of firefighting activities. In the case of older buildings, special attention needs to be paid to the potential problems of structure and materials. Fires spread more easily

The Cameron House Hotel fire December 2017. Fire sprinklers have been included in the rebuild. Picture: Georgraph

The Grade II* listed 200 year old Royal Albion Hotel suffered a major fire in July 2023.
Much of the remaining structure has had to be demolished.

where there is insufficient compartmentation and where there are unstopped shafts, ducts, voids and flues. (Factors in the spread of the Cameron House Hotel and New County Hotel fires). The age of the building will usually determine its type of construction and the inherent fire risk and fuel load.

The Cameron House Hotel fire on 18 December 2017

Unusually, the causes, spread and impact of the fire are well documented as a result of the SFRS investigation mandated by Sherriff Thomas McCartney under the Inquiries into Fatal Accidents and Sudden Deaths etc (Scotland) Act 2016[1].

Quoting directly from the Sherriff's findings, the two deaths resulted from:

"…a fire which began in the concierge cupboard of the Hotel, as a result of hot embers within ash igniting combustibles within said cupboard. The fire spread from the cupboard through voids and cavities in the structure of the building and escaped into the reception area once the door to the cupboard had been opened, thus causing fire and smoke and fire gases to spread extensively throughout the old part of the Hotel".

This the proximate cause of the fire was therefore:

- Careless disposal of hot ash i.e., the removal of hot ashes from open fires in the hotel as part of cleaning them; exacerbated by:
- The presence and impact of hidden voids allowing easy and rapid fire and smoke spread.

“In the case of heritage or historic buildings the usual FRA criteria should be augmented by consideration of the heritage, aesthetic and cultural value of the property and its contents as well as factoring in the impact of firefighting activities”

The benefit of automatic fire suppression systems

There can be no doubt that the installation of automatic fire suppression systems is an effective method of protecting life and property in hotels.

This was recognised in Sherriff McCartney’s Report which included the recommendation that:

- The Scottish Government should consider introducing for future conversions of historic buildings to be used as hotel accommodation, a requirement to have active fire suppression systems installed.
- The Scottish Government should constitute an expert working group to more fully explore the special risks which existing hotels and similar premises may pose through the presence of hidden cavities or voids, varying standards of workmanship, age, and the variance from current standards and to consider revising the guidance provided by the Scottish Government and others”.

Grand Kartal Hotel Turkey which was ravaged by fire in 2025. Picture Melih Rustu Calikogl

It's worth noting that within his Section 26(1)(b)[2] observations regarding fire suppression, Sherriff McCartney went so far as to suggest that: "Given the potential added fire protection provided by an active fire suppression system, if such installation was said to be impossible or impractical in specific premises, it may be that such premises are simply not suitable as hotel accommodation."

In 2023 the Scottish Government set up a working group to consider whether and how Building Standards should be amended to require fire suppression systems in certain hotels. The conclusions and recommendations of the working group[3] are presently being considered by Ministers.

Heritage buildings: Public domain guidance

The weaknesses of some heritage buildings and the specific causes of the Cameron House Hotel fire are covered in several publicly accessible guides. Most specifically, in Historic (Environment) Scotland Technical Advice Note No 28: Fire Safety Management in Heritage Buildings can be found advise not only on the need to fire stop or compartment historic buildings which are being converted to new uses.

This is covered in great detail in Historic Environment Scotland's Guide for Practitioners Guide Number which 6 provides in-depth data on how traditional buildings can be converted to new uses in compliance with Scottish Building Standards. Guide Number 7 covers in some detail deficiencies in fire separation and how fire suppression systems can be retrofitted and makes it clear that where the original structure may not comply with current standards, the sensitive introduction of (for example) fire sprinkler systems will compensate for deficiencies in compartmentation and separation and even means of escape.

Conclusions

On 14 February 2025 in the mid afternoon a fire broke out in the former Chiltern Street London Fire Brigade Station now a five-star hotel and restaurant. 125 firefighters struggled to contain the fire and save the structure. Fortunately, no one was injured but the building has been seriously damaged and will remain closed for some time.

Consequentially, a valuable asset has suffered serious and extensive damage. A popular hotel and eating place is no longer earning revenue and employing people. A major function, the Netflix post BAFTA party had to be relocated, and local businesses have complained about the impact on their customer footfall.

One might ask whether anyone considered installing fire sprinklers in the building during its conversion. Damage to heritage fabric can hardly have been a reason for not doing this given the need for significant insertion of building services demanded in modern hotel. Let us hope that fire suppression is included in the rebuild – as it has been at Cameron House.

Notes

1 Scotland does not hold Coroner's Inquests.

2 S.26(1)b of the Inquiries into Fatal Accidents etc Act 2016 requires the sheriff to make such recommendations as they may consider appropriate in respect of necessary improvements and preventative measures.

3 https://consult.gov.scot/local-government-and-communities/building-standards-fire-safety-cameron-house-hotel/

The importance of sprinkler system service and maintenance

By Dale Kinnersley, Principal Consultant at the Fire Protection Association (FPA)

Every year thousands of people are injured in fires and hundreds lose their lives. It is widely acknowledged within the fire safety industry that many of these tragedies could have been avoided with a sprinkler installation. Not only are sprinklers instrumental in controlling fires, with some extinguished before fire and rescue services arrive on the scene, they help minimise the risk to life of fires by giving people a better chance of evacuating a building and sprinklers can help save money too. They provide property protection and business continuity as their effective use reduces the scale and cost of potential fire damage, as well as limiting the potential knock-on effects for local communities.

Sprinkler systems work by reacting to heat. When activated by the high temperature caused by fire, they will operate directly over the fire and discharge water effectively and efficiently to suppress it. A fire can spread frighteningly fast where no sprinkler system is fitted and in just

three to four minutes, it can push temperatures towards 900°C and quickly spread throughout a building. Where sprinklers are installed, the sprinkler closest to the fire is activated first, when it detects the temperature reaching ~68°C, at which point it will release water to effectively suppress the fire. Following this initial activation, additional sprinklers will only activate if the fire spreads, however, this again will be controlled by the sprinklers providing cooling and control.

Across all premises, when properly maintained and installed, sprinklers are 99% effective and are by far the most efficient and effective fire safety devices. Over the past 130+ years they have had a better than 99% success rate worldwide in controlling fires. The installation of fire sprinklers will virtually eliminate fire deaths, reduce injuries by at least 80%, reduce property damage by 90% and substantially reduce damage to the environment from fire (source: BAFSA). They are particularly valuable in the case of schools, care homes, and hospitals where young, sick, and vulnerable people are at risk and where the damage to the essential services such organisations provide can have a severely detrimental and far-reaching effect on the local community.

There is no doubt that sprinklers play a critical role in terms of fire safety, however for sprinklers to operate efficiently in the event of a fire, they must be correctly designed, installed, serviced and maintained. This means using a system that has been tried and tested with approved sprinkler contractors accredited to UKAS-recognised third-party certification schemes.

It is vital that a sprinkler installation is considered as part of a building's design at the beginning of a project, to ensure that fire safety is maximised, with all stakeholders and interested parties having been consulted in confirming the fire strategy and sprinkler standard for the building.

The cost of fitting sprinklers is highly cost effective if it is planned in the initial stages and will provide a building with automatic fixed fire protection for its full life, provided the system is serviced and maintained properly in accordance with the requirements of the applicable standard.

In the UK, commercial and industrial sprinkler systems are installed to satisfy two different authorities. Where mandated by legislation, sprinklers are installed to satisfy building control for the safety of life. However, insurers require more resilience from a sprinkler system to cover both property protection and business continuity in addition to life safety. Therefore, two different standards are considered:

- BS EN 12845:2015 for 'Safety of Life' purposes to satisfy building regulations. Section 20 and 21 cover service and maintenance requirements, or
- LPC Rules[1] for 'Property Protection' purposes to satisfy the requirements of the property insurers, as updated and modified by Technical Bulletins. TB203 covers service and maintenance requirements.

The FPA's LPC Rules for Automatic Sprinkler Installations is the most widely used and recognised installation standard in the UK and is also used in other jurisdictions, such as Hong Kong. The document is aimed at anyone involved in the design, installation, service, and maintenance of sprinkler systems, from sprinkler contractors and engineers, to architects and local government. The document is split into three parts, with part 1 covering BS EN 12845 'life safety', part 2 including technical bulletins for 'property protection', and part 3 providing additional associated information.

When considering the life-safety aspect, Part 2, Article 17 of the Regulatory Reform (Fire Safety) Order 2005 covers the maintenance of fire safety systems, outlining the legal obligation on the building owner/occupier's responsible person to ensure their sprinkler system is suitably serviced and maintained.

It is therefore a requirement that the sprinkler system owner/responsible person appoints a competent individual or company who shall undertake specific tasks related to the sprinkler system. These individuals should receive basic outline training in order to carry out weekly and monthly testing and checks of the sprinkler system. It is also crucial to keep staff training records up to date to ensure the sprinkler system is checked and operated by trained competent personnel to ensure swift and effective action can be taken where required.

LPC Technical Bulletin TB203 sets out the requirements for the service and maintenance routines of a sprinkler system covering visual, testing, and maintenance inspections. The frequency of inspections can consist of Weekly, Quarterly, Bi-annual, Annual, Two-yearly, Three-yearly, Five-yearly, Ten Year and 25 Year, however; these are only typical routines covering the components installed and may not be applicable to all sprinkler systems.

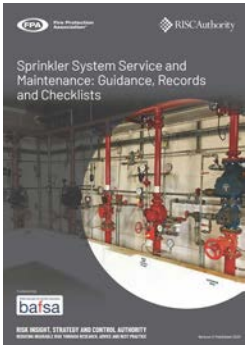
The people responsible for fire safety in any organisation are not expected to be experts or know all the answers when it comes to sprinkler systems. They need to seek the appropriate support from a competent, certified third party to help them understand and follow legal standards and good practice which could be critical in the event of a fire.

The FPA have recently updated the Sprinkler System Service and Maintenance (Guidance, Records & Checklists), produced by RISCAuthority and endorsed by BAFSA, which provides a fully compliant service and maintenance schedule to meet the requirements of the LPC Rules Technical Bulletin TB203. This is a free to download document available here: https://www.riscauthority.co.uk/public-resources/documents/resource/sprinkler-system-service-and-maintenance-746

The primary purpose of a sprinkler system is to save lives and limit the damage to property. The responsible person/building owner/occupier has a legal obligation to ensure the sprinkler system is serviced and maintained in accordance with the relevant standard. Regular 'Review of Hazard' and annual inspections will ensure the sprinkler system remains fit for purpose in ever changing environments.

By taking a responsible and proactive approach to fire safety and seeking support and guidance on effective sprinkler installation and maintenance; owners/occupiers can take the lead in satisfying legislative requirements and the building insurer and, most importantly, safeguarding their premises and the people who use them from fire.

The FPA have recently updated the Sprinkler System Service and Maintenance (Guidance, Records & Checklists), produced by RISCAuthority and endorsed by BAFSA. Visit www.thefpa.co.uk to find out more.



Notes

1 LPC Rules incorporate BS EN 12845, building on life-safety requirements as mandated by UK government and including property protection requirements required by the building insurer covering both requirements in one all-encompassing standard recognised throughout Europe.

Fire Protection Association®

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Testing Times

Stuart Lloyd cautions that while progress offers improved solutions, it also reveals prior shortcomings. That's why maintaining up-to-date knowledge, consulting and monitoring current standards and data, and liaising with the customer's insurer is vital

As development of Early Suppression Fire Sprinkler (ESFR) sprinkler protection solutions continue, I believes it is time for us all to take stock of the journey and to understand the development and approval process as well as taking a closer look in the rear-view mirror. Not all changes are for new solutions, and published guidance has not always kept pace.

We all know the simple positives of using an ESFR design approach, essentially it boils down to three main points that attract end users, contractors and insurers to the design philosophy where permitted.

- Ceiling only design option for tall storage warehouses
- 60-minute water supplies
- Suppression, the ability to crush the fire and reduce its size compared to control sprinklers

As an insurer representative, I have had these discussions with our customers and their contractors on a regular basis. ESFR provides some freedom with storage arrangements when avoiding solid shelves, blocked flues and open top containers. They respond quicker than typical control sprinklers and their discharge patterns are proven to push back the fire by driving a central core jet of water that penetrates the fire plume, all based on large scale fire tests and approvals. Compliant applications can limit the size of a fire, reduce the amount of smoke generated and as a result, limit disruption to the customer. This in turn leads to reduced claims for an insurer - an overall win for everyone.

But I am often presented with requests or proposals that deviate from the design guidance. So I would like to offer some insight into the testing approval and process, followed by highlighting how that process has been refined and what has changed. We all need to be aware that to meet our combined goals of providing solutions we know will be fit for purpose and maintain the integrity of those involved.

I sit in a privileged position of being involved with multiple standards committees that deal with ESFR sprinklers, namely LPC Rules, EN 12845, and NFPA 13. I am also involved in research via the NFPA Research Foundation and its Property Insurers Research Group, where I am currently the chairperson.

Through these groups and over many years, I have been fortunate to have access and review the test data for multiple new ESFR solutions, engaging directly with manufacturers and test labs that do the large-scale fire tests (FM and UL), and learn about the nuances of the testing process from healthy debates and discussions. I know that small details matter. I have seen the impact of minor changes in research test programs that have brought solutions to NFPA 13 (and FM data sheets) for protection of exposed expanded plastics (EEP), high volume low speed (HVLS) fans, sloped ceilings above storage, and relaxed ESFR obstruction rules.

So, let's look at how ESFR sprinklers get approved for storage protection, beyond the obvious selection of storage arrangement (racks), goods classification/category, storage height, and aisle width there are two key other parameters that must be proven by multiple tests. Let's consider the first one, you may have heard about ignition points and head location.

Figure 1

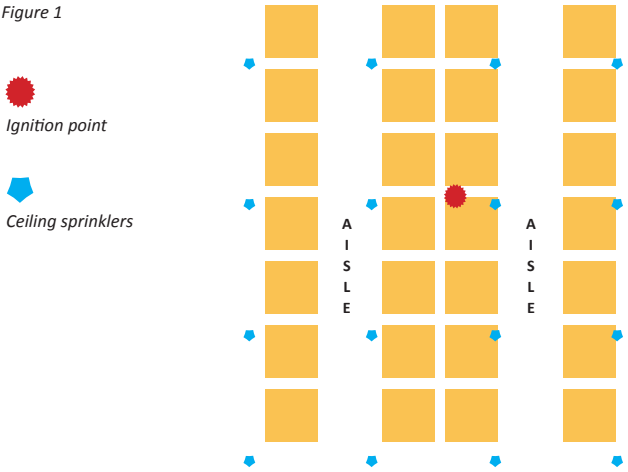
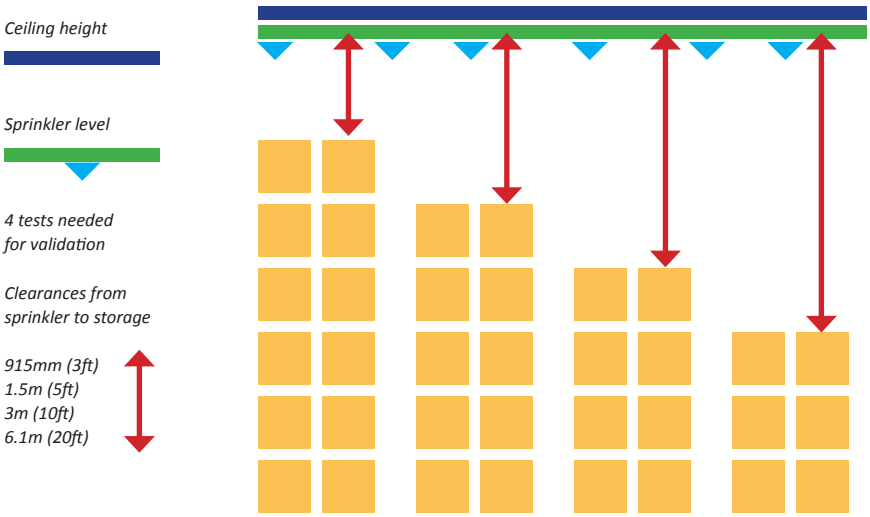


Figure 2



The ignition point is consistent with both Underwriters Laboratories (UL) and Factory Mutual (FM) test labs, it is a point two-thirds of the distance of a pallet from the loading aisle in the transverse flue, highlighted in figure one with a red marker, maybe like where someone may try to set a fire in an arson attack at arm's length. At this point it is known that pallets on both sides of the transverse flue will get involved and as the fire grows, it will wrap into the central longitudinal flue involving more product and head towards the ceiling.

Depending on the distance from the top of storage to the ceiling sprinklers, the test labs will ensure that the ignition point is located either below one sprinkler, off-set between two (as shown in figure one) or amongst four. The labs will choose the most challenging, for example it is typically below one for the highest clearances as the heat will spread out before reaching the ceiling sprinklers and may actuate a less favourable sprinkler first.

You are probably aware that in a fire test if the fire reaches the end of a storage array, jumps the aisle and burns through a single target array or operates too many sprinklers, it is a failure. The ignition point relative to ceiling sprinkler location is one series of tests that is designed to challenge the robustness of the sprinkler design. The other is a series of four tests that is also required and works in combination with the above are concerned with ceiling clearances. (see figure 2)

These tests demonstrate the ability to protect various storage heights under a given ceiling, high clearances may be impacted by air movement or ventilation systems, low clearances test the ability of a sprinkler to form a suitable spray pattern in a limited space.

The objective is to be able to discharge effectively into flues and aisles when located in a challenging position relative to ignition point, which will be engineered to not be ideal.

These tests also prove the ability to handle various fire loads which may encourage the fire to move along the rack, rather than race to the ceiling to activate the sprinklers. We have seen failures at 1.5m and 3m even after passing the high and low clearance tests – who would have thought? That's why we do tests.

Reviewing test data, being involved in research projects and direct discussions with major test laboratories and manufacturers, often at the same table, has provided some real insights. It has also highlighted the importance of not deviating from what is published.

Imagine yourself as one of the major sprinkler manufacturers looking to outperform your competitor. Also bear in mind the investment in large scale testing alone on top of extensive research. Each manufacturer has taken their sprinkler to the limit of what can be achieved. ESFR is a proven performance-based design solution, some manufacturers have unique edges to their sprinkler performance, these are captured on their data sheets and due to their uniqueness cannot be included in installation standard tables. Some offer different ceiling heights or aisle widths, but are reliant on specific temperature ratings, distance of head to the ceiling requirements or limited scope of stored goods. Do not try to push the limits published, manufacturers have explored them already and found the boundaries of what is possible for their sprinklers.

Now we are armed with this information, we perhaps believe that updates to standards are regular, aligned and only add positively to the number of solutions? Well, if only this was true, we need to understand some important points as development of standards and data sheets are not aligned:

- Representation is not consistent, especially globally
- FM develop and publish some of their own unique solutions, primarily for their customers
- Test data is not openly available to every standards organisation
- NFPA 13 updates with a 3-year publication cycle
- FM update their data sheets variably as they determine when needed
- EN 12845 is addressing issues with ESFR now: –
  - EN 12845-2 is published and should be used by everyone in Europe
  - EN 12845 is being amended to remove ESFR annex P – very outdated
  - LPC Rules – Technical Bulletin 209 is planned for removal now EN 12845-2 is published
- No other local/international standard should be trusted

You may be surprised by the above list and the last bullet point. As a contractor I would have chosen the most economical solution from these guidelines and used them in good faith. With the current situation of having many different options to choose from, I may even find one option not included in the others, that needs careful review.

Now is the time to take stock, look in the rear-view mirror and be responsible for what actions we all take going forward. As a contractor, specifier or consultant you may be using a copy of a standard from a few years ago, you may perhaps regularly use a design for a specific customer or ceiling height and not felt the need to review the latest publications.

Here is the shock news. Despite all the testing, research and product development that you do - unless you track changes to standards and data sheets you may have missed some critical changes completely. Using NFPA 13 as an example, looking at table 23.3.1 covering storage of different standard products in buildings of various heights up to 13.7m. Today there are 59 design options

using available upright and pendant sprinkler heads up to K360. These 59 options are based on only 23 actual tests (four upright and 19 pendant), the remaining options use the same solution cascaded to a lower product group or a lower ceiling height to populate the table. Manufacturers will test against these benchmark tests and probably wont look for a better answer - they are now focused on higher ceilings.

However there used to be many more. ESFR was originally a FM concept, and early tests were driven by their protocols. Over time these protocols were modified. Originally in many tests, the ignition point was located at the junction of the transverse and longitudinal flues. It was discovered that the fire travelled up the flues very quickly to activate the sprinklers and very little product was involved in the fires.

The test was essentially too easy to pass, so UL and FM aligned to agree the ignition point as indicated in figure one. Some of these solutions were originally included in NFPA 13 from 1994, 1999, 2002, 2007 and 2010. A few were removed in 2013, but many not removed until NFPA 13:2022, some were present for 19 years! The original designs failed to pass the revised current test protocol.

Some solutions were never tested, and the design was based on engineering judgment from early tests, there was 13 of these solutions removed for the 2022 edition of NFPA 13. FM dealt with the same issues over a similar time frame, and all have now been removed from NFPA 13 and FM data sheets in their current form.

You will now hopefully realise that Annex P of EN 12845 is wildly out of date, and I would consider it unsafe. I have had that view for many years and it is why I was involved with supporting development of LPC Technical Bulletin 209. However, I should advise that although this is more recent, some of the design options removed from NFPA and FM remain in TB 209. I noted earlier that TB 209 is planned for removal, users should look to EN 12845-2 since that was published in spring of this year.

I was instrumental in the authoring of EN 12845- 2, using my experience and insights from NFPA 13 committee work, research activity and data available to myself. It was a collaboration with a fellow NFPA 13 member from Sweden along with FM's Chief Operations Engineer for Europe. This new standard contains the latest NFPA 13 and FM 8-9 design criteria validated by representatives of those groups. Any other publication besides NFPA 13, FM data sheets and EN 12845-2 is based on pure interpretation of published standards and/or outdated information.

Progress brings new solutions and better answers, but it also identifies the gaps and weaknesses of previous work. I would urge you to do your due diligence, seek the most recent standards, latest data and liaise with the customers insurer to determine a suitable solution. If you are reviewing existing systems, you should be aware that the original system may not perform as intended.

Stuart Lloyd is global practice leader – fire protection at Zurich Resilience Solutions
www.zurich.com/riskengineering

All Party Parliamentary Group Fire Safety & Rescue update

Ronnie King OBE, O.St.J, QFSM, F.I.Fire E – Adviser & Hon. Sec to the APPG gives a brief overview from his annual report outlining the activities of the All-Party Parliamentary Group's (Fire Safety & Rescue) and his own involvement with the group over the period July 2024 to July 2025.

When Former Prime Minister Rishi Sunak, announced on 22nd May 2024 that he was calling a General Election to be held on the 4th July 2024, every All-Party Group ceased to exist having been prorogued on 24th May 2024. The General Election as predicted, brought about 335 new MP's, which impacted on the composition of the All-Party Group (Fire Safety & Rescue) where we lost eight MP's. (Fortunately Peers in the Lords were unaffected) The Group has since made up the deficit with it's inaugural meeting being held in Westminster on 29th July 2024, which was the start of its reporting year, ending on 28th July 2025.

During Summer Recess commencing 30th July 2024, I continued to remain active in meetings and media interviews in the run-up to the Grenfell Tower Report publication as well as preparing briefing notes for APPG members circulated ahead of the Report's publication. I also liaised with Kate Lamble of Grenfell podcast and Newsnight, who produced a 10 part series of the Public Inquiry for BBC Radio 4. Titled: "Building a Disaster"

The Group aims to hold bi-monthly meetings with ministers each year, in addition to other meetings like the one in March 2025 on lithium-oon battery fires and large battery energy storage systems.

I cannot emphasise enough the importance of having a voice heard through access to those who make decisions about safety legislation.

As an example I am highlighting a matter raised at last January's APPG meeting with Ministers Dame Diana Johnson MP and Alex Norris MP, by BAFSA Chief Executive Ali Perry, where he made an excellent point about the Grenfell report stage one and stage two.

In particular phase one talks about sprinklers in the built environment being important but Sir Martin Moore Bick goes on to say: “I cannot make recommendations at this stage about retrofitting existing buildings,” But then there was nothing in phase two about sprinklers. Ali Perry asked: “Why is that”? “Sprinklers are a key component in buildings”. He likened it to a football team: “high-risk buildings are playing an important match, World Cup final, the Champions League final and sprinklers are the goalkeeper. When everything else fails, sprinklers save the day”. “I know and we all know that we need to have sprinklers in these high-risk buildings to protect the occupants but also in community buildings, in public buildings to protect investment”. He had urged Minister Johnson to look at this whilst at the recent fire conference. She talked about the importance of Grenfell and how the recommendations from Grenfell will be a priority for this government. He said he was glad that these recommendations are going through but had a major concern for the sprinkler industry and for the safety of the public in all kinds of buildings if sprinklers are not part of the recommendations. He just wanted to highlight that because his experience over 30 years is (and Tom Roche has mentioned it as well), that sprinklers are there when everything else fails…..’’

Minister Norris noted all these points, and there was a general understanding from the Ministers that it was important and beneficial to continue to hold regular meetings between the All-Party Group and ministers going forward.

In another context APPG Member Sir Geoffrey Clifton Brown MP, who also chairs the Government's Public Accounts Committee, asked the APPG to make a submission to the Committee. I am highlighting part of the APPG's submission to that important Select Committee as follows:

> "MHCLG announced a long-term loan for leaseholders in affected medium-rise buildings to pay for remediation works, along with measures to make industry pay. In 2022, it decided not to progress with the loan, promised to protect leaseholders in buildings over 11 metres from remediation costs, and adopted a more proportionate approach towards its assessment of building safety. This approach called for greater use of lower cost mitigations such as sprinklers, which it said would be less disruptive for residents. In some cases, where risk is deemed low or 'tolerable', it could mean flammable cladding staying in place. These changes have tried to clarify who will pay but introduced more uncertainty over the number of buildings in scope for government programmes and how much remediation will cost (paragraphs 1.3 to 1.13, 1.16, 1.20, 1.22 and Fig 1}

This is something which the All-Party Group strongly supports, along with the National Fire Chiefs Council.In fact there is an opportunity for Government to do more to increase the use of sprinklers in the built environment. Sprinklers save lives and reduce injuries. They have been used for over one hundred years and are consistently reliable, protect property, reduce the cost of repairs, and minimise the impact of fire on the environment. Sprinklers can also buy crucial additional time in firefighting operations which may mean that evacuations are not necessary in the first place. Analysis has demonstrated that they are 99% effective in extinguishing or controlling a fire and 94% reliable in their ability to operate across all building types..

A cost-benefit analysis produced following the Callow Mount retrofit project in Sheffield demonstrated clear benefits to installing sprinklers. Since then, more recent estimates from industry partners suggest that the cost per flat of installing sprinklers has risen from £2,500 - £4,000 per flat depending on a range of factors.

MHCLG's best estimate of total remediation costs are £16.6bn (ranging from £12.6bn to £22.4bn) in 9,000 to 12,000 buildings. The estimated costs of retrofitting sprinklers in these buildings is £1.5bn (midpoint estimate based on a range from £202.5m to £2.8bn)

While these initial estimates require further scrutiny and peer review, this suggests that at just 9% of the estimated costs of cladding replacement, sprinklers may be a proportionate and effective way to help mitigate risks in buildings while further solutions are being developed to support the pace of remediation. This is not to suggest that sprinklers can fully mitigate the risks posed by some or all external wall systems, or that they will be appropriate in every building as this must be risk assessed on a case-by-case basis. However the APPG is aware of a range of cases where cladding remediation alone has not been sufficient to mitigate other risks within buildings.

With a high ability to mitigate a range of fire safety risks and in some cases the potential to obviate the need for simultaneous evacuation strategies and make it easier to develop and maintain personal emergency evacuation plans (PEEPs), these estimates demonstrate the value of further investigating greater use of sprinklers in the built environment.

NFCC has called on the Government to make it a requirement to retrofit sprinklers in all existing residential buildings over 11 metres on a risk-assessed basis; which is supported by the APPG.

“I cannot emphasise enough the importance of having a voice heard through access to those who make decisions about safety legislation”

Fire and Rescue Services {FRS’s} have played a key role to date in relation to efforts to assess the extent of risks in high rise blocks of flats and ensure action is taken to ensure the immediate safety of residents despite challenges related to FRS’s workforce limitations. However, these efforts have highlighted the scale of broader issues preventing duty holders from meeting their obligations to make buildings safe.

These findings highlight that Government cannot simply enforce their way out of the building safety crisis, it will require leadership from Government to unlock the various issues in the system.

This submission has taken account of the urgent challenge of remediating unsafe residential buildings, highlighting key issues and actionable solutions.

Finally, a further significant development is beginning to emerge through BAFSA’s Sprinkler Saves project whereby Nick Coleshill, BAFSA Sprinkler Ambassador is attracting more Fire & Rescue Services to report sprinkler activations, which can be passed on to Members of Parliament and the APPG, resulting in correspondence being generated to both recruit new members, and in some cases, being drawn to ministers’ attention.

Working together

The Chartered Association of Building Engineers (CABE) has been very proud to work with BAFSA throughout 2025 on what we have dubbed a "knowledge partnership". In essence, it is a voluntary agreement to facilitate the regular exchange of insights between our two organisations, the joint goal being to share expertise that supports our respective members to maintain and boost competence.
By Richard Harrel Chief Executive CABE.

CABE and BAFSA share the mutual objective of improving public interest outcomes across the built environment. Both parties prioritise guiding our members' professional development and heightening awareness of resources available to them; our ongoing partnership serves as a knowledge bridge, with the professional seeking information on one side and the high-value content from CABE and BAFSA on the other.

To date, the CABE and BAFSA knowledge partnership has yielded several different outputs. To kick off, we focused attention on BAFSA Information Files (BIFs). These documents are an invaluable resource, made freely available by BAFSA to the industry, and offer extensive advice on sprinklers and fire suppression units across a wide range of building types.

Produced by BAFSA's technical committee, the full suite of BIFs is recommended reading for CABE members, but the challenge comes from knowing which one suits your professional situation best. Working with CABE's Head of Competence & Learning, CABE mapped the BIFs against CABE's competency frameworks to ensure compatibility with the technical information and the professional requirements of our members. Once assessed, the BIFs were incorporated into the CABE Competency Management System, our members-only facility for professional self-assessment and CPD-planning. The CMS is designed to help a member pinpoint their individual learning need and then directs them to the most appropriate learning resources to help them satisfy that need. Therefore, CABE Members know they can use the BIFs as a trusted CPD resource to help build understanding and achieve their goals.

The same has since been actioned for BAFSA's two accredited CPD programmes, Awareness of Automatic Fire Sprinkler Systems (free online learning) and Principles & Practices of Automatic Fire Sprinkler Systems (online learning with fee), and also the recent BAFSA publication Sprinkler Saves. These resources, already available for BAFSA members to access, are also now housed in the CABE CMS library for our members to discover as they structure their goals and target any gaps in their knowledge.

Our two Associations also joined together to host an industry roundtable earlier this year. Chaired by CABE CEO Richard Harral alongside BAFSA CEO Ali Perry, the discussion was with members of the Architectural Technical Leads Group (ATLG), and offered valuable insights on challenges, concerns and barriers to the uptake of fire suppression systems.

Architects play an important role in educating clients and specifiers on the differences between life safety and property protection. Sitting down together helped CABE and BAFSA to better understand the challenges they face in the adoption of fire suppression systems, with plenty of food for thought on how our two Associations can play a part in bridging these kinds of gaps in understanding.

CABE and BAFSA have also worked on reciprocal articles for their respective journals, with the BAFSA-authored piece 'A Light Touch' featuring in the June issue of CABE's Building Engineer (www.buildingengineer.org.uk/intelligence/overview-water-mist-fire-protection-systems), and CABE's feature 'Clearing the Lines of Communication' being published in BAFSA's Spring edition of Sprinkler Focus (www.bafsa.org.uk/bafsa/basfa-publications).

CABE's article was based on the round table outcomes with ATLG, covering the mixed messaging around the relevance and utility of fire suppression systems, the challenges being faced by architects, specifiers and designers and what can be done to remove barriers to improving life safety outcomes in the event of a fire.

The BAFSA piece offered a thorough overview of the technology, standards and applications of water-mist fire protection systems, with comprehensive detail on current British Standards and certifications, as well as noting the challenges faced by the sector.

CABE are extremely grateful to Ali and the whole team at BAFSA for their support on the production of this content, and for sharing our aim to boost building engineers' understanding and knowledge.

Looking ahead to 2026, CABE hopes to team up with BAFSA on even more CPD outputs for the benefit of both Associations' members; future opportunities include more articles, webinar presentations, and teaming up to write more technical and professional information notes.

CABE and BAFSA strongly believe in the power of collaboration. By ensuring that we do not stagnate in silos, we can link professions together and elevate our members' knowledge for the greater good.

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88.9	80	3	DUO G200	300-1400	100-400	150,200	464a/07	80FGFM
114.3	100	4	DUO G450	500-3500	150-900	250,300,450	464a/08	100FGFM
165.1	150	6	DUO G1000	900-7000	250-2000	500,750,1000	464a/09	150FGFM
168.3	150	6	DUO 6 G1000	900-7000	250-2000	500,750,1000	464a/22	6 FGFM
219.1	200	8	DUO G2000	2000-15000	750-4000	1250,1500,2000	464a/10	200FGFM
219.1	200	8	FR G3000	n/a	1500-6000	2500,3000	—	8 FGFM

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The BAFSA seal of approval

BAFSA has introduced two new accreditation schemes to help those in the sprinkler industry deliver high quality vocational learning and training to staff.

The BAFSA Course Accreditation Scheme (CAS) gives your vocational training the official seal of approval from the UK's leading trade association for the fire sprinkler industry.

This respected accreditation is your mark of training excellence – a guarantee that your course content and delivery meet rigorous industry standards, giving clients, learners, and employers total confidence in your training.

Note: BAFSA accredits the quality of training and materials only – not individual products. Accredited courses may use the BAFSA Accredited logo on relevant materials to showcase this achievement.

Why get your course BAFSA accredited?

- **Build trust**
  Accreditation shows clients and learners your training meets industry-recognised standards.
- **Enhance credibility**
  Join a respected network of training providers recognised by the UK's fire sprinkler trade association.
- **Boost your brand**
  Use the BAFSA logo on approved materials to promote your accredited status.
- **Meet industry expectations**
  Accreditation demonstrates your commitment to safety, quality, and professional standards.
- **Future-proof your business**
  As demand grows for quality-assured training, accreditation positions your organisation ahead of the competition.

Ruth Oliver, BAFSA Skills and Development Adviser says: "BAFSA's accreditation scheme was developed to allay concerns about the quality of delivery of training within the fire sprinkler

industry. It is BAFSA's intention to recognise high quality training and endorse it with the aim of increasing the availability and quality of training available to everyone who works in the sector. Training is matched to industry standards or best practice, which specify standards of performance that people are expected to achieve and the knowledge and skills they need to perform effectively providing the evidence to providers, trainers, employers and learners that training is being delivered to the highest possible standards. With accredited training, learners have assurance of receiving a quality education as well as gaining recognition by employers."

How the accreditation process works

Step 1: Submit your application
Send a short presentation to BAFSA outlining:

- Your course learning outcomes
- Training delivery methodology
- Supporting materials (handouts, PowerPoints, scheme of work)
- Evidence of alignment with industry standards
- Assessment methods and resources

Step 2: Review & approval
BAFSA's training team will assess your submission to ensure it meets nationally recognised best practices.

Step 3: Get accredited
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Accreditation fee

- £1,250 per year (payable upon application)

Contact the BAFSA Training Team at training@bafsa.org.uk or visit www.bafsa.org.uk to download an application form.

BAFSA Training Accreditation Scheme (TAS)

The BAFSA Training Accreditation Scheme (TAS) provides BAFSA members with a recognised mark of quality that formally acknowledges the in-house vocational training delivered within their organisations.

This accreditation is more than just a stamp of approval it's a trusted symbol of quality, professionalism and industry alignment. It demonstrates that your training programmes meet the highest standards, are benchmarked against current industry best practices and are designed to equip learners with the knowledge and skills required to succeed in the fire sprinkler sector.

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For more information on the scheme visit: www.bafsa.org.uk

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- Assessment methodology and learning resources

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For full details on application fees and how to apply, contact the BAFSA Training Team at training@bafsa.org.uk

BAFSA
Course Schedule

British Automatic Fire Sprinkler Association
bafsa

September 2025 – August 2027

ABBE Level 2 Certificate in Fire Sprinkler Installation (Commercial)
A rolling programme with no fixed start date

ABBE Level 2 Certificate in Fire Sprinkler Installation (Commercial) – Add on assessment programme
A rolling programme with no fixed start date

ABBE Level 2 Certificate in Fire Sprinkler Installation (Residential & Commercial)
A rolling programme with no fixed start date

ABBE Level 2 Certificate in Fire Sprinkler Installation (Residential)
A rolling programme with no fixed start date

ABBE Level 2 Certificate in Fire Sprinkler Installation (Residential) – Add on assessment programme
A rolling programme with no fixed start date

ABBE Level 3 Award in Inspection & Commissioning of Commercial Fire Sprinkler Systems (in Person)
Course Commencement dates:

23.03.2026	16.08.2026
23.03.2027	17.08.2027

BAFSA High Rise & FHC Non-Storage course
Course Commencement date:
2.9.2026

ABBE Level 5 Diploma in Classification & Pre Calculated Commercial Fire Sprinkler System Design for Experienced workers – 5 Day Course
Course Commencement dates:

02.02.2026	11.05.2026
08.02.2027	03.05.2027

Exam dates (held at BRE, Garston):

11.03.2026	August 2026 date TBC
11.03.2027	25.08.2027

ABBE Level 5 Diploma in Classification & Pre Calculated Commercial Fire Sprinkler System Design (New Entrants) – Every Monday for 15 weeks
Course Commencement dates:

01.09.2025	02.09.2025
31.08.2026	01.09.2026
30.08.2027	

Exam dates (held at BRE, Garston):

11.03.2026	August 2026 date TBC
11.03.2027	25.08.2027

BAFSA Awareness of Automatic Fire Sprinkler Systems (CPD Accredited)
A rolling programme with no fixed start date

BAFSA Principles and Practices of Automatic Fire Sprinkler Systems (CPD Accredited)
A rolling programme with no fixed start date

BAFSA Automatic Fire Sprinkler Systems – Owners & Occupiers Guide (CPD Accredited)
A rolling programme with no fixed start date

All rolling programmes have no fixed start date – commence at a time to suit you

NOTE: ALL COURSES MUST BE PURCHASED THROUGH BAFSA E-LEARNING PORTAL
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Using water mist systems in buildings and structures – A guide to compliant applications

by Stewart Kidd and Dr Simon Bird

Water mist systems are based on proprietary products and designs; they are not harmonised to a common set of properties. The layout and spacing of nozzles, operating pressure and water capacity will differ between manufacturers and technology.

It should be noted that nozzles and components are rarely interoperable (which means one cannot use a nozzle from one manufacturer on a system installed based on a different manufacturer). The supply-chain and maintainability risks associated with such proprietary systems are highlighted.

This document has been written to provide facts about water mist as a firefighting technology. The general perception is that the application of water mist technology is similar or equivalent to sprinklers or gas extinguishing systems. This is not the case. The use of sprinklers and gas extinguishing systems is guided by prescriptive standards, developed from decades of fire-testing, research and knowledge base of their effectiveness and reliability in real-case fires.

Water mist is a performance-based technology. That is, it that requires specific testing to each possible fire scenario. For a limited set of fire scenarios, a set of standardised fire test protocols have been developed. Each manufacturer has developed their own water mist product to 'pass' one or more of these fire test protocols. Thus, all water mist systems are based on proprietary manufacturers' technology and design.

The correct use of the design standards for water mist are dependent on an assessment of the application hazard and determination of applicability with the relevant fire test protocol; proof of independent third-party fire testing to that protocol; proof of system approval; proof of third-party component approval; and limits of applicability as determined through testing and documented in the manufacturer design manual. There is a requirement to ensure competence

in design for water mist systems that is not currently verified through examination, or a LPCB third-party verification scheme, such as LPS1048 or LPS1204 respectively for sprinkler and gas extinguishing systems.

At the time of writing several organisations are working to establish a credible and enduring third party certification scheme for UK water mist installers. It is notable that no such schemes exist despite the British Standards BS 8458 and BS 8489 series having existed for nearly 10 years.

The aim of this document is not to replicate information that exists in standards but to explain the context in which they have been drafted, and to detail considerations and limitations of water mist systems, which are not clearly documented in all standards. It should be a useful document for those who may wish to specify fire suppression systems, have a role in approving these or simply want to increase their knowledge of water mist.

The annexes at the end of the document provide technical and supporting references.

Viable method

Over the past 30 years, water mist technology has increasingly been considered a viable method of protecting the occupants of buildings and some building equipment and contents. This document provides a guide to what mist systems can (and cannot) do and provides a guide to technology used and the standards that are presently available.

This document does not replicate or replace any specific standard but summarises the knowledge contained within. It aims to set the requirements in context so that they can be better understood by those who wish to procure, specify, or approve water mist systems.

The design of water mist systems is intended to achieve a fire performance objective. This maybe to achieve fire extinguishing, suppression, or control.[1] Manufacturers use differing technology to develop and maximise the efficiency and effectiveness of droplet deployment to achieve the performance objective. This will vary with both the manufacturer and with the application, both for the nozzle and means of water delivery. For each nozzle type there will be a change in nozzle appearance, minimum operating pressure, k-factor[2], spacing, height and activation type; and in different requirements for location, orientation and limitations (for example, use with ventilation).

As discussed in the introduction, water mist, unlike sprinkler or gas extinguishing systems, is wholly application and manufacturer specific. Each hazard or occupancy requires its own very specific design which is detailed in the manufacturer's DIOM (Design Installation Operation and Maintenance manual). This DIOM should include limits of applicability (such as fire hazard, temperature, height, ventilation, obstructions, etc.). It is therefore not possible to design a mist system simply by reference to one of the standards available. This is unlike sprinkler systems where reference to BS EN 12845 or BS 9251 may suffice, or gas extinguishing systems where the BS EN 15004 series or BS 5306 Part 4 apply. For water mist, the DIOM is the fundamental guide to application and manufacturer specific design instructions whilst the standards per se list the performance requirementsof water mist systems independent of manufacturer for the occupancies where fire test protocols exist.

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1.1 Definition of water mist

Definitions vary between standards in terms of the method of measurement, but a good working definition is:

"A water spray for which the cumulative volumetric distribution of 90% of water droplets is less than 1,000μm (microns)3 at the nozzle minimum operating pressure".

1.2 Definition of a water mist system

A fire suppression distribution system connected to a water supply, that discharges water mist where required, that is fitted with one or more nozzles intended to extinguish, suppress or control the fire.

1.3 History of the development of water mist

Early maritime water mist applications were introduced following disastrous fires on two large passenger ferries in 1990. In 1993 a series of independent cabin and corridor fire tests were undertaken which led to revised International Maritime Organisation fire safety requirements for passenger ships and the development of installation guidelines and fire test procedures for alternatives to conventional sprinkler systems.

Early use of land-based water mist technology came at the beginning of the 1990 and was partly linked to the rapid expansion of food processing production plants that were being constructed to

cope with the growing demand for ready-prepared meals and other convenience foods. The food industry and their insurers recognised the benefits of correctly installed and tested water mist systems in extinguishing potentially disastrous fires.

At about the same time, following the prohibition on the use of the Halon gases for firefighting in 1989, water mist joined the portfolio of alternative extinguishing media considered and developed by the fire industry. Early applications were limited to very specific occupancies requiring full scale fire tests. Over the last 25 years however, much research has been carried out and as experience has grown with the subsequent development of fire test standards.

Water mist systems are a now an alternative for gas extinguishing systems for a wider range of hazards including engine rooms, electrical transformers, steam and combustion turbines, and oil cookers. These types of applications were traditionally protected by carbon dioxide systems, but there is general acceptance by insurers and users that a suitably tested and approved water mist system is both safe and effective. Water mist has also been installed in homes, saunas, and heritage buildings. These types of applications (and others such as schools, offices, and data centres) require a much higher level of fire engineering to determine the suitability of water mist.

This will be determined, amongst other factors, on the relevant fire test protocol and the limitations of the design to ensure the water mist system provides the fire protection objective. For an independent assessment of suitable applications, reference should be made to the standard BS 5306 Part 0.

The need for coherent guidance for performance-based water mist technology has led to the production of British, European, US and Maritime Standards for the design, installation, commissioning, and maintenance of water mist systems. The detail of within each standard differs but the common theme is the water mist system must be performance tested for any given application to meet specific criteria (be that extinguishing, suppression, or control) as defined by a relevant fire test protocol. There are also detailed sections that cover salient matters such as component approval and design competence. At present in the UK there are both UK and European standards used in parallel, and it is an unfortunate fact that this has led to a ‘pick and mix’ approach from less competent designers.

1.4 How water mist works

For a fire to spread, it relies on the presence of the three elements: oxygen, heat and combustible material. This is known as the fire triangle. The removal of any one of these elements can suppress or extinguish a fire.

Water mist removes heat and displaces oxygen and provides a wetting interface between unignited combustibles and the flame front. The physical difference between water mist and sprinklers is simply the droplet size.

As the droplet size decreases the following physical changes take place:

1. The mass decreases. This permits a more rapid evaporation of the water. It allows movement of the water within an air stream (entertainment). It lowers its momentum which can inhibit the water from penetrating the heat plume.
2. Per unit volume there are more droplets which increases the surface area available for contact with heat.

The fire triangle

Figure 1: The fire triangle and water droplet size in relation to surface area

The production of small droplets can be achieved through a variety of technologies that include:

1. Using high pressure (typically greater than 60 bars) to force water through very small orifices. The pressure energy is transferred to breaking the water into small droplets that emit at high speed but small mass and pressure (droplet diameter in the range of 50 to 200 microns)
2. Using a deflector that breaks the water into droplets typically between pressures of 4 to 16 bars ('low' pressure). (Droplet diameter in the range of 150 to 350 microns)
3. Using a propellant gas (such as nitrogen or air) to atomize the water at a nozzle at pressures typically 6 to 8 bars (droplet diameter in the range of 10 to 50 microns). These are known as twin fluid systems. Note that they differ from water mist systems where the propellant is used simply to pressurize the water.

Note that pressure is not the defining property of water mist. The performance of the water mist system is all that is relevant. To avoid confusion neither the UK or European standards use the terms high- or low-pressure water mist. There are some performance and application differences between technologies.

Water has unique thermodynamic properties. The first is its specific heat capacity, that relative to other materials is very high. The specific heat capacity is the amount of energy required to heat one kilogram of substance by one-degree kelvin. The value for water is 4,200 J.kg K. This means that 4,200J (joules) of energy are required to heat 1kg of water by 1 degree Kelvin (1oC).

“As of 1 August 2025, the sole British Standard for water mist is BS 8489 covering industrial and commercial occupancies. The previous standard for water mist in residential premises has been withdrawn”

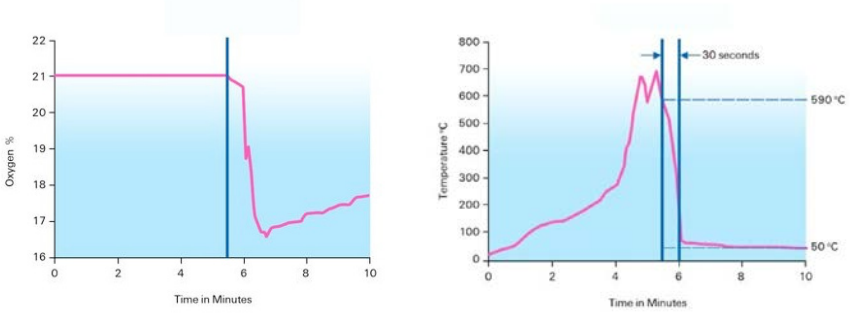

Figure 2: Oxygen reduction and temperature drop for water mist discharged on a Class B fire

Conversely cold water put onto a hot surface will extract the same amount of energy per unit mass/temperature drop.

The second important property is the latent heat of vaporisation. Once the water temperature reaches 100 degrees centigrade, it changes phase to vapour (steam) without a change in temperature. The energy required for this phase change is known as the latent heat of vaporisation. For water this value is 2,257kJ.kg. This means that 2,257kJ (kilojoules, or 2.257MJ (megajoules)) of energy is required to change liquid water to vapour. As for the example for specific heat capacity above, this property is used to extract heat.

The smaller the droplet size, the greater number of droplets per unit volume and a greater the surface area with which to absorb the heat. Therefore, smaller droplets equate to greater heat extraction and more rapid cooling.

Water as a droplet or vapour contributes to firefighting through two other mechanisms. The first is dilution of oxygen around the flame which removes a second element of the fire triangle. The second is the attenuation of radiation which prevents heat transferring to adjacent combustibles and structures, such as walls and ceilings.

Not all fires are ‘hot’ and therefore the effectiveness of water mist depends not only on its droplet size but also the fire class of the material and its burn temperature.

Considering Class B or Class F fuel types. Class B fuels are flammable hydrocarbon liquids or solids that include heptane, oil, paraffin wax, and alcohols. Class F fuels are vegetable or animal fats used in commercial or industrial cooking. Both Class B and Class F fires are characterised by a high temperature burn.

The water removes heat energy first through the mechanism of specific heat capacity and then through latent heat of vaporisation. The production of large amounts of steam as the water changes phase depletes the oxygen around the flame front. The fire is extinguished when the oxygen level falls below 15% by volume. The cooling by water mist post extinguishment is equally as important as it will lower the fuel below the ignition temperature, preventing re-ignition.

The application of water mist for Class B or Class F fires is by means of a deluge, or open nozzle system, whereby the water mist is discharged simultaneously through all nozzles. Actuation is via a detection system. The fire test protocols and approval procedures for this type of fire hazard have been long established, and it is fair to say, that water mist is probably the de facto choice for these applications.

Test data proves that the smaller droplet sizes are more efficient in terms of water quantities is shown in Figure 3.

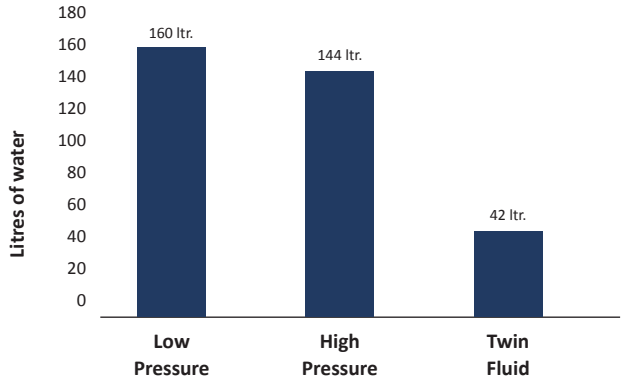

Figure 3: Relative water quantity required to extinguish a 1MW fire per water mist technology – decreasing droplet size reduces the water required

The design of water mist systems for Class B and Class F applications is of two forms – total flood or local application.

In total flood the entire volume is filled with water mist (for example a generator enclosure).

Water mist nozzles are required to be installed across uncloseable openings to prevent ingress of external air (oxygen) during the extinguishing process. For local applications water mist nozzles are directed on or around the object to be protected (for example industrial deep fat fryers). Note that twin fluid systems rely on providing extinguishment to a greater degree through use

of the atomising gas. The residual oxygen level is between 10-12% and the water mist provides additional cooling.

If we now consider Class A fuel types, the application of water mist now is more challenging. Class A fuels include combustibles such as wood, paper, and cloth, etc. Also, within Class A fire class are plastics, which have unique burn characteristics. Class A fires are also deep-seated. This means that even if the surface temperature is cooled there is often sufficient thermal energy within the material to allow pyrolysis to continue (it is the pyrolyzed (material gas) products that ignite). Thus, whilst extinguishment is desirable it cannot be guaranteed and the objective of (all but one published) fire test protocol for Class

A fires is that of suppression, defined by parameters within the protocol. Note that the defining parameters differ between fire test protocols, and it is important to ascertain the application requirement prior to deciding the suitability of a particular fire test protocol.

For Class A applications the water mist system is configured as an automatic system (as a sprinkler system). That is, each nozzle has a frangible heat sensitive element that acts as both detector and actuator. Water will only discharge from each nozzle that has reached activation temperature.

The suppression of Class A fires requires more water than for Class B or F fires, and the larger droplet sizes may produce more efficient systems in terms of water quantity used (as opposed to Class B and F fires). This is thought to be due to the importance of direct impingement and wetting of the material over indirect entrainment.

The effectiveness of water mist against sprinklers is often erroneously compared. As an example, a sprinkler water density is taken as 5mm (5 litres per minute per m^2) for a Class A fire ordinary hazard. This is then compared against a water mist water density of 0.5mm for a Class B fire hazard. Often accompanied For Class A applications the water mist system is configured as an automatic system (as a sprinkler system). That is, each nozzle has a frangible heat sensitive element that acts as both detector and actuator. Water will only discharge from each nozzle that has reached activation temperature.

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As evidenced through fire testing, the water density to suppress Class A fires for water mist is not constant but increases with fire load density. As an example, for light hazard fire loads (< 150MJ.m-2), the lowest water density for a system approved to a light hazard fire test protocol (FM 5560 Appendix G) is 1.5mm and the average across all approvals is 2.5mm. This 50% of a sprinkler design density of 5mm.

For higher hazard fire loads, the water mist required density increases to between 3.5 to 4.2mm (based on the BS EN 14972-3 fire test protocol). Note for this hazard application the sprinkler

design density is still 5mm. Note that the water mist values are at optimum (maximum) spacing and minimum pressures. In actual designs the water density will be more, which is explained below.

2.0 Water Mist Systems

Water mist systems are based on proprietary product; they are not harmonized to a common set of properties. The layout and spacing of nozzles, operating pressure and water capacity will differ between manufacturers and technology. It should be noted that nozzles and components are rarely interoperable (which means one cannot use a nozzle from manufacturer on a system installed based on different manufacturer). Nozzle and system designs are customised to the application, based on successful completion of fire testing which result in a variety of nozzle types, spacing and activation methods.

There are however generic water mist application categories.

2.1 Types of systems

2.1.1 Open nozzle of deluge systems

Open nozzle (or deluge) systems are dry pipe activated by a separate fire detection system.

Examples of open nozzles are shown in Figure 4.

Figure 4: High and low pressure nozzles

2.1.2 Automatic nozzle systems

Automatic nozzles contain a thermal element (normally a frangible thermal link or alcohol filled bulb) at a pre-set activation temperature (for most water mist nozzles tested and approved this is 57oC or 68oC). When the ambient temperature surpasses this value, the element fails (for example a thermal link will melt or the alcohol in the bulb expands breaking the glass). The water then flows from the nozzle. All other nozzles remain closed unless the ambient temperature exceeds their opening threshold value. Example of automatic water mist nozzles are shown in Figure 5. Note that automatic nozzles do not currently exist for twin-fluid systems.

Figure 5: Automatic Nozzle Examples

Figure 6: Electronically Controlled Nozzle Example

2.1.3 Electronically contolled nozzle

A type of nozzle in which the release of water is made by electronic means instead of by mechanical means. An electronic control allows for a predetermined number of nozzles to operate via alternative means, for example a smoke, heat, or flame detector.

Note that at present there are no UK test standards for this type of nozzle.

2.2 Types of application

2.2.1 Local application

A local application (or object protection) system is used to protect facilities and equipment only, such as individual diesel driven generator sets, transformers, switchgear and deep fat fryers, by discharging water directly onto the hazard and if required adjacent risks. Their use is advantageous when a specific risk is disproportionately higher than the risk in the rest of the space, or the object is small compared with the overall volume. The design requirements for local application are more stringent as the extinguishing method relies much more on cooling than oxygen reduction since the volume is not fully enclosed. (An exception is within the hood of an industrial deep fat fryer). Local application systems use open nozzle system design.

2.2.2 Volume protection

Volume protection systems are used to discharge water mist into an enclosed volume, compartment, or room. In open nozzle systems the water flows through all nozzles within the protected volume. In automatic systems one or more nozzles activate as required.

2.2.3 Zoned protection

In open deluge systems, each protected volume is controlled by a valve (known as a selector or directional valve). Water mist will only discharge into the volume with a fire. If there is sufficient water supply for the largest protected volume this can be an economical way of protecting more than one volume (assuming there will not be multiple fires at the same time where additional water quantities and/or larger piping will be required). For automatic systems, zoning is a means for sectioning the building to identify where the fire occurs (for example, per floor). Each zone has a valve that will have a flow switch to indicate activation of a water mist nozzle within that zone of the system.

2.3 Water supplies

Water mist can be delivered either through a pre-pressurised system (stored water and propellant gas in cylinders) or a flow generating device (a pump) through the system distribution pipework to the nozzles. In twin-fluid delivery systems there is an additional pipe for the atomizing gas.

2.3.1 Single fluid pumped

A single fluid system generates water mist by delivering water through the nozzle under pressure from a pump system. Pumps for pressures 16 bars and under are centrifugal type (as for sprinklers). Pumps for pressures above 50 bar are positive displacement (or piston) type. Both pump systems require a storage water tank of sufficient working capacity for the duration of discharge required for the size or design area of the hazard.

Centrifugal pumps are available for any flow likely to be required for a water mist system. The characteristic pump curve has a maximum pressure at zero flow (closed head) and the pressure decreases as flow increases.

Piston pumps have a maximum flow up to ~120 litres.min-1 and provide a constant pressure throughout the flow range. The head pressure is set by an unloader valve which also acts as a relief valve for unused flow. For example, if a pump provides 120 l.min-1 but the nozzle delivery only requires 50 l.min-1, the balance (70 l.min-1) returns to the storage tank or drain, via the unloader valve.

2.3.2 Single fluid pressurized

A single fluid pressurized system generates water mist by delivering water through the nozzle under pressure from a pressurised gas container. The gas (usually nitrogen) does not mix with the water being pressurised; it is only used for pressure/flow generating purposes.

2.3.3 Twin fluid pressurized

A twin fluid system generates water mist by mixing an inert gas or air fed from separate pipework to the water mist nozzle. Such systems are normally container based (as single fluid pressurized).

2.4 System operation types

2.4.1 Wet pipe system (automatic nozzles)

This water mist system uses automatic, heat sensitive, nozzles fitted to distribution pipework that is permanently pressurised with water. Wet pipe systems are the most common automatic suppression configuration and are typically used to protect areas where temperatures are above 4oC and below 95oC and are unlikely to fall below freezing point.

2.4.2 Dry pipe system (automatic nozzles)

This water mist system uses automatic nozzles fitted to distribution pipework that are permanently pressurised with air, nitrogen, or other inert gas. In the event of a fire, when a nozzle operates, the pressure drop in the distribution pipework activates the system's control valve to release water into the pipework where it is discharged through the nozzle.

These systems are typically used in the same applications as wet pipe systems where the key constraint is the need to prevent freezing of water in the pipes. There is a delay in flow of water because of the time it takes to fill the distribution network with water, which increases with the volume of pipe work to be filled. Because of this delay, such systems are not normally be considered for applications where there is a need for the protection of life.

Note fire test protocols do not test to include the delay in dry pipe systems. Proof will need to be provided in the certification of the maximum delay permitted and that the system will still perform as tested and prescribed.

2.4.3 Deluge system (open nozzle)

A deluge system is designed so all open nozzles discharge simultaneously in the event of a fire. This is achieved when a separate fire detection system is actuated. This in turn operates the pump or container actuator and a valve in the pipe work to release the water through all the open water mist nozzles. Fire detection systems can be electrical, electronic, or pneumatic. The actuation should comply with BS 7273 Part 5. As the nozzles are open, the water distribution system is kept dry and unpressurised. The activation of the fire detection system is more sensitive than heat detectors or frangible bulbs. A deluge system may be zoned. This allows for several areas to be protected but permits a discharge in only one area (zone) at any given time (unless the water supply and pipe diameters are sized for simultaneous discharges).

2.4.4 Pre-action system

Such systems comprise an automatic water mist installation and a fire detection system. The water mist pipe work is dry, pressurised with air, and monitored for loss of pressure.

On receipt of a signal from two or more detectors, the main control panel sends a signal to open the pre-action control valve, allowing water to flow into the distribution pipework in readiness for the water mist nozzle(s) to operate. These systems are commonly used for the protection of high value areas such as data centres, server rooms or communications, or where sensitive electrical equipment and goods are stored. They provide warning of system discharge (through the operation of the fire alarm system) and prevent accidental discharge if a frangible bulb were inadvertently broken or the pipe work damaged. The actuation should comply with BS 7273 Part 3.

2.4.5 Electronically controlled system

Electronically controlled systems consist of nozzles which incorporate a valve that is operated by a 'controller', actuated by fire sensors to either allow water to discharge or to shut off flow. This permits for a pre-determined number of nozzles to operate. Which nozzles operate will depend on the location of fire identified by the controller. This may be via the use of a detection system or other sensing method. There are also stand- alone, modular domestic systems that use this principle. Such self-contained applications are known as Personal Protection Systems and are designed specifically to protect vulnerable people such as the bed-ridden or immobile. System requirements are detailed in the Loss Prevention Standard LPS 1655.

2.5 System design type

2.5.1 Engineered

Engineered systems require hydraulic flow calculations to determine the requirements of pump pressure and flow and the amount of water storage. The core information will be determined from the type and number of nozzles within the design area. Calculations will be undertaken for the hydraulically most favourable areas (to determine the maximum water quantity and flow required) and the hydraulically most unfavorable areas (to determine pump source pressure and pipe sizes such that the most remote nozzles operate above the minimum design pressure).

2.5.2 Pre-engineered

These systems have pre-determined flow rates and water quantities. This results in very little work to be done by the designer as the pipe diameters can be derived from look-up tables verified by testing and included in the DIOM. These systems generally are limited to simple deluge systems, for example the protection of small enclosures for the protection of Class B fuel hazards.

2.6 Water mist pipework and fittings

The material used for the pipework and fittings of a water mist system should be governed by the operating pressure and other requirements of the water mist system (such as water purity) and the environment surrounding the installed pipe. This may include resistance to heat, or chemical corrosion. All water mist systems require the use of non-corrosive materials such as stainless steel,

copper, or brass. Twin fluid systems can use galvanized or steel pipe for the atomising agent as there is no direct contact with water. Further details of pipe types can be found in the FIA-BAFSA Piping Document.

3.0 Using water mist

Given the performance-based design of water mist systems and their proprietary nature, the design of water mist systems does not follow the prescriptive approach as detailed for other fire suppression systems (i.e. sprinklers, gas extinguishing systems, etc.). As a result, system component manufacturers have much more involvement and responsibility in demonstrating the suitability and performance of their water mist system and must show necessary competence in assessing suitable applicability and design.

3.1 Legislation

The primary legislation for life safety fire protection is contained in the Building Act 1984, and the building relevant regulation is the Building Regulations 2010, Schedule 1. The applicable fire safety guidance is given in Approved Document B (ADB) Volumes 1 and 2 including the latest date amendment and devolved national equivalents. Codes of practice for fire safety in the design, management and use of buildings are detailed in BS 9991 (residential) and BS 9999 (commercial and industrial). The present (March 2025) iteration of AD-B does not include reference to water mist nor does the recent revision of BS 9991 (2024) In Wales, the design and installation of water mist systems, where installed as an alternative to sprinkler systems must comply with Regulation 37A of Building Regulations and the Domestic Fire Safety (Wales) Measure 2011.

3.2 Water mist standards

At the time of publication (there is one British Standard and one suite of European Standards covering the design and installation of water mist systems in the UK (see Annex 2). As new products and test protocols for applications are in continuing development, there may not necessarily be a standard to guide manufacturers and buyers to the suitability of every solution. This may have to be done on a case-by-case basis with the creation of a bespoke fire test protocol and by referring, if relevant, to a similar real-life application. The water mist standard BS EN 14972 Part 1 Annex A details the methodology to develop a fire protocol where one does not yet exist. An example of a well-established application which only recently has had a standard for it is that of data centres. ‘Prisons’ do not yet have such a protocol although water mist was proven by testing commissioned by Scottish and English Prisons some years back.

Clause 8 Method B of BS 5306-0:2020 provides guidance on the how deviations from standards and out of scope systems can be assessed for the intended application. Application of due diligence by examining the proposed installation of a non-standard solution is essential. As is the by assurance that a proposed standardised system does indeed comply to the standard in the manner it states it does. This is the key reason for the value of third-party certification and the disclosure of the manufacturer’s DIOM manual to all stakeholders involved. Method B warns that: “Innovative, engineered or otherwise non-standard solutions can be significantly higher risk in many respects. However, they can offer overall benefit where there is a genuine need for such

a solution. At least equivalent performance (to the closest applicable standardised technology) should be sought". It is often the case that the contracting parties are unaware of the size and type of fire load. Thus, it is not always possible to determine if the water mist system is suitable. As an example, BS 8489 Part 1 Table 1 lists two fire test protocols for light hazards. The first is FM 5560 Appendix G (most commonly available from water mist manufacturers) which has a maximum fire test load of 150 MJ.m-2. The second is BS 8489 Part 7 that tests for fire loads up to 500 MJ.m-2 (less available from manufacturers). Thus, if the FM protocol were used for a fire load of 250 MJ.m-2 (instead of a BS 8489 Part 7 tested system) the performance of the system will be at best unknown, and at worse ineffective.

As of 1 August 2025, the sole British Standard for water mist is BS 8489 covering industrial and commercial occupancies. The previous standard for water mist in residential premises has been withdrawn.

BS 8489 Part 1 and BS EN 14972 Part 1 set out the design and installation requirements of water mist systems and subsequent parts of these standards detail fire test protocols for certain applications.

See Annex 2 for full details of published BS EN standards relating to water mist systems and components. The International Water Mist Association (IWMA) also holds up to date information covering international published standards for water mist.

3.3 Fire test protocols

The design and installation methods of water mist systems are based on proprietary information, so systems will vary between manufacturer and with each application, so their effectiveness in fighting fires must be verified by standardised tests. This standardised test is known as a fire test protocol which has a set of parameters that define the system performance objectives. Fire test protocols have only been published for a selected range of fire hazards and occupancies. Note that the type and size of fire loads used for the fire test may not represent those of the application hazard. In addition, each test protocol will have limiting parameters which will limit the system performance and validation of certification. Such parameters include, but are not limited to, height, ventilation, ceiling slope, activation temperature, obstructions, etc. It is these aspects that requires suitable competence in fire engineering to determine whether water mist is appropriate for any given hazard/occupancy.

The introduction of BS 8489 Part 1 states "The water mist system is to be…tested in accordance with a recognised test protocol". This means that the system specified for an occupancy not covered in the standard requires the designer and installer to produce evidence that the proposed system is fit for purpose for the proposed application. This must include one or more of each of the following:

- Fire testing undertaken in an approved fire laboratory with BS EN ISO/IEC 17025 accreditation
- Reference to third-party verified fire tests already undertaken elsewhere for such an application

Care should be taken by manufacturers and installers to avoid claims appearing to fulfil these criteria but which on closer inspection do not.

3.4 Component standards

There is a significant amount of accumulated knowledge of the ways in which fire suppression system components can fail over time depending on the material with which they are made, method of construction and operation, and the environment that they are exposed to. Some of the tests and best practices embedded in these standards may include ageing tests, over- pressure tests, and material choices. The only UK national water mist component standard is for nozzles - BS 8663 Part 1. This standard appears to be little used and given the publication of BS EN 14972-17 Fixed firefighting systems. Water mist systems – Test protocol for residential occupancies for automatic nozzle systems in July 2025 this will become the preferred test protocol.

A CEN standard for nozzles, EN 17450 Part 2 is awaiting publication. However, this does not include a high-temperature ageing test that BRE have verified is critical for proving the reliability of automatic nozzles that use dynamic polymeric O-rings. It is likely that this test will be an optional (normative) test, that would be required for the UK market. This will be confusing to many end users resulting in a two-tier standard. Some experts believe that the EN standard is technically inferior to BS 8663-1.

Note: The problem of dynamic O-rings is well-documented with sprinklers and has been observed with water mist nozzles. The O-ring can harden that can cause leaks and/or fail to actuate when required.

3.5 Third party verification

Third-party testing and verification of the performance and composition of the system must be proven by certification, often publicly listed (for example LPCB Red Book Live). Although not mandated by law in the UK, certification provides one element of surety to stakeholders. This is because certification is an assessment by an independent competent body, and evidence that the manufacturer is willing to have their manufacturing processes and systems' performance thoroughly scrutinised.

Robust certification also performs important functions such checking that the supplier has not changed their materials, or design, without obtaining full revalidation. Certification also provides additional routes to problem and dispute resolution.

Certification laboratories have, for many years, undertaken work in testing products to national standards but also (usually in the absence of such standards) to their own standards. For example, as there is no UK standard for personal protection water mist systems, the LPCB developed LPS 1655. LPCB have also been published approval documents for fire suppression systems in kitchens - including water mist. Such documents are invariably developed by test laboratories in conjunction with stakeholders who are expected to fund the work. Certification laboratories also have the autonomy to extend their testing and assessment program to promote confidence of the systems tested beyond the consensus found in national standards.

Certification laboratories which have experience with water mist components internationally are FM, LPCB, UL and VdS.

3.6 Types of certifications

3.6.1 Fire test protocol

A certificate detailing the performance to a specific fire test protocol. The certificate will detail factors including as a minimum nozzle spacing, height, operating pressure and k-factor and limitations.

3.6.2 System certification

This is certification of the fire performance for the specific application and is closely linked to the requirements of the standard in addition to specific test laboratory criteria. The test laboratories will certify systems which have successfully been tested either to specific fire test protocols (above) as listed in BS 8489 (parts 4 and 7) or BS EN 14972. Other fire test protocols in exist in the standards FM5560, UL2167 and VdS 3188.

Certification is based upon satisfactory evaluation of the product and the manufacturer in the following major areas:

- Examination and tests on production samples performed to evaluate:
  - The suitability of the product.
  - The performance of the product as specified by the manufacturer and required by the testing organization; and, as far as practical,
  - The durability and reliability of the product.
- A thorough review of the proposed water mist DIOM manual.

There are occasions where a variation of a standardised product or a completely different product (which is out of scope of existing standards) is proposed. Invariably, there will not be a certification scheme for such systems which will rely on a certifier who is willing to adapt or create a test protocol for that product. The certifier may adapt existing test protocols for system and components but might also need to develop custom fire test protocols following the guidance in Annex A of BS EN 14972-

> *1. This can be a lengthy process, but it is the typical path for a product category to then become standardised. Conversely, a system which is within the scope of a standard implies that certification schemes are readily available and there is therefore no reason for these systems not to be able to be fully certified.*

3.6.3 Certification of equipment

As with other fire protection equipment, certification of the components should be the norm. A certified component provides evidence the component has been third party scrutinised and therefore is reliable, but it is not a guarantee on its own and should not be confused with the system performance validation. There should also be a link (through a reference in the DIOM) on what components and what certifications have been achieved for which applications.

Therefore, specifiers of water mist systems must ensure that the components that make up a water mist system are listed as approved by a recognised approval body. It is essential that specifiers are supplied with copies of the relevant listing or certificates, which should normally be included in the tender submission or specification document.

Components which typically undergo certification are:

- Control valves, water pumps, water, and gas pressure containers.
- Distribution pipework, couplings, and fittings.
- Water mist nozzles.
- Fire detection and alarm control panels, fire detection sensors, alarm sounders, indicators, and actuators.
- Non-electrical equipment such as pneumatic, hydraulic, or mechanic control valves and equipment.
- Manual actuation equipment.

In addition to compliance with the minimum test requirements for individual components according to the relevant standards, it is essential that the assembly of components is tested together as a system and as such, the system also carries a system approval. To ensure the efficacy of a system, an independent third-party certification body must examine and test that system to establish its firefighting performance and the compatibility of all components.

3.6.4 Certification of installers

The third essential element of quality requirements for installations is an assurance that the designer/installer of the system is fully competent to undertake this work. It is the only certain way to ensure that the requirements in BS 8489 and BS EN 14872-1 to design and install the system are 'entrusted to appropriately qualified and experienced people'. This is typically done using a certification standard which is based on a national standard as specified above.

Third-party certification is key because it is an external assessment of competence. However, given the proprietary nature of water mist, it will not necessarily capture the specific requirements from different manufacturers. Therefore, just as important, is evidence that the installers' workforce have been trained by the manufacturer and can demonstrate competence for that specific product. This evidence should be available from manufacturers, so stakeholders should ask for sight of references and training certificates from system or component manufacturers.

Note that designer competence requires skills and experience in fire engineering, determining applicability and suitability of a fire test protocol to the fire hazard and occupancy; the ability to determine design areas; and undertake hydraulic flow calculations. It will also require an understanding of pump curves; actuation; system interfacing; electrical loads and system resiliency. These are just some of the examples. Such an engineer is likely to be qualified to at least degree level, have many years' experience in the fire suppression industry, be registered with the IFE and be either an Incorporated or chartered engineer or scientific equivalent.

As stated, a key part of the regime which ensures that water mist systems will be effective and reliable is the correct installation of the water mist system, which depends on the attestation of the competence of the designer and installing company.

It is important to note the distinction between accreditation and conformity assessment. Accreditation ensures that those who carry out testing, certification and inspection are competent to do so, it therefore applied only to approval and testing bodies accredited by the United Kingdom Accreditation Service. (https:// www.gov.uk/guidance/conformity-assessment-and-accreditation) 'Approvals' by organisations who are not so accredited should be viewed with care.

Conformity assessment is a service provided by an accredited body such as an UKAS accredited (or European Notified Body) to providers of products or services. As a result, installers, products, and components can only be certified (or conformity assessed), they cannot be accredited. To comply with the need for product approval marking, for water mist components being imported into the UK, CE marking will still be found. The situation regarding the UKCA mark is complex and guidance for UK manufacturers should be sought from the Department for Business and Trade.

At present, there are no UKAS accredited certification bodies providing third-party certification for water mist installers to either BS 8489 or the BS EN 14972 suite of standards. While nozzle certification testing continues to be carried out by organisations such as LPCB (Loss Prevention Certification Board) and FPA (Fire Protection Association), full third-party certification for installation companies is currently lacking.

Previously, FIRAS and IFCC KIWA ran third-party schemes for residential and domestic systems in line with BS 8458. However, these schemes primarily verified tests conducted against selected annexes of BS 8458, rather than providing comprehensive certification coverage. The withdrawal of BS 8458, coupled with the closure of the FIRAS water mist testing and certification scheme, has further contributed to the uncertainty in the sector.

With the withdrawal of BS 8458 and the inevitable discontinuation of related certification schemes, the market currently faces uncertainty regarding formal third-party approval R&D for water mist installers. Although the FPA claims to be testing water mist systems for residential applications, the scope and status of its activities in this area remain unclear.

In summary:

- There is currently a lack of an UKAS accredited third-party certification for water mist installers to BS 8458 or BS EN 14972.
- Nozzle testing is ongoing through the LPCB and FPA, but this does not extend to installer or system certification.
- The FPA is planning to test nozzles to BS EN 14972-17 when it receives UKAS certification for this, possibly in autumn 2025.

DIOM – Design, Installation, Operation and Maintenance Manual

The DIOM is the document that contains all the key information from the manufacturer of the water mist system. These will vary between manufacturers and with different applications even with the same manufacturer. These documents should be available to the specifier, and AHJ to review suitability of the proposed water mist system and compliance with the design objectives.

The DIOM should not be used in isolation and must reference the standard to which the system has been designed. If the system is stated to comply with a specific standard, documented evidence of compliance to all clauses, or justifications for variations to clauses, must be provided. Details of the fire test protocols against which the system has been tested should be provided with full details of the results obtained and the details of the laboratory which undertook testing.

National Annex B to BS EN 14972-1 provides the critical list of items to be included in the DIOM, such as:

- General Information regarding the type of system.
- Limits of application, for example height, ventilation, obstructions, etc.
- Description of components and the standards to which they are designed.
- Testing of the specific system/s and details of the fire test protocols against which they have been tested and the results of such tests.
- Approvals and certifications gained in respect of systems and components.
- Declaration of conformity to applicable product safety directives.
- Planning, Design and any specific qualifications or approvals needed by the designer.
- Nozzle maximum and minimum spacings, height, working and standby pressure.
- Minimum design area (AMAO), minimum number of nozzles in design area.
- Discharge duration per application.
- Water supply requirements including details of acceptable water quality.
- Installation process.
- Testing and placing in service (commissioning).
- Inspection and audit.
- Maintenance.
- Typical hazards applicable to the fire testing (including fire type and maximum fire loads).
- Hazard description.
- Types and sizes of fire loads tested.
- Nozzle k-factor.
- Interaction with other fire systems (detection, alarm, smoke control).

https://www.gov.uk/guidance/placing-manufactured-goods-on-the-market

4.0 Choosing a Water Mist System

4.1 Introduction

Before any fire protection system is specified the methodology as detailed in BS 5306 Part 0 clause 4 should be followed. BS 5306-0 contains tables that explain the suitability of different fire protection systems for different applications.

Standards detail best practice and are for the guidance of the wise, not an avenue to 'pick and choose'. It is not whether a system simply 'complies' to a standard but rather how it conforms to each of the clauses within. This highlights the importance of the DIOM in detailing the design constraints and performance limitations of the proposed water mist system with respect to the referenced standard, supported by the evidence of fire testing and third-party certification. Equally, this is the reason that the system manufacturer must make the full text of the DIOM available to specifiers and regulators.

One of the principal perceived benefits of water mist is its ability to solve a water supply or storage constraint. This subject it is important to clarify. As an example, for light hazard systems for Class A fires the design is not based on achieving a water density, as with sprinklers. It is based on the layout of the nozzles in accordance with the DIOM, the number of nozzles within the design area, and the respective pressure and k-factor at those nozzles. Often, contractors quote the

minimum water density of the water mist system, which is only achieved at maximum spacing and minimum operating pressure. This is rarely possible as room layouts are rarely dimensioned to fit an exact number of nozzles and there will always be obstructions that require additional nozzles. In addition, the operating pressure will always be above minimum. As an example, a manufacturer claims a water mist density of 2mm based on 16m^2 maximum spacing a minimum tested operating pressure. The layout of the room and obstructions mean that the spacing is reduced to 12m^2 per nozzle, the water density increases by 2.66mm. If the pressure at that nozzle is % above minimum, then the flow will increase by square root of the increase. The water supply is based on most favourable hydraulic calculation that could be defined by either the most nozzles within the design area and/or the maximum pressure at which they are subjected. A frequent observation during third-party audit of water mist designs is that contractor either does not determine the design area (and number of nozzles within) correctly or understand the effect of hydraulic gradient. The same applies to the working tank capacity required, with often gross tank capacities being used instead.

Water mist has to date been used mostly used for asset and business continuity purposes.

Consultation with the relevant stakeholders should first take place to seek approval where any protection system is being considered, regardless of whether the system is an elective install (providing addition protection to an otherwise compliant building), to meet Building Regulations, or for property protection or for business continuity purposes:

- The building control authority or approved inspector.
- The fire authority.
- The water supply undertaker (This is usually essential to comply with Water Regulations).
- The insurer(s) of the premises and premises' contents.
- The owners and property managers.
- Residents' associations.

Note that the use of water mist is presently not accepted under Building Regulations. A suitable automatic fire suppression system detailed in Regulation B3(3) is defined in Approved Document B as a sprinkler system designed to BS 9251 or BS EN 12845.

The DIOM should be comprehensive enough to provide answers to all questions from any of these stakeholders. So that project approvals can been given, whether from building control or the insurer, it is essential that the specifier is provided with a full, written technical specification from the installer, authorised by the manufacturer, on how the system will be designed, installed, commissioned, tested, and maintained in accordance with the DIOM.

4.2 Effectiveness and reliability

As for any fire protection installation, the system must be able to perform as designed and intended. For that, it needs to be demonstrated that the system will be effective for the intended application. Effectiveness depends on the suitability of the proposed system for the application and that it has been designed and installed correctly so that it works as intended.

It must also be available to operate, without delay, whenever required.

Once a decision has been made that a water mist system is appropriate, three conditions must be satisfied:

a) the system chosen must be suitable for the proposed fire hazard and fire load (the application).
b) the system must be designed, installed, and commissioned correctly by a competent contractor using approved equipment.
c) the system must be maintained so that it is ready to operate (available).

Only when there is evidence that this has been done can the system be expected to perform reliably once installed.

Note that there is little data on either reliability or effectiveness for water mist systems. There is extensive international data for sprinklers, harmonized standards, and rigorous component certification. One of the fire engineering decisions in risk analysis and design is that of reliability and effectiveness. PD 7974 gives detailed quantitative guidance for sprinklers that does not currently exist for water mist.

4.3 Suitability

There are several factors that need to be considered before a water mist system is considered suitable for the building, asset or occupant being protected. Ignoring any of these could be deemed to evidence of negligence and in the case of life safety systems in the UK, a breach of fire regulations. Adequate specification and due diligence should take the following into consideration.

4.3.1 Fire test protocol applicability

The proposed installation must refer to the fire test protocol which has been used to validate the performance of the proposed system. This test must be relevant to the application being considered and carried out with the same components and systems being specified in the installation.

4.3.2 Third party evidence

A declaration of compliance is a first-party declaration but verification such as certification is a key demonstrator of long- term reliability and compliant performance. This should be sought for systems and components where such schemes are available.

4.3.3 Tenability

Tenability is governed by exposure to heat (convective, conductive and radiation all have difference threshold values) and the Fractional Effective Dose (FED). FED is normally determined by CO2 and CO levels but can also be measured by levels of by- products of combustion such HCN and Hcl. Water mist has been shown to provide tenability within protected spaces, but dependent on the fire test protocol this may be limited to temperature only. Further evidence may be required if tenability is a core criterium.

4.3.4 Protection of glazing

Water mist system may possibly be used for the protection of glazing but there are no published fire tests protocols for verification. Any data presented by the manufacturer must be third-party verified against as set of performance criteria acceptable to the AHJ and user.

4.3.5 Smoke scrubbing

Smoke is made up of mostly solid substances entrained with toxic gases. While water mist may not be able to fully 'scrub out' all the particulates in smoke it has been shown to be capable of capturing some water-soluble gases. Specific fire testing is required for verification of applicability and limitations as this is not detailed in the published fire test protocols.

4.3.6 Reducation visibility

Water mist effect visibility that must be considered relevant to the evacuation of normally occupied areas. These are:

- Reduction of visibility through the mist (akin to walking in mist or fog).
- Light diffraction in various directions and a loss of visual contrast that could lead to people within the area becoming disoriented.
- Cooling and mixing with the smoke layer that reduces the buoyancy and causes the smoke layer to fall.

With these facts in mind, the system designer should specify measures to safeguard occupants. Guidance in BS 9991 and BS 9999 must be followed.

4.4 Water supplies

It is critical for the operation of the water mist system that the installation can provide the flow and pressure that the system needs to operate in all scenarios.The amount of water (and pressure) required is governed by the fire hazard, design area, manufacturer details (DIOM), and most favourable (and unfavourable) hydraulic calculations.If an enhanced availability system is required there must be resilience in water supplies. Guidance is given in the standards albeit conflicts between the published UK and EN standards remain unresolved.

4.4.1 Water discharge times

The minimum duration for water discharge is prescribed in the relevant standards and is a factor of the type of hazard and occupancy. For domestic dwellings this will be a minimum of 10 minutes; and residential at least 30 minutes. For commercial and industrial light hazard occupancies it will be a minimum of 60 minutes.

The water quantity required assumes that all the nozzles in hydraulically most favourable design areas are operating.

For extinguishing systems which are required for local and total flood applications involving flammable liquid fires, up to and including 260m3, and for industrial oil cookers, the duration discharge should be at least twice the time taken to extinguish the fire and to prevent reignition,

and a minimum of 10 minutes. For larger volumes (>260m^3) this discharge time may need to increase to 60 minutes dependent on the certified test results from the fire test protocol.

4.5 Ventilation considerations

As the mass of the water droplets decreases the droplets will be more affected by air movement (both natural and forced ventilation). It is essential that where ventilation is above the limit prescribed in the fire test protocol that measures are taken to turn-off or reduce the ventilation to within the tested limit. It may be that a judgement must be made as to whether a sprinkler system may be more appropriate (since the heavier droplet makes sprinklers less vulnerable to air flow). Ventilation may also delay the activation of heat sensitive nozzles through dispersion of the convective heat plume, and conductive cooling at the frangible element surface.

4.6 Enclosures and integrity of enclosures

Water mist systems used for the protection of enclosures containing Class B fuels are required to have the enclosure sufficiently leak tight that oxygen cannot be drawn into the fire during discharge. Openings will need to be automatically closed prior to discharge of the system. Some fire test protocols permit the installation of nozzles over openings to exclude oxygen if this is proven in the testing.

These form part of the design and additional nozzles should be included in case automatic vent closure fails. This will require that the water supply quantity is increased.

4.7 Nozzle positioning

Nozzle positioning is a key parameter in water mist system design. Obstructions will affect the coverage and distribution of water mist and appropriate variations of nozzle locations, as tested, and approved, should be detailed in the DIOM. Water is two dimensional (not three dimensional as gas), so is unlikely to penetration enclosures (such as cabinets) useless there is heat for entrainment, or ventilation.

4.7.1 Nozzle heights & spacing

Installation of nozzles at the heights and spacings which have been validated by the nozzle manufacturer's tests is a crucial requirement. The maximum and minimum nozzle height and spacing must be detailed in the DIOM. Installation of nozzles above or below the maximum or minimum heights is unproven and may result in the failure of the system to perform as tested.

For Class A fire hazards many fire test protocols have a maximum ceiling height of between 2.4m and 5m. Higher heights may be permitted in the fire test protocol if the performance criteria are still met.

For Class B fire hazards the height is generally in the range of 5m to 8m. Again, as above larger (or lower) heights must be proven by testing and detailed in the DIOM.

4.7.2 Nozzle temperature ratings or detection specification

Where a thermal element (such as a frangible bulb) is used, the type of application will determine its temperature rating as certain occupancies may generate unwanted activations if the activation temperature is low (for example, in saunas and plant rooms). The temperature rating selected should be 30oC above the maximum ambient temperature. Higher temperature rated elements must have been proven by third-party fire tests and included in the DIOM.

The specification of systems which are activated by separate detection systems must be included in the DIOM and be the same or equivalent as those proven in fire testing.

4.8 Installation & commissioning

The installation and commissioning procedures are critical to ensure that the system is put into service as intended by the design and proven by fire testing. Additional requirements beyond those in the standards should be detailed in the DIOM. If these are not followed there is a significant risk that the system will not function as intended.

The water mist contractor must provide the client/specifier with a copy of their DIOM that contains the design and installation rules for the system.

Particular attention should be given to the condition of the distribution pipework. It should be confirmed that prior to installation, the pipework has been cleaned and is completely free of any sharp edges, swarf or debris that could impair the functional efficiency of the system.

Open and automatic nozzle systems are subject to hydrostatic pressure tests as required in the standards. Note that these tests only check for pipe integrity at static pressures, not dynamic pressures. Where pipe work is subject to sudden shock, for example an open nozzle system increasing from zero pressure to 100 bars instantaneously, it is imperative that suitable fittings are used where there is a change of direction, for example a bend, else the pipe may come apart at the fitting.

Where pumps are installed, provision should be made for testing at full flow.

All valves in the critical water path (for example inlet to tank, pumps, and valves to the hazards) should be ensured as locked open and/or monitored.

The quality of water and filtration should be verified as within specification for the system.

The commissioning engineer must take responsibility for testing all aspects of:

- Electrical detection and signalling.
- Electrical or mechanical actuation.
- Pumps and tanks and/or water storage and gas container vessels.
- Valves including main control, isolation, zone, deluge and pre- action as required.
- Correct calibration of unloader valves and/or regulators as required.
- Discharge testing and/or pump flow tests (note that for multiple pumps it is important that there is a provision to test maximum flow demand from all pumps, not just per individual pump).
- Providing the client/specifier with a Completion Certificate stating that the system conforms to all the appropriate recommendations of the relevant British Standard and DIOM. All details of deviations from these documents MUST be notified and recorded. Review by a competent auditor is essential.

4.9 Availability & Maintenance

Correct installation of the water mist system is only the start of its life in service. For it to be effective, it needs to be "available" during its lifetime. Regular maintenance is required to verify that the environment, hazard, or occupancy have not changed significantly over time as well as to verify that none of the components have been tampered with or damaged.

Note that water mist nozzles are not interoperable, so that if nozzles are required to be replaced, only those of the original manufacturer can be used. Where nozzles are unavailable (for example manufacturer has ceased trading) then it is probable that all the installation may become redundant.

The DIOM should include detailed maintenance instructions covering all the individual weekly, monthly, quarterly, and annual test procedures including additional measures required to those detailed in the referenced standard.

As with many building systems the internet has increased the adoption of remote monitoring and testing of systems to report faults or the need for maintenance. The same principles are being adopted by water mist suppliers. The aim is to provide notification of faults well before the annual check takes place, resulting in, potentially, a more efficient and effective on-demand maintenance as opposed to a reactive or scheduled maintenance. The objective is to maximise availability and reduce the possibility and the time of system downtime due to a fault which would only be observed during routine maintenance. Note this function is dependent on the resilience of the internet, interconnecting routers and servers, and the management software in both system control panel and maintainer off-site monitoring equipment.

Manufacturer and Installer Exclusivity

Unlike conventional sprinkler systems, where maintenance and replacement tasks can typically be performed by any accredited fire protection service provider, water mist systems are much more restrictive. For the vast majority of water mist installations, maintenance obligations—and critically, the provision of spare nozzles and high-pressure pumps—are reserved exclusively for the original system installer. This practice is not arbitrary; it reflects the often-proprietary nature of water mist technology, where nozzle designs, pressure requirements, and system configurations are unique to each manufacturer.

Implications for Spare Parts and System Integrity

A crucial difference with water mist systems is the unavailability of genuine spare parts—especially nozzles—from third-party sources. Manufacturers and original installers retain sole access to replacement components. Using parts or nozzles from a third-party source does not just risk incompatibility; it may also void the system's warranty and, in many cases, render the entire installation inoperable. These risks are particularly acute given the precise engineering required in water mist delivery and droplet size, which are critical to system effectiveness.

Warranty considerations

Water mist system warranties are usually contingent on strict adherence to the prescribed maintenance schedule and the exclusive use of original parts supplied by the system installer or manufacturer. Any deviation, such as using unauthorised third-party nozzles or pumps, is likely to invalidate warranty coverage. This could result in significant liability in the event of system failure during a fire incident.

Operational reliability

The operability of water mist systems is highly dependent on the integrity of proprietary components. Substitute parts are not only discouraged but expressly prohibited by most manufacturers because they may compromise system performance or safety. For instance, nozzle geometry and flow characteristics are meticulously engineered for specific applications and cannot be reliably replicated by non-original components.

Annexes

1.0 DEFINITION OF PERFORMANCE OBJECTIVES

Fire Control - limitation of fire growth and structural damages (by cooling of the objects, adjacent gases and/or by pre-wetting adjacent combustibles)

Fire Extinguishment - complete elimination of any flaming or smouldering fire

Fire Suppression - reduction in the heat release rate and prevention of re-growth of a fire over the discharge duration

2.0 PUBLISHED BS/EN WATER MIST STANDARDS

Withdrawn: July 2025 BS 8458: 2015 Fixed fire protection systems – residential and domestic watermist systems – code of practice for design and installation

BS 8489 Fixed fire protection systems – Industrial and commercial watermist systems
Part 1:2016 Code of practice for design and installation Part 4:2016 Fire performance tests and requirements for watermist systems for local applications involving flammable liquid fires
Part 7:2016 Fire performance tests and requirements for watermist systems for the protection of low hazard occupancies

BS 8663 Fixed fire protection systems – Components for watermist systems
Part 1:2019 Specification and test methods for watermist nozzles

BS EN 14972 Fixed firefighting systems. Water mist systems

- 14972-1 Design, installation and maintenance of water mist systems
- 14972-2 for shopping areas

- 14972-3 for offices, school classrooms and hotel
- 14972-4 for non-storage occupancies
- 14972-5 for car garages
- 14972-6 for false floors and false ceilings
- 14972-7 for low hazard occupancies
- 14972-8 and -9 machinery spaces
- 14972-10 atrium protection
- 14972-11 for cable tunnels
- 14972-12 commercial deep fat fryers
- 14972-13 for wet benches
- 14972-14 and -15 combustion turbines
- 14972-16 for industrial oil cookers
- 14972-17 for residential occupancies

BS EN 17450 Fixed firefighting systems — Water mist components
Part 1:2021 Product characteristics and test methods for strainer and filter components

- BS EN 17450-2 nozzles
- BS EN 17450-3 check valves
- prEN 17450-4 control deluge valves and actuators
- prEN 17450-5 pressure switches

3.0 OTHER STANDARDS & REFERENCES

Approved Document B: 2019 incorporating 2022 amendments
Volume 1: Dwellings
Volume 2: Buildings other than dwellings

Automatic water mist systems for domestic and residential premises (Welsh Government August 2021 https://gov.wales/ water-mist-systems-guidance

BS 5306 Fire protection installations and equipment on premises Part 0:2020 Guide for selection, use and application of fixed firefighting systems and other types of fire equipment

BS 7273 Code of practice for the operation of fire protection measures
Part 3:2008 Electrical actuation of pre-action water mist and sprinkler systems
Part 5:2008 Electrical actuation of water mist systems (except pre-action systems)

BS 9991:2024 Fire safety in the design, management and use of residential buildings – Code of practice

BS 9999:2017 Fire safety in the design, management and use of buildings – Code of practice

BS EN ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories

FIA Guidance Document - Watermist pipe test guide

FIA Guide to Block Plans for Watermist Installations

FIA Guidance on Additional Requirements for Watermist Systems Protecting High-Rise Buildings

FM5560:2021 Examination Standard or Water Mist Systems

LPS1655:2015 Requirements and Test Methods for the LPCB Approval of Personal Protection Water Mist Systems

UL2167:2021 Water Mist Nozzles for Fire Protection Service

VdS3188en:2020 Water Mist Sprinkler Systems and Water Mist Extinguishing Systems (High Pressure Systems) Planning and Installation

This is the August 2025 revision of the Technical Guide which incorporates changes in British Standards as of 1 August 2025

Since this article was drafted, the UK standard for residential and domestic water mist systems, BS 8458, has been withdrawn and replaced by BS EN 14972 Parts 1 and 7.

In providing this information BAFSA makes no warranties or undertakings as to its accuracy or completeness and assumes no liabilities in connection with the way the advice and information is used. Any deviations from BS EN 14972 which may be contemplated should be agreed with the Authority Having Jurisdiction and any minor deviations recorded on the Certificate of Compliance detailing the Originator of the Deviation. BAFSA's advice is that Certificates of Compliance should not be issued where a system has been installed with major departures from the requirements of BS EN 14972. In the case of water mist installations where there is insurer involvement, approval and guidance should be sought from the relevant underwriter.

Notes

In earlier drafts of this document, there were significant number of references and footnotes. The number of these references has been reduced to those which is felt are essential and others moved to the end of the guide. Notes on units. This document uses the scientific notation for units, examples are given below:

Flow	Litres per minute	l.min-1
Density=mm	(per minute per m^2)	mm.min-1 or l.min-1.m-2
Size	micron metre	µm
Fire Load	mega joules per m^2	MJ.m-2

Note also that although the pressure measurement 'Bar' is not an SI unit and is widely used in fire protection engineering.

1 Bar = 1000 kPa 1 Bar = 14.50377 1 Bar = 0.980665 kg/cm^2

Partners in promoting and supporting the automatic fire suppression sector

Since 1974 BAFSA has been advocating for the increased use of automatic fire sprinkler and water-based fire suppression systems and continues to work to raise awareness of their role in saving lives and protecting firefighters, property and the environment from fire.

Our members install more than 85% of the sprinkler and water mist installations in the UK.

We are dedicated to ensuring that sprinkler systems are installed to the highest professional standards and as a result all BAFSA members must have third party certification.

Join us today and help us continue to advocate for the increased use of automatic fire suppression systems and uphold competence and compliance in our industry.

British Automatic Fire Sprinkler Association
bafsa

Core Values

To raise industry competence levels through training and education	To promote the importance of compliance in the sprinkler industry	To educate and inform on the value of fire sprinklers in an effective fire safety strategy

There are numerous benefits of becoming a BAFSA members. It immediately give your customers the reassurance that the work you do will be fully compliant and carried out to the highest standards. Not only that as part of the UK's largest industry wide association you will be able to have your say on the industry issues that matter to you – training and qualifications, legislation, British and European standards, technical developments in fire suppression technology. Our members are all actively engaged in the direction of travel of their industry.

All members can therefore automatically join any of BAFSA's working committees and be elected to BAFSA Council. BAFSA's technical committee meet regularly to help to develop new technical guidance and influence legislation and standards. It's skills & development committee works tirelessly to ensure the highest standards of competency in the industry through the delivery of fully accredited qualifications and learning programmes. You will also access expert advice from our technical team on any aspect of sprinkler design, installation and maintence.

British Automatic Fire Sprinkler Association
bafsa

Benefits of Membership

- Access to free expert technical, and legislative advice
- Exclusive discounts for BAFSA's fully accredited qualifications and CPD programs
- Ability to join BAFSA's technical, skills & development and CPD committees
- Free entry in the BAFSA Sprinkler Yearbook and online directory
- Member only advertising opportunities on the BAFSA website and BAFSA Focus magazine
- Numerous BAFSA organised events, seminars and networking opportunities throughout year

Membership categories

BAFSA has several membership categories which provide an opportunity for anyone with an interest in suppression systems to apply for membership. We have sprinkler and mist head manufacturers, third party certificated installer companies, suppliers and manufacturers of approved equipment as key membership categories. We also have associate membership which allows associated trades, organisations, and individuals as well as Fire and Rescue Services to apply for membership, these associates include architects, fire engineers and consultants. This provides a rich, varied and friendly membership committed to the common good of the industry.

There are three types of BAFSA membership

- Installer members
- Supplier and manufacturer members
- Associate members

Installer members

These membership grades are based largely on the LPS 1048 grading scheme. Companies which are listed under the FIRAS or IFCC Domestic and Residential Installer scheme are classified together with LPCB Level 1 installers.

Grades and costs per year (inc of VAT)

- Level 4 – £3,812
- Level 3 (inc water mist installers) – £2,550
- Level 2 – £1,965
- Level 1 LPS1301/FIRAS/IFC residential scheme members – £1,270

Suppliers and manufacturers

Manufacturers of sprinkler heads and water mist heads/nozzles, suppliers/manufacturers of listed components for sprinkler systems and water mist systems

Costs per annum:

- Sprinkler head manufacturers – £10,500
- Suppliers/manufacturers of listed sprinkler/water mist components – £2,100
- Sprinkler/water mist components – £2,100

Associate members

Associate members are made up of the following:

Trade members:

- Sub-contractors and suppliers of unlisted misc. equipment and services – £640
- Fire & Rescue services – £220

Organisations:

- Insurers, BCO's, consultants etc – £231
- Individual members not providing products or services or installing systems – £231

For more information or to fill out an application form,
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Members
2025/2026

All third party accreditations correct up to 31st August 2025.
Please note: The FIRAS TPC scheme is no longer valid after that date.

2G Fabrications Ltd

Unit 3B Kayley Industrial Estate, Richmond Street, Ashton-under-Lyne,
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CATEGORY	Assoc Trade
ACCREDITATIONS	ISO9001
CONTACT	Rachel Batey

2G Fabrications Ltd was established in 2005, in Oldham, Greater Manchester. Since this time, the company has developed a reputation for high quality fabrication combined with excellent customer service and has grown significantly. As a result of our growth we moved to larger premises and are now based in Ashton-under-Lyne. We achieved ISO9001 accreditation in May 2021. The Quality Management System enhances our existing policies and procedures allowing for continual improvement and ensuring our customers receive consistent levels of fabrication and service.

A

A&F Sprinklers Ltd

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CATEGORY	Installer L4
ACCREDITATIONS	LPCB LPS 1048 Level 4 LPCB - ISO 9001 - 2015 LPCB - ISO 14001 - 2015 LPCB - ISO 45001 2018 RSA, CHAS Elite, Safe Contractor, Constructionline Gold, Social Value, Good Business Charter, Real Living Wage Employer, Acclaim, Avetta, Ecovadis

With nearly 40 years experience in the design, supply, installation, and aftercare of automatic fire sprinkler systems for both commercial and residential properties. Our team provide bespoke automatic fire sprinkler solutions nationwide and Ireland. Specialising in warehousing, schools, factories, shops, special risk, and high rise for commercial and residential properties. As an LPC Level 4 contractor and accredited

to ISO 9001, 14001 & 45001. Safety assured and always fully compliant with the relevant LPCB, FM, VdS, NFPA or British Standards and COP. A&F Sprinklers is the largest and longest-serving employee owned LPS 1048 company. Ensuring quality, efficiency, pride and responsibility are at the core of our service. Our dediCATEd departments cover every aspect, including servicing and in-house pump repairs. Plus, on-call engineers around the country ensure were never too far away. 24 hours a day, 7 days a week, 365 days a year, ensuring life safety equipment is fully operational and in place at the time its needed most. Our mission is clear - Providing quality and efficient fire protection solutions nationwide to keep protecting premises and saving lives.

AD Sprinkler Protection Ltd

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CATEGORY	Installer L1

AFT Group (Wales) Ltd is a privately owned, multi-disciplined fire safety company, specialising in numerous aspects of passive & active fire safety. Services include - Residential Fire Sprinklers, Gaseous Extinguishing Systems, Fire Alarms, Fire Stopping, Fire Doors (Timber, Steel & Composite), Automated Doors & Barriers, AOVs, CCTV, Intruder Alarms & Refuge Systems. FIRAS, BAFE, NICEIC, ECA, ADSA, GateSafe, SSAIB & F-Gas Accredited. AFT proudly incorporates a sister company; AFT Corporate Facilities Ltd (aft.fm). Delivering planned cyclical M&E packages, ad-hoc works, reactive works, project management & refurbishment. GasSafe & ECA accredited.

AL Fire Systems

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CATEGORY	Assoc Organisation
ACCREDITATIONS	The Chartered Insurance Institute (CII) Corporate Chartered Status, The Safety Assessment Federation (SAFed), UK Accreditation Service (UKAS)
CONTACT	Alan Whitehead, Andrew Miller, Lee Theobald

Allianz Insurance plc is one of the largest general insurers in the UK, and part of the Allianz Group. We employ 147,000 employees worldwide across 70 countries. In the UK, we offer commercial insurance with a full range of products for sole traders, right up to large commercial organisations. We also provide musical insurance, legal expenses insurance and pet and equine insurance. Also: Worldwide insurance partner of the Olympic & Paralympic movements Inclusive top 50 UK employers 2021/22.

Alpha Sprinkler Protection Ltd

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ACCREDITATIONS	LPCB - Level 2
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Alpha Sprinkler Protection Ltd provides design, installation and servicing of fire sprinkler systems within retail, commercial and residential properties. At Alpha, engineers have years of experience across a diverse array of projects, installing automatic sprinkler systems, dry risers, wet risers and water mist systems. We undertake projects nationwide and each project is managed in a cost effective and timely manner, whilst ensuring quality stays at the forefront.

Alpine Fire Engineers Ltd

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CATEGORY	Installer L4
ACCREDITATIONS	LPC Level 4, FM Global, CHAS, Safe Contractor, Achilles Building Confidence, EuroSafe UK, Avetta, SEMA.

Alpine Fire Engineers has unrivalled experience delivering highly integrated bespoke fire protection solutions. With regulatory reforms, various insurance requirements, numerous design standards and a constantly evolving service sector it is vital that a project is supported and commissioned by an accredited company.Alpine is an LPC level 4 accredited company which ensures that their clients receive accurate, up to date and invaluable information at whatever stage of the process it is required. The Project Engineering team, who are fully conversant with both LPC BS EN 12845 and FM Global specifications, engage early to support their customers from the initial planning stage right through to interpreting employers requirements.As important as the design and commissioning is the ongoing planned maintenance and testing of the system by appropriately trained personnel or certified companies as noted by the LPCB guidelines.Alpine directly employs a nationwide team of highly skilled Service Engineers who will inspect automatic fire suppression systems as part of a planned and preventative maintenance regime, which is vital to ensure deployment and optimal performance when the system is needed.

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CONTACT	Andy Edmunds – Director

AM Fire Systems Ltd is a privately owned independent fire protection company specialising in active fixed fire protection. Our facilities and expertise ensure that systems are designed, installed and managed to an excellent professional standard. Our designs and installations would be to LPC, NFPA and FM standards for Fire Sprinklers, Special Hazard Systems (medium & high velocity water spray), Foam Enhanced, Foam / Water Deluge installations, BS EN 12845 commercial systems and BS 9251 residential. BS 9251 residential sprinklers and dry / wet risers.

AML Fire Protection Ltd

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ACCREDITATIONS	IFC
CONTACT	Kaj Haines – Managing Director

Amsco design and install fire and mist sprinkler systems within Domestic & Residential, and Commercial properties including Schools, Hotels, High Rise properties, Care Homes, Housing Developments, Vulnerable properties and homes of all shapes and sizes.

Amtec Integrated Solutions Limited

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Applications Engineering Ltd

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CATEGORY	Sprinkler Comp Manf
ACCREDITATIONS	ISO 9001, LPCB

Applications Engineering Ltd are a UK based company who have established a reputation for service and quality within the Residential and Domestic fire sprinkler industry. We offer our very own LPCB approved flow switch to accompany our range of turnkey Fire Sprinkler Control Valve Sets, using high quality equipment configured to the clients specific requirements. Options include check valves, CPVC adapters, MDPE fittings and Pressure Reducing Valves. We hold large stocks which allows us the ability to supply next day where possible. We also offer ball valve monitoring and pump auto test panels.

APW Fire Protection Ltd

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CATEGORY	Installer L2
ACCREDITATIONS	LPCB 1048 Level 3 Approved Sprinkler Contractor, ISO9001 Constructionline Gold, Safe Contractor

APW Fire Protection Ltd was founded in 2007 and is now recognised as one of the leading designers and installers of Automatic Fire Sprinkler Systems withinN. Ireland. Our professionalism and technical competence have earned us a well-deserved reputation for excellence across all the sectors we serve. We offer a friendly, knowledgeable and highly competent service via our specialist engineers. APW Fire Protection conducts rigorous in-house mandatory training courses, and all materials and components used are approved to the highest quality standards available. We provide 24hr call out cover.

Aquablaze

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ACCREDITATIONS	FIRAS
CONTACT	William Ferguson – Managing Director

We install firas third party certified residential fire sprinkler systems. We only use fully product tested components in our system. We issue real third- party certification for our systems. We have worked in a range of projects including btr, student residences, apartments, care homes, heritage buildings.

Aquaspray Fire Protection Ltd

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We have been carrying out design works and engineering services on a sub-contract basis for the sprinkler industry for over 20 years.

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Aquatherm are a manufacturer and supplier of polypropylene pipework for use in sprinkler systems. Our pipes are LPCB approved and connected by fusion welding so theres no leak path. We offer many sustainability benefits over steel alternatives.

Aquatronic Group Management Ltd

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TELEPHONE	01206 215 100
EMAIL	Angela Nilsson
WEB	agm-plc.co.uk
CATEGORY	Assoc Organisation

Argus Fire Protection Company Limited

Hendglade House, 46 New Road, Stourbridge, Dudley, West Midlands, DY8 1PA

TELEPHONE	+44 (0)1384 376 256
EMAIL	info@argusfire.co.uk
WEB	argusfire.co.uk
LINKEDIN	/company/argus-fire
CATEGORY	Installer L4
ACCREDITATIONS	LPCB LPS 1048 Level 4, LPCB LPS 1014, LPCB LPS 1204, LPCB ISO 9001 2015, LPCB ISO 45001 2018, Constructionline Gold, CHAS, Safe Contractor, Achilles Building Confidence
CONTACT	Simon Woodings – Executive Director

Argus Fire is one of the largest, privately owned fire protection companies in the UK. We specialise in the design, installation, service and maintenance of fixed fire protection and detection systems, with an area of operation covering the UK andEurope. Our head office in Stourbridge West Midlands established in 1982, specialises in the full turnkey package from initial design concept through to end user training and servicing and maintenance. This includes the full range of fixed fire protection systems such as automatic sprinklers, dry & wet risers, water mist, special risk, gas suppression and fire detection systems.

Armstrong Fluid Technology

Wolverton Street, Manchester, M11 2ET

TELEPHONE	08444 145145
EMAIL	PChetram@armstrongfluidtechnology.com
WEB	armstrongfluidtechnology.com
CATEGORY	Sprinkler Comp Manf
ACCREDITATIONS	LRQA ISO 9001: 2000, ISO 14001: 2004. Pumps approved to FM 1311, 1319 and 1371: LPS 1131
CONTACT	Neil Syson (UK North), Patrick Chetram (UK North)

Manufacturer of centrifugal and reciprocating pumps, pressurisation units, booster sets and packaged pump room enclosures for fire protection installations.

Armstrong Priestley Ltd

Seventy Seven, Holbeck Lane, Leeds, West, LS11 9UL

TELEPHONE	0113 3944040
EMAIL	sjb@armstrongpriestley.com
WEB	armstrongpriestley.co.uk
CATEGORY	Installer L4
ACCREDITATIONS	LPCB 1048 Level 4 Approved Sprinkler Contractor IFCC (Domestic and Residential) Sprinkler Contractor LPCB ISO 9001:2015 Quality Management System
CONTACT	Steve Brailey

Armstrong Priestley are specialists in automatic fire suppression systems with over 45 years of experience providing our clients with a wealth of expertise in the design, supply, installation and maintenance of:Wet and Dry sprinkler systems Deluge sprinkler systemsLow Pressure Water MistSpecial Risk applications (tank deluge)Low and High Expansion Foam systems (aircraft hangar protection) Gas suppressionWet and Dry RisersThere is no project that Armstrong Priestley cannot undertake, with experience in: Industrial sprinkler applications (warehousing, production and manufacturing facilities) Commercial applications (pharmaceuticals, hotels, office blocks, fire stations) Education (schools, colleges, early learning)Retail (from minor alterations to full shop fit-outs) Residential (care homes, high rise blocks) Our Service & Maintenance team provide a 24/7 call out service 365 days of the year.

ASAP Fire Systems

Unit 22, Silver Birches Business Park, Bromsgrove, Worcestershire, B60 3EU

TELEPHONE	01527 574259
EMAIL	service@asapfiresystems.co.uk
WEB	asapfiresystems.co.uk
LINKEDIN	ASAP Fire Systems LTD
CATEGORY	Installer L2
ACCREDITATIONS	FIRAS, ISO 9001: 2015 Service and Maintenance of Sprinkler systems and Wet / Dry risers.
CONTACT	Claire Hewitt

ASAP Fire Systems Ltd specialise in the service, maintenance and installation of wet mechanical fire protection products. Commercial and Residential sprinklers Systems, In house fire pump engineers Wet /Dry risers, Fire hydrants Hose reels. Amerex Kitchen suppression. Centrally loCATEd in Bromsgrove Worcestershire we are cover all over the UK and offer a 24/7 call out facility. We work in accordance with all standards including BS/ LPCB/ NFPA /FM. At ASAP Fire, we prioritise client satisfaction by offering customised service agreements that CATEr to your individual needs. From installation to ongoing maintenance and servicing, our highly-trained technicians are readily available to ensure the compliance and optimal performance of your systems.

ASLR Fabrication Services Ltd

Opal Way, Stone Business Park, Stone, Staffordshire, ST15 0SS

TELEPHONE	01785 286060
EMAIL	sales@aslr.co.uk
WEB	aslr.co.uk
CATEGORY	Assoc Trade
ACCREDITATIONS	BRE Global assessed to ISO 9001:2015, Quality Management
CONTACT	Chris Shenton

ASLR Fabrication Services Ltd provide prefabriCATEd, powder coated steel pipework for Fire Sprinkler systems. Quality and timely service from our Midlands base delivering to all areas of the UK & Ireland.

Associated Fire Systems Ltd

4a Oakwood Parade, Loughton, Essex, IG10 3EL

TELEPHONE	0208 508 3330
EMAIL	ppatten@afs-ltd.co.uk
WEB	afs-ltd.co.uk
CATEGORY	Installer L1
CONTACT	Peter Patten

Automatic Sprinkler Solutions ltd

144 Brownspring Drive, New Eltham, SE9 3LD

EMAIL	mick@autosprinklersolutionsltd.co.uk
WEB	autosprinklersolutionsltd.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	IFCC
CONTACT	Mick Sheaf – Managing Director, Operates nationwide

Avon Fire & Rescue Service

Police & Fire HQ, PO Box 37, Valley Road, Portishead, Bristol, BS20 8JJ

TELEPHONE	0117 9262061
EMAIL	Fire.Safety@avonfire.gov.uk
WEB	avonfire.gov.uk
CATEGORY	Assoc Fire & Rescue
CONTACT	Richard Bobruk

B

B&C Fire Engineering Ltd

Booth Hall Farm, Clamgoose Lane, Kingsley, Stoke on Trent, ST10 2EG

TELEPHONE	01782 206144
EMAIL	kim.smallwood@bandcfire.net
WEB	bandcfire.net
LINKEDIN	/company/b-&-c-fire-engineering-limited
FACEBOOK	/B-C-Fire-Engineering- Ltd-347426195309204
X	@BandCFire
CATEGORY	Installer L4
ACCREDITATIONS	FIRAS - Level 4 (Commercial, Domestic and Residential)
CONTACT	Kim Smallwood

We are one of the UK's leading designers, suppliers, installers, service, and maintenance provides of fire suppression systems in the UK and have been helping to protect buildings since 1972. BS EN 12845, FM Global, NFPA, VDS, BS 9251, BS 16925 and bespoke hybrid solutions.

B4 Fire Protection

Unit 6 Summerhill Trading Estate, Goodman Street, Birmingham, B1 2SS

TELEPHONE	0116 2960782
EMAIL	sean.cooper@b4fireprotection.co.uk
WEB	b4fireprotection.co.uk
CATEGORY	Installer L3
ACCREDITATIONS	FIRAS - Domestic and Residential Scheme LPCB Level 3, and ISO 9001.2015
CONTACT	Sean Cooper – Director

Bailey Fire Services Ltd

Unit 15 TCSBIC, Mewburn Road, Banbury, Oxfordshire, OX16 9PA

TELEPHONE	01295 817657
EMAIL	info@baileyfire.co.uk
WEB	baileyfire.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	Level 1 LPCB

Balmoral Tanks

Rathbone Square, 24 Tanfield Road, Croydon, CR0 1AL

TELEPHONE	0208 665 4100
EMAIL	tanks-website@balmoral.co.uk
WEB	balmoraltanks.com
LINKEDIN	/balmoral-tanks-direct
X	@BalmoralTanks
CATEGORY	Sprinkler Comp Manf
ACCREDITATIONS	FM Approvals Class 4020; BS ISO 9001:2015; BS ISO 14001: 2015; Achilles UDVB Member
CONTACT	Norman Ross

Balmoral Tanks is a globally-renowned designer and manufacturer of liquid storage solutions and associated services. Offering project-specific choices of hot press moulded GRP sectional, steel and coated steel bolted cylindrical tanks, Balmoral will guide you through the firefighting sprinkler tank specification process and carry out installation if required.

Base Fire Sprinklers

Stockport Business & Innovation Centre, Broadstone Mill, Stockport, SK5 7DL

TELEPHONE	0800 009 6906
EMAIL	info@basesprinklers.co.uk
WEB	basesprinklers.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	IFCC
CONTACT	Mark Gordon

At Base Fire Sprinklers, we provide a turnkey solution for the design, supply, installation, servicing, and maintenance of sprinkler systems across the UK. Our focus is on delivering high-quality systems that adhere to the latest industry standards, specifically BS9251:2021, using approved materials and installed by fully qualified engineers. We are proud to hold 3rd party accreditation through the reputable IFCC scheme. With our dedicated in-house design and project management team, we offer an end- to-end approach, applying our knowledge from the start of the development process to ensure a compliant solution that perfectly meets your requirements. Contact us today to explore how we can collaborate on your next project

Bedfordshire Fire and Rescue Service

Southfields Road, Kempston, MK42 7NR

TELEPHONE	01234 845000
EMAIL	Mark.Garrett@bedsfire.gov.uk
WEB	bedsfire.gov.uk
FACEBOOK	/bedsfire
X	@bedsfire
CATEGORY	Assoc Fire & Rescue
CONTACT	Mark Garrett

Blue Shield Fire Protection Ltd

Unit 9, Sovereign Park, Cleveland Way, Hemel Hempstead, Hertfordshire, HP2 7DA

TELEPHONE	01442 828000
EMAIL	sales@blueshieldfire.co.uk
WEB	blueshieldfire.co.uk
CATEGORY	Installer L3
ACCREDITATIONS	LPCB ISO 9001:2000
CONTACT	Ashley Gorton

BMS E.A Ltd trading as AES Sprinklers

Cedar Cottage, Church Street, Eye, Suffolk, IP23 7PS

TELEPHONE	01473 748355
EMAIL	aessprinklers@aol.com
WEB	bmsprinklers.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	LPCB Installer : Level 1 FIRAS
CONTACT	Mark Bedford

BMSprinklers is a Suffolk based company specializing in the design, installation and maintenance of Residential Sprinkler systems. We pride ourselves on a bespoke personal service ranging from single dwellings right through to Blocks of Flats and Care Homes. We over 20 years continuous experience we are confident that can design and install a Sprinkler system to meet your needs.

BRE

Bucknalls Lane, Watford, Hertfordshire, WD25 9XX

TELEPHONE	+44 (0)333 321 88 11
EMAIL	CustomerServices@bregroup.com
WEB	bregroup.com
LINKEDIN	/company/building-research-establishment-bre-/
X	@BRE_Group
CATEGORY	Assoc Organisation

BRE Global is an independent, third-party approvals body offering testing, inspection and certification of fire, security, microgeneration (MCS), environmental profiles and sustainability of products and services to an international market. BRE Global is owner of the internationally recognised Loss Prevention Certification Board (LPCB), BREEAM and BRE Global certification schemes. LPCB is responsible for the approval of fire and security products and services listed in the Red Book. LPCB also operates installation and service maintenance schemes, and provides inspection services.

Buckinghamshire Fire & Rescue Service

Service Headquarters, Stocklake, Aylesbury, Buckinghamshire, HP20 1BD

EMAIL	FireSafetyEnquiries@bucksfire.gov.uk
WEB	bucksfire.gov.uk
CATEGORY	Assoc Fire & Rescue

Buckinghamshire Fire & Rescue Service serves a population of more than 800,000 in Milton Keynes and Buckinghamshire.

Burgate Fire Limited

16 Baxter Way, Kingshill, West Malling, Kent, ME19 4BB

TELEPHONE	077741 28188
EMAIL	burgatefire@gmail.com
WEB	burgatefire.com
CATEGORY	Installer L1
ACCREDITATIONS	BS9251 Sprinkler design and installation Ceasefire commercial kitchen & fire suppression systems approved supplier. Approved agent for the ico fire mist system.

Burgate Fire Ltd is fully accredited, and has been in the mechanical contracting industry for over 30 years, and as such are able to offer a complete package of design supply & fitting or retrofitting into existing residential blocks or high risk homes with Fire fire suppression systems. Burgate Fire Ltd is Manufacturer approved to supply & fit the Ceasefire range of commercial kitchen fire suppression systems, using both chemical & high pressure mist. In addition, Burgate Fire Ltd are also Manufacturer approved, to Design, Supply & Fit the ico fire mist system, Together with a full range of Dry riser solutions for any application. We look forward to assisting you in the future.

Bush Fire Engineering

A3 Broomslegh Business Park, Worsley Bridge Road, London, SE26 5BN

TELEPHONE	02039061619
EMAIL	alex.braun-cook@bushengineering.com
CATEGORY	Installer L3
CONTACT	Alex Braun-Cook

C

C&H Fire Protection Ltd

Unit 8, Ilford Trading Estate, Paycocke Road, Basildon, Essex, SS14 3DR

TELEPHONE	01268 293199
EMAIL	enquiries@chfireltd.co.uk
WEB	chfireltd.co.uk
LINKEDIN	C&H Fire Protection LTD
FACEBOOK	/profile.php?id=100053256803772
CATEGORY	Installer L2
ACCREDITATIONS	IFCC, CHAS, BAFSA

C&H Fire Protection Ltd are a Third-party IFCC Level 2 approved sprinkler company based in Basildon that was established in July 2020 with a view to deliver high-end technical ability in all aspects of sprinkler protection. With nearly 20 years in the industry, we have experience on all types of commercial, residential and domestic sprinkler systems with a great understanding of British Standards BS9251/BS16925, BSEN12845 FM and NFPA We can offer design, repair and servicing of the below equipment: Wet sprinkler systems dry/alternate sprinkler systems Pre-action systems both electrical and mechanical Deluge and special risk systems watermist systems dry and wet risers Hydrants Fire Pump servicing electrical installation We have achieved our Advanced CHAS accreditation and more recently became IFCC approved and became members of BAFSA. We are currently pursuing our ISO 9001 to enable us to increase our operational efficiency to improve product quality and services for both us and our clients.

Cambridgeshire Fire & Rescue Service

Hinchingbrooke Cottage, Brampton Road, Huntingdon, Cambridgeshire, PE29 2NA

TELEPHONE	01480 444500
EMAIL	steve.fleming@cambsfire.gov.uk
WEB	cambsfire.gov.uk
CATEGORY	Assoc Fire & Rescue
CONTACT	Steve Fleming

Cannon Fire Sprinklers

37a Parkfield Road, Warrington, Coleshill, Warwickshire, B46 3LD

TELEPHONE	01636 402123
EMAIL	info@cannonfiresafety.com
CATEGORY	Installer L1
CONTACT	Craig Milligan

Canute LLP

148 Rose Bowl, Portland Crescent, Leeds, LS1 3HB

TELEPHONE	0113 328 0350
EMAIL	john.moore@canutesoft.com
WEB	canutesoft.com
CATEGORY	Assoc Trade
CONTACT	John Moore

Canute specialises in hydraulic calculations software for the fire protection industry and offers training, support and consultancy within the United Kingdom, which has helped us become the UK leading provider. We have thousands of satisfied users in over 50 counties and support both national and international design standards. The FHC hydraulic calculation software can be used for any water-based fire protection system, including fire sprinkler, water mist, foam enhanced, water cannon, fire hydrants, hose reels and deluge. We support the following design standards BS EN 12845, BS EN 16925, BS 9251, BS 8458, BS 8486, NFPA 13/13D/13R, NFPA 750, FM global, Vds CEA 4001, CP52, ASIB and many others.

Cheshire Fire & Rescue Service

Winsford, Cheshire, CW7 2FQ

TELEPHONE	01606 868700
EMAIL	fireadvice.shq@cheshirefire.gov.uk
WEB	cheshirefire.gov.uk
CATEGORY	Assoc Fire & Rescue

Cheshire Fire and Rescue Service is a massive advocate of sprinkler systems. Officers and fire authority members proactively promote the installation and use of sprinklers and work tirelessly to educate and encourage building owners and developers to install these systems alongside campaigning and lobbying for greater mandatory sprinkler installation requirements within building standards.

Chubb Fire & Security t/a Vipond Fire Protection

10/12 Glenfield Road, Kelvin Industrial Estate, East Kilbride, London, UK, G75 0RA

TELEPHONE	01355 237525, 24-Hour Emergency No: 0844 561 9851
EMAIL	alastair.wilson@vipondltd.co.uk
WEB	vipondfire.co.uk
LINKEDIN	Vipond Fire Protection
CATEGORY	Installer L4
ACCREDITATIONS	LPS 1048 certificated sprinkler installer. LPS 1014, LPS 1204, IFCC. LPCB iSO 9001:2000. LPCB Level 4
CONTACT	Alastair Wilson

Total Fire Protection by means of design, supply, install, commission and service of Fire Sprinkler, detection and gas suppression systems, dry and wet risers, Water Mist. High and Low Pressure. Special Hazard systems including water, foam. To BSEN 12845, NFPA, FM and BS9251 standards. We provide a first class, installation, service and provide training for the operation and maintenance of customers fire protection systems. Our dedication ensures that our customers receive the most advanced, custom-designed fire protection system using the best products available. Among our specialisms is the installation of sprinkler systems in new and existing buildings, both commercial and residential. Branch Offices throughout the UK & Ireland.

Churches Fire & Security

Fire House, Mayflower Close, Chandlers Ford, SO53 4AR

TELEPHONE	0370 608 4350
EMAIL	training@churchesfire.com
WEB	churchesfire.com
CATEGORY	Installer L3
CONTACT	Paige Small

Established in 1992, Churches Fire & Security is a nationwide company dedicated to supplying customers with the best fire safety and security solutions. We deliver comprehensive fire protection from fire alarms to the installation, service and maintenance of sprinklers. We also design, supply, install and commission several security services including CCTV, intruder alarms and access control. We are always fully aware of the latest legislation and have worked hard to ensure that our customers are fully compliant. Our third-party quality assurance and accreditations show that customers can rest assured that their legal fire safety responsibilities are taken care of.

Clarke Fire Protection Products

Lomond Road, Coatbridge, ML5 2NN

TELEPHONE	01236 429946	FAX	01236 427274
EMAIL	rlivingston@clarkefire.com		
WEB	clarkefire.com		

CATEGORY	Sprinkler Comp Manf
ACCREDITATIONS	Diesel Engines Approved / LPS 1239, UL 1247 & FM 1333

Clarke Fire are the global supplier of emergency standby diesel fire pump engines. Established in 1964, we have nearly 60 years experience in developing diesel engines to meet demanding fire pump requirements and providing end users with piece of mind that their sprinkler systems source of power is guaranteed in times of emergency. Clarke partners with renowned engine OEMs John Deere, CAT, Kohler and Doosan, which allows us to support sprinkler installations from basic commercial sites, to high value energy assets. We specialise in NFPA 20, FM Approved, UL Listed & LPCB Approved applications, we also supply country code compliant engines.

CMT Engineering Ltd

Corngreaves Road, Cradley Heath, B64 7DG

TELEPHONE	01384 563200
EMAIL	sales@cmtengineering.co.uk
WEB	cmtengineering.co.uk
X	@cmt_engineering
CATEGORY	Assoc Trade

Our range: Tube to BS EN10255/10217-1&2 (BS 1387); Machine Shop Cutting Screwing VICTAULIC roll & cut grooving; Mild Steel fittings BS EN10241 (BS 1740 & BS 1387); Jinan Malleable fittings EN10242 (BS143); Jinan Anvil Mech Brand Grooved Fittings; Gauge Syphons Manufactured in house; Stainless Steel 150lb screwed fittings; CNC Machining; Genuine Unicone Pipe System

Coda Octopus Martech Ltd

17 Mereside, Osprey Quay, Portland, Dorset, DT5 1PY

TELEPHONE	01305 770440
EMAIL	sales@firesprinklerwatchdog.com
WEB	firesprinklerwatchdog.com/martechsystems.co.uk
LINKEDIN	/company/3134710/
X	@MartechWeymouth
CATEGORY	Assoc Trade
ACCREDITATIONS	ISO9001:2015, Cyber Essentials Plus

Designed and built in the UK, Martechs Fire Sprinkler Watchdog2 is a simple to install BS9251-2021 fire sprinkler controller that is plug & play out of the box, but can also be configured to suit non-standard installation requirements. Integrating dual pressure sensors, a flow sensor and low water sensor as standard, Watchdog2 provides full automatic control and management of the sprinkler system, including jockey mode pressure maintenance, automatic periodic whole-system test, fault detection and fire mode operation. Compatible with single phase pumps up to 3kW and incorporating volt-free outputs for alarms and a 230V solenoid valve connection, no additional hardware is required to create a compliant installation.

Compco Fire Systems Ltd

Cleeve House, Malvern Road, Lower Wick, Worcester, Worcestershire, WR2 4YX

TELEPHONE	01905 741600	FAX	01905 741620
EMAIL	matt.baker@compcofire.co.uk		
WEB	compcofire.co.uk		
CATEGORY	Installer L4		
ACCREDITATIONS	LPCB - Level 4		
CONTACT	Matt Baker – CEO		

COMPCO Fire Systems is one of UK largest fire engineering companies, based in the Midlands with branch offices in Hemel Hempstead, Swansea, Wetherby, and Hamilton. Founded in 1988, the company has carried out work in the UK and Europe. Its team of engineers has a wealth of experience to carry out contracts for active fire protection systems of any size or complexity, with expertise in automatic sprinkler systems being a particular strength. COMPCO works closely with clients at every stage of a project to provide them with a quality yet competitively priced package of solutions and support.

Congruent Design Solutions Limited

Cross Keys House, 3rd Floor, 22 Queen Street, Salisbury, SP1 1EY

TELEPHONE	01722 567110
EMAIL	enquiries@congruent-design.com
WEB	congruent-design.com

CATEGORY Assoc Organisation

CONTACT Eamon OKelly – Director

We understand the construction process and help our clients achieve successful project delivery by enabling collaboration between disciplines. Our team includes qualified sprinkler designers and Chartered Engineers with extensive experience stemming from M&E services and wider construction related backgrounds. We provide a rare offering of expertise that can support your project at every stage. Typically appointed at the early stages of design, we assist in developing the interface between utilities, sprinklers, M&E services and architecture. We work closely with the design team to navigate the consultation process, refine the Fire Strategy and provide design input, scoping documents, compliance reports and more, including assistance with commissioning witnessing and handover. CDS can aid you manage risk, enable compliance, but also optimise your scheme for cost-efficiency and effectiveness.

Covac

Eagle House, Bilton Way, Lutterworth, Leicestershire, LE17 4JA

TELEPHONE +44 1455 556631
EMAIL craig@covac.co.uk
WEB covac.co.uk

CATEGORY Sprinkler Comp Manf

CONTACT Craig Phillips – Director

We undertake the internal and external preparation, repair and lining/relining of water and liquid retaining structures including sprinkler tanks made from steel, concrete and GRP using a high performance, solvent free polyurethane coating Acothane DW. Every project we undertake is guaranteed for a minimum of 10 years against leaking, corrosion and erosion.

CST Industries Ltd

Unit 11A Farmwell Lane, Castlewood Business Park, South Normanton, DE55 2JX

TELEPHONE 01773 835321
EMAIL sales@cstindustries.com
WEB cstindustriesuk.co.uk

LINKEDIN CSTIndustries
X @CSTIndustries

CATEGORY Sprinkler Comp Manf
ACCREDITATIONS LPCB & FM Sprinkler Tanks with CE Marking Accreditation

CST Industries (UK) Ltd specialises in the design, manufacture and construction of CE marked cylindrical and VersaTank galvanized steel bolted storage tanks. These tanks are primarily used for storing water in the fire sprinkler market with LPCB & FM approvals. CST also offer aftermarket services such as ROV Inspections to TB203, remedial works and replacement tanks.

Cumbria Fire & Rescue Services

Service HQ - Fire Safety, Carleton Avenue, Penrith, CA10 2FA

TELEPHONE	01768 812612
EMAIL	Justinl.robinson@cumbria.gov.uk
WEB	cumbriafire.gov.uk
CATEGORY	Assoc Fire & Rescue
CONTACT	Justin Robinson

D

DCI Fire Protection Ltd

12, Enterprise way, Newport, Wales, NP10 8GR

TELEPHONE	01633 548350
EMAIL	lawrence@dcifireprotection.co.uk
WEB	dcifireprotection.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	FIRAS Domestiic and Residential
CONTACT	Lawrence Clarke

DDS Sprinklers Scotland Ltd

23 Bentinck Grange, East Kilbride, G74 5PL

TELEPHONE	079009 11896
EMAIL	Dougie@ddssprinklers.co.uk
WEB	ddssprinklers.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	IFCC
CONTACT	Dougie McMahon

We have over 25 years experience in the design and installation of commercial, residential and domestic sprinkler systems. Currently IFCC approved for the installation of residential & domestic sprinkler systems and in the process of obtaining approval for BSEN:12845 installations. Our design team are capable in both AutoCad and Revit.

Decca Plastics Ltd

Victoria Mill, Lincoln Street, Preston, PR1 6RE

TELEPHONE	+44 772 825 757
EMAIL	sales@deccatanks.co.uk
WEB	deccatanks.co.uk
LINKEDIN	decca-plastics-ltd
FACEBOOK	/deccaplastics
X	@Decca_Tanks
CATEGORY	Assoc Trade
ACCREDITATIONS	WRAS, CHAS, SSIP, Construction Line Gold, ISO9001

We would like to take this opportunity to introduce DECCA PLASTICS LIMITED. A major force in the manufacture of glass reinforced plastic cold water storage cisterns since 1973; Our comprehensive range of British standard size storage units consists of DECCA one-piece from a nominal 18 litres to 12000 litres. Additionally, we can supply a full range of DECCA two-piece and DECCA sectional cisterns assembled from a dual range of contact moulds (SFCM) or alternatively hot press (HPM). To compliment our GRP Range of cisterns we also manufacture and install a wide range of GRP HOUSINGS with a vast range of accessories for tanks and housings to suite customer requirements. All DECCA GRP products are manufactured in our own factory under strict quality conditions, with dediCATEd moulds and skilled contact moulders, providing an Environment Friendly, maintenance free product which will withstand the rigours of the severest climatic conditions.

Deltak Associates

45 Lackford Road, Chipstead, Surrey, CR5 3TB

TELEPHONE	+44(0) 1737 271896
EMAIL	Noel.Kennedy@deltakfire.com
WEB	deltakfire.com
CATEGORY	Installer L1
ACCREDITATIONS	LPCB Level 1 LPS 1048 Fire sprinkler installers for commercial and residential sprinkler installations
CONTACT	Noel Kennedy

Deltak fire offer a full design and installation package for all aspects of active fire protection for any client requiring expertise from the industry. Commercial and residential, high rise to care homes, retail to schools and colleges, Deltak deliver on budget and on schedule for all our customers ensuring systems conform to latest codes and standards.

Derbyshire Fire & Rescue Service

Butterley Hall, Ripley, Derbyshire, DE5 3RS

TELEPHONE	01332 771221
EMAIL	gplatts@derbys-fire.gov.uk
WEB	derbys-fire.gov.uk
FACEBOOK	/DerbyshireFRS
X	@DerbyshireFRS
CATEGORY	Assoc Fire & Rescue

DIS Sprinklers Ltd

Unit 4 Manchester Park, Tewkesbury Road, Green Farm Business Park, Cheltenham, Glos, GL51 9EJ

TELEPHONE	+44 1452 304927
EMAIL	wdavies@dis-ltd.co.uk
WEB	dissprinklers.co.uk
CATEGORY	Installer L3
ACCREDITATIONS	LPCB Level 3 Approved, ISO9001:2015

Discovery Fire Sprinklers Ltd

Unit 4 Taygate Trading Est, 5 Coldside Road, Dundee, DD3 8DF

TELEPHONE	01382 624000
EMAIL	james@discoveryfiresprinklers.com
CATEGORY	Installer L1
CONTACT	James Bryceland

We design fabriCATE and install commercial & residential and domestic fire sprinklers wet and dry risers all to the current standards.

Domestic Sprinklers Ltd

16/17 Hamm Beach Road, Portland, Dorset, DT5 1DX

TELEPHONE	01305 765763
EMAIL	email@domesticsprinklers.co.uk
WEB	domesticsprinklers.com
CATEGORY	Installer L4
ACCREDITATIONS	IFC

Offering a Nationwide service for residential and commercial projects. All of our work force are fully qualified direct labour, providing a local service at competitive rates. Established 23 years ago, we are the longest running residential sprinkler company in the UK and are proud to be a member of BAFSA and fully support the values it promotes.

Dorset & Wiltshire Fire & Rescue Service

5 Rivers Health & Wellbeing Centre, Hulse Road, Salisbury, SP1 3NR

TELEPHONE	01722 691395
EMAIL	tim.gray@dwfire.org.uk
WEB	dwfire.org.uk
FACEBOOK	DWFire
X	@DWFRSfiresafety
YOUTUBE	/c/dwfire
CATEGORY	Assoc Fire & Rescue
ACCREDITATIONS	GIFireE
CONTACT	Tim Gray

Dorset & Wiltshire Fire and Rescue Service actively promotes the inclusion of fire sprinklers within homes as well as in commercial or public buildings, such as schools. We work with our local authority building control departments to consider the use of sprinklers where the risk to life or property would benefit from the inclusion of sprinklers.

Dorset Fire Sprinkler Systems

15 Factory Road, Upton, Poole, BH16 5SN

TELEPHONE	01202 658470
EMAIL	enquiries-defa@axisuk.org
WEB	firesprinklersdorset.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	IFC, RSA

We are Dorset Fire Sprinkler Systems based in Dorset and we provide a domestic and residential fire sprinkler installation service to customers around the south of the UK. Over the last few years, we have supplied and installed hundreds of domestic and residential sprinkler systems. We offer all of our clients completely free, no-obligation quotes Our work is covered by a guarantee for your peace of mind Our work conforms to all regulations and legislation We tailor our installations to suit your specific requirements We work with architects, local builders, building control and the fire brigade to suit your needs.

DPJ Sprinklers Ltd

Unit 19 Tabrums Farm, Tabrums Lane, Battlesbridge, Essex, ss117qx

TELEPHONE	+44 01245 325299
EMAIL	Helpdesk@dpjsprinklers.co.uk
WEB	dpjsprinklers.co.uk
LINKEDIN	DPJ Sprinklers Ltd
CATEGORY	Installer L1
ACCREDITATIONS	ISO9001, Safecontractor, BAFSA, IFCC

DPJ Sprinklers Limited is an industry-leading independent sprinkler specialist, offering an unrivalled level of expertise, technical competence and above all, the often- forgotten ethos of good customer service. DPJ Sprinklers Ltd offers a full range of services including design, supply, installation, commissioning and maintenance. We have built our reputation on listening to clients requirements and specifications to provide an outstanding service. We have the people, the products and the financial resources to manage any size project from start to finish. We provide leading-edge design and engineering resources, with the latest in technology and all our design work is carried out strictly to the latest British Standards in line with our ISO, IFCC BAFSA and Safecontractor accreditations.

E

East Sussex Fire & Rescue Service

Headquarters, Church Lane, Lewes, East Sussex, BN7 2DZ

TELEPHONE	01323 462409
EMAIL	scott.saunders@esfrs.com
WEB	esfrs.org
FACEBOOK	/eastsussexfrs
X	@EastSussexFRS
CATEGORY	Assoc Fire & Rescue

East Sussex Fire Authority is committed to reducing the impact of fire on people, property and the environment. We will play a key leadership role in promoting a better understanding of the benefits of sprinklers and will encourage building managers, owners and developers to install sprinklers where there is a risk-based case for doing so. Wherever it is able to influence, the Authority will lobby for the creation of a legal requirement to fit sprinklers in domestic dwellings, high rise premises, care homes, schools and other buildings where the risk to life and property from fire are most significant.

Easyheat

McDermott House, Inveralmond Ind Est, Perth, Perthshire, PH1 3TS

TELEPHONE	017384 45222
EMAIL	alan@mcdermottgroup.co.uk
WEB	mcdermottgroup.co.uk
CATEGORY	Installer L1
CONTACT	Alan Clark

Electrical Plumbing & Gas Services Ltd

Unit 5 Nelrose, Princess Road, Manchester, M20 2LT

TELEPHONE	+44 0161 881 1883
EMAIL	info@epg.services
WEB	elecplumbgas.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	IFC, ISO 9001
CONTACT	John Goss

Based in Manchester, Electrical Plumbing and Gas Services Ltd (EPG Services), are a provider of gas, electrical and plumbing services including residential sprinkler design and installation nationwide to the domestic and commercial residential sector.

Elmech Ltd

Unit 13, 30B, 30B Wilds Rents, London, SE1 4QG

TELEPHONE	020 37511110
EMAIL	office@elmech.co.uk
WEB	elmechltd.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	FIRAS - Domestic and Residential Scheme, ISO 9001: 2015, RSA, SMAS, CHAS, NICEIC
CONTACT	Dobrek Mikosinski

Elmech Ltd is a family run business formed in 2012. We specialise in domestic and residential sprinkler systems (design, installation and commissioning), mechanical/ electrical services installation including design. Our head office is based near to London Bridge and we cover whole United Kingdom. Every project, large or small, is important to us and we exert every effort to ensure a successful contract. Our skilled work force take pride in finding individual solutions for every site-specific requirement, placing great emphasis on build quality and striving to achieve excellence through attention to detail.

EMTEC Fire Systems

Ellismuir Way, Tannochside Park, Uddingston, Glasgow, Worcestershire, G71 5PW

TELEPHONE	01698 808030
EMAIL	info@emtecgroup.co.uk
WEB	emtecgroup.co.uk
CATEGORY	Installer L2
ACCREDITATIONS	LPCB LPS 1048 Level 3 Approved Sprinkler Contractor LPCB ISO 9001:2015 Certified; Member of The British Automatic Fire Sprinkler Association Limited - BAFSA Constructionline Gold Member; Acclaim AccreditationACCREDITATIONS LPCB - Level 3
CONTACT	Stuart Mackay

Emtec Fire Systems specialise in the design, installation, commissioning, and verification of essential fire suppression systems. Our expert teams are experienced in working in a variety of sectors and work closely with our clients to gain an in depth understand of your requirements and offer a tailored solution to meet your needs whilst ensuring compliance with the latest standards.Our systems include the following:Commercial and Industrial Fire Sprinkler Systems Residential Sprinkler SystemsDeluge Systems Pre-Action Systems Dry and Wet Risers Fire HydrantsFire Extinguishers Service and MaintenanceOut of Hours emergency call out.

Engineered Corrosion Solutions

11336 Lackland Road, St. Louis, USA, MO 63146, USA

TELEPHONE	0(1) 573 239 7801
EMAIL	ptuckley@ecscorrosion.com
WEB	ecscorrosion.com
CATEGORY	Assoc Organisation
CONTACT	P Tuckley

Essex County Fire & Rescue Service

ECFRS HQ, Kelvedon Park, Rivenhall, Witham, CM8 3HB

TELEPHONE	07785 977419	FAX	01376 570466
EMAIL	mike.sparrow@essex-fire.gov.uk		
WEB	essex-fire.gov.uk		
CATEGORY	Assoc Fire & Rescue		
CONTACT	Mike Sparrow		

Eversafe Fire Protection Ltd

Unit 14, Precision 2 Business Park, Sittingbourne, Kent, ME10 3TR

TELEPHONE	01795 713123
EMAIL	info@eversafefire.com
WEB	eversafefire.com
LINKEDIN	eversafefp
FACEBOOK	/eversafefp
X	@eversafefp
INSTAGRAM	@eversafefp
CATEGORY	Installer L2
ACCREDITATIONS	LPS 1048 Approved Sprinkler Contractor

We carry out the consultation, design, installation and commissioning of commercial, residential and domestic sprinkler systems and dry and wet risers. We offer maintenance for all fixed fire protection systems including a 24/7 emergency call out.

F

FES Limited

Forth House, Pirnhall Business Park, Stirling, Strilingshire, FK7 8HW

TELEPHONE	01786 819600
EMAIL	Craig Sands & Stuart Mackay
WEB	fes-group.co.uk
LINKEDIN	/company/fes-ltd_3
CATEGORY	Installer L3

FES is a privately owned and family managed business with a network of regional offices throughout Scotland, our Sprinkler Division are based in Stirling head office and cover the whole of Scotland. We are LPCB accredited for the design, installation, commissioning, and servicing of all types of sprinkler systems including industrial & commercial and residential & domestic. Our aftercare services include service, maintenance and 24hour call out.

Fire Defence Servicing Limited

Fire Defence Servicing Ltd, Crown Bray House, Bucknell Way, Pathfields Business Park, South Molton, Devon, EX36 3LH

TELEPHONE	01769 574070
EMAIL	fds@fire-defence.com
WEB	fire-defence.com
LINKEDIN	Fire Defence Servicing Ltd
FACEBOOK	Fire Defence Servicing Ltd
X	@FDS_Firedefence
CATEGORY	Installer L4
ACCREDITATIONS	ISO9001:2015, Constructionline Gold, Facilitiesline Gold, SAFEContractor Plus, CHAS Advanced, Acclaim, Altius CDM
CONTACT	Norman Rider

Fire Defence Servicing Ltd is a Fire Protection Engineering Contractor specialising in the Consultancy, Design, Supply, Installation, Commissioning, Service, Maintenance and Remedial Repair of Automatic Sprinklers, Deluge Water Spray, Dry Pipe, Foam Suppression, Pre-Action, Water Mist and Wet Pipe systems to also include Wet & Dry Risers, Fire Hydrants, Fire Pumps/Tanks. National coverage across the whole of the UK including Northern Ireland.

Fire Engineering Ltd.

Office 12, Enterprise Causeway, 17 Sandel Village, Knocklynn R, Knocklynn Road, Coleraine, Co. L/Derry, BT52 1WW

TELEPHONE	+44 (0)7510 075 377
EMAIL	spencer.allen@fire-eng.co.uk
CATEGORY	Assoc Trade
CONTACT	Jamie Freeman

Fire Prevention Sprinklers Limited

1 Long Craig Rigg, West Shore Road, Edinburgh, EH5 1QT

TELEPHONE	0131 552 7772
EMAIL	info@fireprevention.scot
WEB	fireprevention.scot
FACEBOOK	Fire Prevention Ltd
X	@Prevention_Fire
CATEGORY	Installer L1
ACCREDITATIONS	FIRAS, SMAS and Construction Line Gold
CONTACT	Gary Bennett – Managing Director

Fire Prevention Sprinklers Ltd specialise in the design, installation, maintenance, and inspection of fire sprinkler systems for domestic and residential properties. Our systems are essential for enhancing the safety of occupants by providing automatic fire suppression in the event of a fire, reducing property damage and increasing survival rates. Our systems are installed in line with regulations and to comply with BS2951:2021 or BS EN16925:2018.

Fire Protection Centre Limited

15 Atkinsons Way, Foxhills Industrial Estate, Scunthorpe, DN15 8QJ

TELEPHONE	01724 854199
EMAIL	sales@fireprotectioncentre.com
WEB	fireprotectioncentre.com
CATEGORY	Sprinkler Comp Manf
ACCREDITATIONS	ISO 9001:2015

Fire Protection Centre Limited is an established, independent supplier of quality approved fire sprinklers, fire sprinkler valves, flow control and ancillary products. With our unrivalled customer service and industry expertise we offer customised solutions and personal service to help you satisfy project, contract, and budget demands.

Fire Protection Services Ltd

Unit 16 Oxwich Court, Valley Way, Enterprise Park, Swansea, United Kingdom, SA6 8RA

TELEPHONE	+44 1792 774085
EMAIL	alan@fpsfire.co.uk
LINKEDIN	/company/fire-protection-services-limited/
FACEBOOK	/share/16AGWPHooF/
CATEGORY	Installer L1
CONTACT	Alan Futcher

Fire Protection Services are a small privately owned solely Welsh based company that specialises mainly in the installation & maintenance of Fire Sprinkler Systems to the Domestic & Residential marketplace. In addition, we have a portfolio of clients in the Commercial Fire Sprinkler, Dry Riser/Underground Fire Hydrant Testing & Fire Pump maintenance sectors.FPS were one of the 1st handful of installers who became FIRAS accredited. In 2015 we were proud to achieve our 3rd party certification which tested & continues to test our ability to provide fully compliant systems. This ongoing audit of our installations and processes ensures that our customers will have peace of mind in their relationship with us. With nearly 30 years experience in the fire protection industry, we are proud to provide the highest level of service protecting people and property from fire.

Fire Sprinkler Design Ltd

20 Hamm Beach Road, Portland Marina, Portland, Dorset, DT5 1DX

EMAIL	colin@firesprinklerdesign.co.uk
WEB	firesprinklerdesign.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	IFC,RSA
CONTACT	Colin Taylor

Fire sprinkler design is a critical aspect of fire protection engineering, aimed at safeguarding buildings and their occupants from the devastating effects of fires. There are several key points to consider in fire sprinkler design. It requires careful consideration of coverage, water supply, system layout, system type, hydraulic calculations, backflow prevention, and ongoing maintenance and testing to ensure the effectiveness and reliability of the system in protecting lives and property from fires. We have over 23 years experience in designing sprinkler systems and specialise in Listed Buildings and water supplies. We offer free friendly advice and technical support for any projects.

Fire Sprinklers Scotland

Unit 17, 32 Dryden Road, Bilston Glen Industrial Estate, Loanhead, Midlothian EH20 9LZ

TELEPHONE	0131 581 5399 / 07809 114 304
EMAIL	Info@firesprinklers-scotland.co.uk
WEB	Firesprinklers-Scotland.co.uk
CATEGORY	Domestic & Residential Specialist
ACCREDITATIONS	FIRAS 3rd Party Accreditation
CONTACT	Craig Jamieson. Managing Director Design, Supply, Installation & Servicing.

Fire Sprinklers Scotland Specialise in the Design and Installation Of Domestic & Residential Sprinkler Systems. We work with some of the country's biggest house builders and main contractors as well as private individuals and provide a personalised, professional approach to all our clients focussing on, budgets timescales and compliance.

Fire Supression Group Ltd

277 Bryn Road, Ashton-in-Makerfield, Wigan, WN4 8BS

TELEPHONE	01942 364 479
EMAIL	tom@thefiresuppressioncompany.co.uk
WEB	thefiresuppressioncompany.co.uk
LINKEDIN	/company/the-fire-suppression-company
CATEGORY	Installer L1
ACCREDITATIONS	FIRAS - Domestic and Residential Scheme
CONTACT	Tom

The Fire Suppression Company are an established, specialist team in both Residential Water Mist Systems and Residential Fire Sprinkler Systems. Based in the Northwest operating nationwide, we offer a bespoke service to all our clients with the ability to design, supply, install and maintain High- & Low-pressure Water Mist systems to BS8458:2015, Residential Sprinkler Systems to BS9251:2021, Dry/Wet Risers to BS9990:2015. We are also able to supply install and service fire extinguishers and fire alarms through our BAFE accredited sister company VOCA Fire Protection.

Fire-Mech Fixings Ltd

Unit 3, Urban Park, Kingsway, Rochdale, OL16 4GR

TELEPHONE	0333 123 3472
EMAIL	jlord@fire-mechfixings.co.uk
WEB	fire-mechfixings.co.uk
LINKEDIN	fire-mech-fixings-limit
FACEBOOK	/firemechfixings
X	@firemechfixings
CATEGORY	Sprinkler Comp Manf
ACCREDITATIONS	LPCB ISO Approval Pending

Fire-Mech Fixings offer a wide range of products and services for the installation of Fire Sprinkler Systems with extensive product knowledge and years of experience within the industry. Established in 2015 we now have three locations (Rochdale, Halesowen & East Kilbride, Scotland) serving the whole of the UK and Ireland with our unique branded product range offering full certification and traceability of all our products. We offer a one-stop shop tailored to your individual needs, saving you time, money and hassle. Fire-Mech Fixings specialise in providing FabriCATEd Bracketry and stock a comprehensive range of Pipe Supports & Fixings, Tube, BSI Kite Marked Malleable Iron Fittings, ANVIL Gr8LOK LPCB & FM Approved Grooved Fittings & CPVC Pipe, Fittings & Supports for Fire Sprinkler Installations.

FireFighter 247 LLP

Unit 4 Old Sawmills Estate Broughton Gifford, Melksham, SN12 8PY

TELEPHONE	01225 782120	FAX	01225 783711
EMAIL	dp@fssuk.net		
WEB	firesprinklersystemsuk.com		
CATEGORY	Installer L2		
ACCREDITATIONS	IFCC		
CONTACT	Dean Price		

Firemain Engineering Ltd

12, Harrier Court, Eurolink Business, Rainford, St Helens, England, WA11 8HZ

TELEPHONE	01744 850063	FAX	01744 812014
EMAIL	info@firemain.com		
WEB	firemain.com		
FACEBOOK	/firemainengineering		
CATEGORY	Assoc Trade		
ACCREDITATIONS	ISO 9001:2015		

Firemain - The UKs leading independent supplier of fire fighting foam systems and equipment. Fire protection professionals know that fire suppression is all about choosing the right option - The type of hazard dictates the fire fighting medium. When itcomes to fighting fires in large inventories of flammable liquid there is only usually one choice - foam. Firemain provide a support service to clients fire protection and firefighting needs. We work closely with end users, consultants, engineers and fire professionals to provide the best solution for a given situation, from application engineering, project supply, commissioning and maintenance.

Fireproof Fire Engineering Limited

The Old Brewery, 40 Coldhurst street, Oldham, Lancashire, OL1 2BQ

TELEPHONE	01616200902
EMAIL	Paul@fireproofsprinklersystems.com
WEB	fireproofsprinklersystems.com
CATEGORY	Installer L4

Firetech Design Ltd

Suite 37, Northlight Pendle, Northlight Parade, Brierfield, Nelson, Lancashire, BB9 5FG

TELEPHONE	01282 222630
EMAIL	craig.thompson@firetechdesign.co.uk
CATEGORY	Installer L1
CONTACT	Craig Thompson

Fireworks Fire Protection

Amber House, Station Road, Attleborough Norfolk, NR17 2AT

TELEPHONE	01953 458420
EMAIL	enquiries@fireworks-ltd.com
WEB	fireworks-ltd.com
CATEGORY	Installer L1
ACCREDITATIONS	FIRAS Water Mist Installations, BS 8489

Fireworks Fire Protection is the UKs leading expert on water mist fire suppression systems. Water Mist is used in a wide range of sectors from data centres to tall buildings in fact wherever the protection of lives and assets is crucial. Fireworks are able to offer you total support, from consulting and custom-design, to installation and maintenance. For more information visit www.fireworks-ltd.com or call 01953 458420 for free, independent advice on your projects.

First Fire Protection Ltd

Unit 3, Network 4, Lincoln Road, Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3RF

TELEPHONE	01494 522 031
EMAIL	enquiries@firstfireprotection.co.uk
WEB	firstfireprotection.co.uk
CATEGORY	Installer L2
ACCREDITATIONS	LPCB Level 3

We are an LPCB Level 3 registered company specialising in the Design, Installation commissioning and Servicing of industrial & commercial and residential & domestic fire sprinkler systems. We design systems to match our customers specific needs for all types of sprinkler installations. From consultancy to contract handover and planned maintenance, we are able to provide a concise, competitive and professional service for all small to major projects.We undertake projects in the Central and Greater London areas, as well as in the counties of Buckinghamshire, Berkshire, Oxfordshire, Northamptonshire, Surrey, Sussex, Hampshire, West Midlands.

First Insurance Solutions Ltd

FIS House, Centre, First Insurance Solutions, 3000 St Leonards Rd, Maidstone, ME16 0LS

TELEPHONE	01634 662941
EMAIL	jdavis@firstins.co.uk
WEB	firstins.co.uk
X	@FirstInsLtd
CATEGORY	Assoc Organisation

First Insurance Solutions are a specialist fire protection insurance broker who offer unique products and solutions designed to cover insurance requirements of fire protection contractors. Our team are dedicated to understanding your industry, work practices and activities so that we can provide the specialist insurance advice you need. An individual account manager is appointed to every customer to provide expert advice and a personal service. We aim to build long term relationships based on mutual trust. We enjoy a number of exclusive insurer relationships. First Insurance Solutions is part of Brown & Brown, Inc. one of the worlds largest insurance broking businesses

Fixed Firefighting Systems Bureau Ltd

71 Maple Road, Rubery, Birmingham, B45 9EB

TELEPHONE	07460 723741
EMAIL	simon.bird@ffsb.co.uk
WEB	ffsb.co.uk
CATEGORY	Assoc Trade
ACCREDITATIONS	Chartered Engineers
CONTACT	Simon Bird

FFSB is an independent source of information to help users of Fixed Firefighting Systems successfully navigate the increasingly complex associated regulatory and standards frameworks. We pride ourselves on providing high quality, independent technical advice to anyone who needs it; insurers, regulators, enforcement bodies, end- users, specifiers and designers, the trade, equipment suppliers and other professions. Our expertise is widely recognised. We actively participate in sector standards writing processes including BSI (British Standards Institution) and CEN (The European Committee for Standardisation).

FM Global (FM Insurance Co Ltd)

Voyager Place, Shoppenhangers Road, Maidenhead, SL6 2PJ

TELEPHONE	01753 750 330	FAX	01753 868 700
EMAIL	allan.macpherson@fmglobal.com		
WEB	fmglobal.com		

CATEGORY Assoc Organisation

Franklin Hodge Industries Ltd

Jubilee Building, Westfields Trading Estate, Faraday Road, Hereford, HR4 9NS

TELEPHONE	01432 269605
EMAIL	sales@franklinhodge.com
WEB	franklinhodge.com
CATEGORY	Sprinkler Comp Manf
ACCREDITATIONS	LPCB & FM Tanks
CONTACT	Nigel Snee

FVS Ltd

Broom Street, Off Huddersfield Road, Newhey, Rochdale, OL16 3RY

TELEPHONE	01706 848599
EMAIL	gareth@fvslimited.co.uk
WEB	fvslimited.co.uk
CATEGORY	Installer L2
ACCREDITATIONS	LPCB - Level 3
CONTACT	Gareth Fitton

FVS Limited is an LPCB Approved Sprinkler Contractor for the Design, Installation, Service & Testing of Fire Sprinkler Systems. FVS Limited has been protecting properties from fire since 1982, and over that time we have grown and developed from a small servicing company into a well-established company and are at the forefront of Design, Installation, Service & Testing of all sprinkler systems. Today we have our own in-house design team who use the latest in modern technology to ensure we meet todays high standard in fire protection systems. Yet while we have grown and modernised, excellent customer relationships are still at the heart of all we do and we know that our continued success lies with our talented employees.

G

Gordonson Fire Protection Ltd

Unit 2, Tawney Farm, Tawney Common, Theydon Mount, Essex, CM16 7PU

TELEPHONE	0207 237 6707
EMAIL	johnm@gordonson.co.uk
WEB	gordonson.co.uk
CATEGORY	Installer L3
ACCREDITATIONS	Level 3 Installer
CONTACT	John Martin

We are a family owned/run business founded in 1994 and are well established in the Fixed Fire Protection Industry. Based in Essex, we work throughout the U.K. We pride ourselves on quality engineering, the right job, first time, on time, safely and within budget. The Companys objectives are synonymous with the quality and speed of operation. Its systematic approach has firmly established its name with clients, many of which are household names. All staff including design, project managers and our installation engineers in the field are directly employed, PAYE employees, giving you, the customer, extra piece of mind.

Grundfos Pumps Ltd

Via Gran Sasso 4 -20060, Beds, Truccazzano, Default, 20060

TELEPHONE	01525 850000
EMAIL	grundfos-uk@sales.grundfos.com
WEB	uk.grundfos.com
LINKEDIN	GRUNDFOS
FACEBOOK	/Grundfos
X	@grundfos
CATEGORY	Sprinkler Comp Manf
ACCREDITATIONS	Pumps approved to LPS 1131

Grundfos Pumps Ltd are a UK leader in the supply of pumps and pump systems for domestic, commercial building services and process industry applications, as well as being a major supplier to the water supply and treatment industries. As a prominent pump manufacturer, Grundfos also offer a wide range of fire pump systems thatare designed to operate within both sprinkler and water misting applications. These F G187 G H188 systems can be installed in a range of situations that include: individual homes, a wide range of commercial and industrial applications, as well as within high-rise settings.Grundfos systems can be retrofitted to address existing risk as well as being deployed in new builds.

H

Hall and Kay Fire Engineering

Wynne Avenue, Clifton, Swinton, Manchester, M27 8FF

TELEPHONE	0121 421 3311	FAX	0121 422 7312
EMAIL	Simon.rooks@hkfire.co.uk		
WEB	hkfire.co.uk		

CATEGORY	Installer L4
ACCREDITATIONS	LPS1048 Level 4, LPS1204, LPS1014

We are consultants, designers, installers, service and maintainers all forms of fixed fire protection systems. Hall & Kay is one of the UKs largest fire suppression company, With over 300 staff and 500+ approved subcontractors spread throughout the regions. We bring advanced product technology, the highest standard of professional expertise and service to our core business of fire protection and detection in all areas of industry and construction. By excelling at customer satisfaction based on our unique skills and strengths, we aim to be the first choice of our customers, shareholders and employees.

Hampshire and Isle of Wight Fire and Rescue Service

HIWFRS Headquarters, Leigh Road, Eastleigh, SO50 9SJ

TELEPHONE	02380 644000
EMAIL	Csprotection.admin@hantsfire.gov.uk
WEB	hantsfire.gov.uk
LINKEDIN	/company/hampshire-isle-of-wight-fire-and-rescue-service/
FACEBOOK	/HampshireIOWFireService
X	@HantsIOW_fire
INSTAGRAM	@hantsiowfireservice
CATEGORY	Assoc Fire & Rescue

As the fire authority of Hampshire and Isle of Wight, we will on request provide advice in line with the Fire and Rescue Services Act 2004 and Regulatory Reform (Fire Safety) Order 2005, with regards to how to prevent fires and restrict their spread in buildings and other property, and, the means of escape from building and other property in case of fire, for the common goal of making Hampshire and Isle of Wight safer for our residents.

Harmony Fire Ltd

Clarence House, Watercombe Lane, Lynx Trading Estate, Yeovil, BA20 2SU

TELEPHONE	020 3196 6996
EMAIL	andrew.vandermerwe@harmonyfire.com
WEB	harmonyfire.com
LINKEDIN	harmony-fire-ltd
FACEBOOK	/harmonyfireltd
X	@harmony_fire
CATEGORY	Installer L1
ACCREDITATIONS	LPCB 1301,BAFE Fire Alarm System Provider, BAFE Fire Extinguisher Service Provider, NHS SBS Approved Framework Supplier, BAFSA, Fire Protection Association

Harmony is a leading fire and life safety company servicing the public and corporate sectors across the world. Were a people-oriented company priding ourselves with individually working with our clients to manage risks or fire and other hazards, to ensure protection of life, assets and business continuity. Harmony provides a comprehensive consultancy, design, project delivery and maintenance strategy for a wide range of sectors giving clients a complete end-to-end solution and a unique service offering added value and time savings.

Harrijess Ltd

Unit 2, Belton Lane Industrial Estate, Grantham, Lincs, NG31 9HN

TELEPHONE	+44 (0)1476 516677
EMAIL	dcarter@harrijess.com
WEB	harrijess.com
CATEGORY	Assoc Trade
ACCREDITATIONS	FACTORY MUTUAL, ISO9001
CONTACT	David Carter

We design and manufacture fire pump controllers, according to various standards such as LPC 1236/1237, TB210, EN12845, NFPA20, FM1321/1323 and BS9251:2021 for commercial, domestic and residential applications. Including; jockey pump controllers, electric and diesel controllers and remote alarm panels. We also stock a large range of spare parts for the fire pump house, including; pressure transducers, magnetic pick-ups, engine starter solenoids, fuel spill, flood and various control panel components.

Hereford & Worcestershire Fire & Rescue Service

Hereford & Worcestershire Fire & Rescue Service Headquarters, Hindlip Hall, Hindlip, Worcester, Worcestershire, WR3 8SP

TELEPHONE	0808 196 9500
EMAIL	dwilley@hwfire.org.uk
WEB	hwfire.org.uk
FACEBOOK	/HWFire
X	@HWFire
CATEGORY	Assoc Fire & Rescue
CONTACT	Dan Willey – Station Commander

Hertfordshire Fire and Rescue Service

Postal Point CHO 331(Room 346), Old Block, County Hall, Hertford, SG13 8DQ

TELEPHONE	01707 292310
EMAIL	administration.cfs@hertfordshire.gov.uk
WEB	Hertfordshire.gov.uk
CATEGORY	Assoc Fire & Rescue

Hire Safe Solutions Ltd

1A Churchlands Business Park, Harbury, Warwickshire, CV33 9GX

TELEPHONE	07496463104
EMAIL	info@hiresafesolutions.com
WEB	hiresafesolutions.com
CATEGORY	Assoc Organisation
ACCREDITATIONS	Construction Line Gold, FORS Gold IPAF SSIP

Hire of powered access equipment.

Humberside Fire & Rescue Service

Public Safety, Summergroves Way, Hessle, HU7 4BB

TELEPHONE	01482 567468	FAX	01482 508635
EMAIL	probson@humbersidefire.gov.uk		
WEB	humbersidefire.gov.uk		
CATEGORY	Assoc Fire & Rescue		

Hydro Protect Group

Thorens House, Beck Court, Cardiff Gate Business Park, Cardiff, Wales, CF23 8RP

TELEPHONE	0800 0563204
EMAIL	Sprinkler@hydroprotect.co.uk
WEB	hydroprotect.co.uk
CATEGORY	Installer L1
CONTACT	Daniel Puttick – Director

Founded in 2020, Hydro has rapidly become a leader in domestic sprinkler systems, working with industry-leading developers like Taylor Wimpey and Bellway. Specialising in design, installation, and maintenance, our FIRAS-approved expertise ensures compliance with BS 9251:2021 standards. With advanced technology and exceptional service, we deliver end-to-end solutions that protect lives and elevate projects. Combining industry knowledge and innovative technology, weve created a company that excels in delivering high-quality, compliant sprinkler systems. Our tailored approach and proven methods set new standards in the fire safety industry.

Hydrocore Limited

Craven House, Harpings Road, Hull, HU5 4JF

TELEPHONE	07388 588948
EMAIL	gmorrison@hydrocore.co.uk
WEB	hydrocore.co.uk
CATEGORY	Assoc Trade
CONTACT	Gavin Morrison

Hydrotech Fire & Mechanical Ltd

Units 3-8 Woodrow Business Centre, Mancheste, M44 6NN

TELEPHONE	0161 413 6960
EMAIL	sales@hydrotechfire.co.uk
WEB	hydrotechfire.co.uk
CATEGORY	Supplier / Manufacturer
ACCREDITATIONS	ISO 9001, LPCB, UL & FM product certifications
CONTACT	Jonny Holt, General Manager

Hydrotech are an industry leading supplier of Dry & Wet Riser and Residential Sprinkler system products. Our products are fully compliant with all relevant British standards, BS5041, BS9990 and BS9251:2021. Where required, the products carry 3rd party certifications of LPCB, UL and FM. Our HydroSMART product range for Residential Sprinklers, includes our fully monitored Residential Riser valve sets, which are designed, assembled and tested in the UK. Hydrotech are representatives on BSI

committees and the BAFSA technical committee. We also regularly provide CPD seminars, product training and technical support for the industry.

Hydrov Ltd

20 Low Cudworth, Cudworth, Barnsley, South Yorkshire, S72 8EF

TELEPHONE	03333 660267
EMAIL	sales@hydrov.co.uk
WEB	hydrov.co.uk
FACEBOOK	@hydrov.co.uk
CATEGORY	Assoc Trade

With over 25 years experience in the water storage industry, Hydrov offer the complete package from surveying water storage tanks using the latest underwater ROV technology, to complete remedial work packages if required. Our site engineers have many years of experience based around the surveying, service & maintaining of water tanks, ensuring the surveyed infrastructure is safe, well maintained and compliant with the latest industry regulations. Hydrov also offer a unique service which allows us to clean sprinkler tanks of sediment and debris while the tank remains online, without the need for costly drain downs and insurance impairments.

I

IFC Certification Ltd (part of the KIWA UK Group)

Ground Floor, Suite A, Building 2, Bear Brook Office Park, Walton Street, Aylesbury, Buckinghamshire, HP21 7QD

TELEPHONE	01844 276920
EMAIL	doug.mackinnon@kiwa.com
WEB	ifccertification.com
CATEGORY	Assoc Organisation
CONTACT	Doug MacKinnon

IFC Certification Ltd is an independent UKAS accredited provider of high quality and customer focused 3rd party certification, in support of fire safety and security (including schemes for Installers of Residential & Domestic and Commercial & Industrial Sprinkler Systems. We also have a scheme for Installers of Commercial,Residential and Domestic Water Mist Systems and Dry & Wet Riser Systems. We have over 20 years experience of successfully delivering independent certification schemes to a vast array of clients who design, manufacture, install, maintain fire protection products and systems, in order that they can demonstrate to the market their capabilities and credibility. IFC Certification Ltd. is also a UKAS Accredited Inspection Body whose scope includes Inspection of Sprinkler Systems.

Ignus Fire Services Ltd

Ignus House, Old Hall Farm Main Road Rettendon, Wickford, Essex, Chelmsford, Uk, CM3 8DN

TELEPHONE	01268 973 370
EMAIL	alex@ignusfire.co.uk
CATEGORY	Sprinkler Comp Manf
ACCREDITATIONS	CHAS, BAFSA, IFEDA
CONTACT	Alex Pretlove

Ignus Fire Services Ltd service and maintenance of all fire protection systems. Covering home counties, London, Kent and Essex. Also providing 24/7 call outs, remedial repairs.

Indigo Fire Systems Ltd

IN3 Invincible Building, Daedalus Park, Daedalus Way, Lee On Solent, Hants, PO13 9FX

TELEPHONE	02392 602944
EMAIL	info@indigofire.co.uk
WEB	indigofire.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	FIRAS - Domestic and Residential Scheme FIRAS Commercial & Industrial Scheme

Design, installation & Maintenance of commercial, industrial, residential & domestic sprinkler installations & Wet/Dry Risers.

Infinity Fire Preventions

Infinity House, 38 Riverside, Sir Thomas Longley Road, Medway City Estate, Rochester, ME2 4DP

TELEPHONE	0330 0 102 203
EMAIL	enquires@infinityfireprevention.com
WEB	infinityfireprevention.com
CATEGORY	Assoc Organisation
ACCREDITATIONS	FIRAS
CONTACT	Manj Mahal

Infinity Fire Prevention Ltd are a leading UK specialist in the provision of passive fire protection (FIRAS Certification Registration Number BR2140). The company consists of over 50 highly skilled operatives along with a handpicked management team with fire backgrounds; specialising in all aspects of passive fire protection including Timber and Composite Fire Doors, Penetrations Sealing, Compartmentation and Class 0 Paint.

Influx Measurements

1A Bennett House, The Dean, Alresford, SO24 9BQ

TELEPHONE	01962 736736	FAX	01962 736737
EMAIL	sales@influxmeasurements.com		
WEB	influxmeasurements.com		
FACEBOOK	/InfluxMeasurements		
X	@influxmeters		
CATEGORY	Assoc Trade		
ACCREDITATIONS	LPCB ISO 9001:2015. Flowmeters approved to LPS 1045 requirements and FM Class 1046. SprinklerSense approved to EN-12259-5		
CONTACT	Mark Towner – Managing Director		

Influx manufacture LPC and FM approved Firesure flow meters for testing fire pumps and the LPC approved SprinklerSense intelligent flow switch. Sprinklersense provides a unique approach in the continuous monitoring of automatic sprinkler systems and the routine testing of flow switches.

INIM Electronics (UK Ltd)

Middlemore Lane, Aldridge, West Midlands, WS9 8SP

TELEPHONE	0844 809 9996
EMAIL	enquiries@inim.co.uk
WEB	inim.co.uk
INSTAGRAM	@inim.uk
CATEGORY	Assoc Trade
ACCREDITATIONS	Product accreditations include LPCB, UL, BOSEC. IMQ

Inim Electronics is a leading manufacturer of fire control panels, interfaces, detection, remote fire apps and FireCloud, for the fire protection sector. Product and solutions for commercial, special risks and residential sprinklers, fire, gas detection, public address voice alarm (PAVA) and suppression are manufactured in Monteprandone, Italy. Continuing investment into research and development has assisted Inim to raising the standard in the field of Integrated Fire Systems. Worldwide, Inim products and systems operate over five continents, across 150 professional distributors with over 100,000 installations. Inim Electronics (UK) Ltd, is UK and Irelands distributor with training and support services centrally loCATEd within Aldridge, West Midlands.

Integrated Fire Safety Systems Ltd.

26 Nightingale Crescent, Horsley, Surrey, London, London, KT246PD

TELEPHONE	0844 357 5839
EMAIL	soerdem@ifssystems.co.uk
WEB	ifssystems.co.uk
LINKEDIN	/company/ifssystems/
FACEBOOK	/IntegratedFireSafetySystems
INSTAGRAM	@integratedfiresafetysystems
CATEGORY	Installer L2
ACCREDITATIONS	PCB Installer Level 2 (LPS 1048), FIRAS, LPS1014, ISO9001 BRE and UKAS approved accreditation
CONTACT	Sadi Okan Erdem

At Integrated Fire Safety Systems, we provide our clients with a level of confidence that leaves them assured that all aspects of their Active Fire Systems are well engineered, compliant, and are able to withstand the test of time. We Design, Supply, Install, Commission, Service, and Maintain all manner of Fire equipment. Integrated Fire Safety Systems Ltd was established in 2018 as a subsidiary of Broadest Services Ltd. We design, supply, install and commission Fire Detection and Suppression systems throughout London and the surrounding counties.The company provides a solution to end users, developers, main contractors, and M&E contractors who were looking to simplify their build by employing a Fire Life Safety specialist to design and deliver all of their active Fire Detection, Suppression, Smoke management, and Evacuation systems. We ensure our system experts fully understand the requirements of each of the disciplines and are all aware of all the requirements on each project. We use some of the best equipment available on the market and pride ourselves on the way we manage and look after our supply chain.

International Plastic Systems Ltd (IPS Flow Systems)

Seaham Grange Industrial Estate, Seaham, Co Durham, SEAHAM, COUNTY DURHAM, SR7 0PT

TELEPHONE	0191 5213111
EMAIL	pwright@ipsflowsystems.com
WEB	ipsflowsystems.com/flameguard.html
LINKEDIN	ips-flow-systems
INSTAGRAM	@ips_flow_systems
CATEGORY	Sprinkler Comp Manf
ACCREDITATIONS	UKAS 3rd Party CPVC Training
CONTACT	Paul Wright – Business Development Manager

IPS Flow Systems are a leading supplier into the Fire sector. IPS is the only European Master Distributor for Spears products and has a proven track record for service and reliability. Spears FlameGuard CPVC fire sprinkler systems offer all of the protection and reliability of traditional piping systems whilst offering some unique advantages to the contractor. The ease of installation ensures that Spears FlameGuard provides savings in the total installed cost. IPS are also the UK supplier for Prevent Systems Mist Nozzles which are LPCB approved are a great compliment to the RM Pressfit range and the Spears FlameGuard system.

Irish Sprinkler and Fire Protection Ltd (Jones Engineering)

Damastown Green, Damastown, Dublin D15 EWP8

TELEPHONE	00353 872 133 172
EMAIL	bdwyer@joneseng.com
ACCREDITATIONS	LPS1048 Level 4 NFPA BSI Kite mark
CONTACT	Shaun McDevitt – smcdevitt@joneseng.com

J

J G Truty Sprinkler Installations Ltd

Unit 3, Whitelocks Farm, Garsons Lane, Warfield, Bracknell, RG42 6JA

TELEPHONE	01494 443 339
EMAIL	info@jgtrutysi.co.uk
WEB	jgtrutysi.co.uk
CATEGORY	Installer L2
ACCREDITATIONS	LPS 1048 Level 3 Approved Sprinkler Contractor
CONTACT	Chris Truty

Specialists in design, installation & servicing of fixed fire protection systems including commercial fire sprinkler systems, residential fire sprinkler systems, dry risers and wet risers.

J S Wright & Co Ltd

The Atlas Building, Portland Street, Birmingham, B6 5RX

TELEPHONE	0121 3224000	FAX	01213224001
EMAIL	jswright@jswright.co.uk		
WEB	jswright.co.uk		
X	@jswrightcoltd		
CATEGORY	Installer L1		
ACCREDITATIONS	IFCC 3rd party		
CONTACT	Lee Driffield – Fire Protection Manager, Matthew Coy – Contracts Director		

J S Wright & Co Ltd are one of the leading building services engineering companies nationwide in the UK. We produce the Residential & Domestic sprinkler systems from our mechanical packages, ensuring the systems installed within our projects are the best they can be, concentrating on the design/ calculation/installation & commissioning of Residential & Domestic sprinkler systems within our new build projects nationwide.

J&J Design Limited t/a J&J Fire Engineering

Riverside House, New Hall Hey Road, Rawtenstall, Rossendale, Lancashire, BB4 6HR

TELEPHONE	01706 223414
EMAIL	info@jjfe.co.uk
WEB	jjfe.co.uk
X	@jjfireeng
CATEGORY	Installer L4
ACCREDITATIONS	LPCB Level 4

J&J Fire Engineering is a leading nationwide provider of fixed fire protection systems, specialising in design, project management, installation, service and maintenance. Operation out of offices in the north and south of the UK, J& J prides itself on providing the very best service to all our clients across a wide range of sectors including retail, warehousing, commercial, education and residential.

Jensen Hughes

Suite 9C Manchester One, 53 Portland Street, Manchester, M1 3LD

TELEPHONE	44 161 236 6527
EMAIL	arda.baydemir@jensenhughes.com
WEB	jensenhughes.com
CATEGORY	Assoc Organisation
CONTACT	Arda Baydemir

JN Dobbin (Partners& Ltd)

MRIB House, 25 Amersham Hill, High Wycombe, Buckinghamshire, HP13 6NU

TELEPHONE	0113 887 3805
EMAIL	Tom.Kendall@partnersand.com
WEB	partnersand.com
CATEGORY	Assoc Organisation
CONTACT	Tom Kendall

John Root Consultancy

4 Thorpe Close, Hawkwell, Hockley, Essex, SS5 4ER

TELEPHONE	07854 126560
EMAIL	john_root@sky.com
CATEGORY	Assoc Individual
CONTACT	John Root

John Stephens (Life Member)

110 Eastmoor Park, Harpenden, AL5 1BP

EMAIL	j.n.stephens@ntlworld.com

JTP Mechanical Engineering Ltd

17 Bellfields Court, Guildford, GU1 1JT

TELEPHONE	07801 932 056
EMAIL	james@jtpme.co.uk
CATEGORY	Assoc Trade
CONTACT	Jame Pyke

K

Kent Fire & Rescue Service

Headquarters, Straw Mill Hill, Tovil, Maidstone, ME15 6XB

TELEPHONE	01622 692121 ext 8301
EMAIL	leanne.mcmahon@kent.fire-uk.org
WEB	kent.fire-uk.org
CATEGORY	Assoc Fire & Rescue
CONTACT	Leanne McMahon – Assistant Director Customer & Building Safety

Keraflo

Unit 1 Woodley Park Estate, 59-69 Reading Road, Reading, Berks, RG5 3AN

TELEPHONE	01189691611
EMAIL	sindy.cross@cistermiser.co.uk
WEB	keraflo.co.uk
CATEGORY	Sprinkler Comp Manf
CONTACT	Lisa Moon

Knowsley SK

Centrepoint Marshall Stevens Way, Trafford Park, Stretford, Manchester, M17 1AE

TELEPHONE	+44 1618727511
EMAIL	pelder@knowsleysk.co.uk
WEB	knowsleysk.co.uk
CATEGORY	Assoc Trade

L

Lancashire Fire & Rescue Service

Headquarters, Garstang Road, Fulwood, Preston, PR2 3LH

TELEPHONE	01772 862545
EMAIL	listerhaworth@lancsfirerescue.org.uk
WEB	lancsfirerescue.org.uk
CATEGORY	Assoc Fire & Rescue
CONTACT	Lister Haworth

Liberty Specialty Markets

Commercial Risk Engineering, Level 22, 20 Fenchurch Street, London, EC3M 3AW

TELEPHONE	020 37581721
WEB	libertyspecialtymarkets.com
CATEGORY	Assoc Organisation

Lil Fire Ltd

calle virgen de la concepcion 1, san isidro, tenerife, 38618

TELEPHONE	02045795339
EMAIL	Sales@lilfire.co.uk
WEB	lilfire.co.uk
CATEGORY	Assoc Trade

Remote Project Management, Digital Engineering Services, Fire Suppression Consulting.

Lincolnshire Fire & Rescue Service

Fire and Police Headquarters, Deepdale Lane, Nettleham, Lincoln, LN2 2LT

EMAIL	Danny.Moss@Lincoln.fire-uk.org
WEB	lincolnshire.gov.uk/lincolnshire-fire-rescue
FACEBOOK	/Lincolnshire Fire and Rescue
X	@LincsFireRescue
CATEGORY	Assoc Fire & Rescue
CONTACT	Dan Moss

Liquitech Ltd

The Old Post Office House, East Street Pembridge, Herefordshire, HR6 9HA

TELEPHONE	01544 388883
EMAIL	andrew@liquitech.co.uk
WEB	liquitech.co.uk
LINKEDIN	liquitechltd
FACEBOOK	/LiquitechLtd
CATEGORY	Assoc Trade
CONTACT	Andrew Searles

London Fire and Emergency Planning Authority

169 Union Street, Union Street, Southwark, London, London, SE1 0LL

WEB	london-fire.gov.uk/fireauthority.asp
CATEGORY	Assoc Fire & Rescue
CONTACT	Karl Manners; Tor Strowger; Phil Turnbull; Matt Rowe

Lubrizol (GB) Ltd

The Knowle Nether Lane Hazelwood Belper, Nether Lane, Hazlewood, Derbyshire, DE56 4AN

TELEPHONE	+44 077114 20904
EMAIL	Adam.hessel@Lubrizol.com
X	@blazeMaster.eu
CATEGORY	Sprinkler Comp Manf
CONTACT	Adam Hessel – Market Development Manager Fire Protection-EMEA

M

M&P Fire Protection Limited (M&P Dry Risers)

Unit 12 Viewpoint, Boxley Road, Maidstone, Maidstone, Kent, ME14 2DZ

TELEPHONE	0800 0431974
EMAIL	info@mpfireprotection.com
WEB	mpfireprotection.com
CATEGORY	Installer L1
CONTACT	Paul Atkins – Director

Experts in the Design, Installation and Servicing of Fire Protection Systems.

M&P Fire Solutions Ltd

Unit 9 Robinhood Business Park, Robinhood Road, Dublin, D22 H728

TELEPHONE	+353 87 7445312
EMAIL	mkiernan@mpfiresolutions.com
CATEGORY	Installer L3
CONTACT	Mark Kiernan

Marioff Limited (A Carrier Company)

25 Earl Haig Road, Hillington Park, Glasgow, G52 4JU

TELEPHONE	08453 880 880
EMAIL	sales.marioff.co.uk@carrier.com
WEB	Marioff.com
CATEGORY	Installer L2
ACCREDITATIONS	FIRAS - Water Mist installations
CONTACT	Ryan Conaghan

Marioff was founded in 1985 with a motivating mission: to protect people, property and business from fire. Today Marioff is a leading supplier of water mist fire protection systems, the HI-FOG brand has become the standard for water mist fire protection with a reputation for superior fire suppression performance. The companys extensive research and development program, which is carried out in association with leading independent authorities and fire testing laboratories has been key to this success. Marioffs greatest reward is the growing list of references and the fires suppressed or extinguished by HI-FOG.

Marlowe Fire & Security Group

Lowry House, 5 Ohio Avenue, The Quays, Salford, Salford Quays, Salford, Choose County, M50 2GT

TELEPHONE	0333 010 2000
EMAIL	rebecca.lees@marlowefireandsecurity.com
WEB	marlowefireandsecurity.com
CATEGORY	Installer L1

Marlowe Fire & Security is one of the UKs leading providers of comprehensive fire life safety and security solutions.With over 40 years industry experience and a commitment to protecting peoples lives, properties and businesses, we offer a comprehensive suite of advanced services tailored to meet your specific needs. Our team of dediCATEd sprinkler experts offer everything from design, supply and installation, through to ongoing maintenance and have experience working on every scale of project in sectors such as social housing, student accommodation and residential blocks through to nursing homes and care homes.If youre looking for a trusted provider that prides itself on delivering superior service quality and exceeding client expectations, youve found us.

Marsh Risk Consulting

5 George Square, Glasgow, Glasgow, Glasgow City, G2 1AR

TELEPHONE	07585 803 706
EMAIL	Heather.McLeish@marsh.com
WEB	marsh.com

LINKEDIN	TheMarshChannel
FACEBOOK	/MarshGlobal
X	@MarshGlobal
INSTAGRAM	@MarshMclennan
CATEGORY	Assoc Organisation
CONTACT	Heather McLeish

Managing Consultant Marsh is a global leader in insurance broking and risk management. A dediCATEd Property Risk Consulting practice enables organisations to strategically manage risks associated with their portfolio of physical assets. Property Risk Consulting capabilities include a global team of more than 250 specialists in40 countries, deep technical engineering expertise combined with Marshs strong understanding of the insurance industry and underwriting. A commitment to leadership in fire protection includes involvement in global fire protection committees.

Maurice Johnson & Partners Ltd

Anchorage, Charlotte Quay, Dublin 4, Ireland,

TELEPHONE	+353 1 661 8086
EMAIL	info@mjp.ie
WEB	mjp.ie
CATEGORY	Assoc Organisation
CONTACT	Stefan Hyde – Fire Engineering Consultancy

MB Firepumps Ltd

12 Teal Court, Starling Way Strathclyde Business Park, Bellshill, Glasgow, ML4 3NN

TELEPHONE	01698 442411
EMAIL	michael@mbfirepumps.com
WEB	mbfirepumps.com
LINKEDIN	MB Firepumps Ltd
CATEGORY	Assoc Trade
ACCREDITATIONS	ISO9001, Safe Contractor, Avetta
CONTACT	Michael Brogan

Service, Repair and Installation of new and retro fit fire pump equipment. Operating throughout Scotland, The Islands and North East and North East England, 24-7-365 emergency service to provide truly comprehensive cover for your business. Engineers are fully mechanical and electrically qualified for working on fire pump systems and have many years experience within the industry. We offer advice and fire pump testing training for sites that wish to weekly test by themselves.

Mercury Engineering

Mercury house sandyford dublin, ravens rock road, Dublin, Dublin, D18xh79

TELEPHONE	00 353 1 216 3000
EMAIL	fireprotection@mercuryeng.com
WEB	mercuryeng.com
LINKEDIN	Mercury
FACEBOOK	Mercury
INSTAGRAM	@Mercury
CATEGORY	Installer L4
CONTACT	Christian Murphy – General Manager

Merseyside Fire & Rescue Service

Bridle Road Bootle, Service HQ, Bridle Road, Liverpool, L30 4YD

TELEPHONE	0151 296 4626
EMAIL	philgarrigan@merseyfire.gov.uk
WEB	merseyfire.gov.uk
CATEGORY	Assoc Fire & Rescue
CONTACT	Phil Garrigan

Mid and West Wales Fire and Rescue Service

Fire Service HQ, Lime Grove Avenue, Carmarthen, SA31 1SP

TELEPHONE	0370 6060699
EMAIL	s.slaymaker@mawwfire.gov.uk
WEB	mawwfire.gov.uk
CATEGORY	Assoc Fire & Rescue
CONTACT	Sin Slaymaker – Head of Business Fire Safety

Mike Murphy (Atelier Ten)

19 Perseverance Works, 38 Kingsland Road, London, E2 8 DD

TELEPHONE	0776845 7707
EMAIL	mike.murphy@atelierten.com
WEB	atelierten.com
CATEGORY	Assoc Individual
CONTACT	Mike Murphy – Senior Fire Engineer

MillHarbour Sprinklers Limited

City Reach, 5 Greenwich View Place, Docklands, London, E14 9NN

TELEPHONE	077200 76679
EMAIL	paul.graham@millharboursprinklers.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	FIRAS - Domestic and Residential Scheme
CONTACT	Paul Graham – Managing Director

MJA Designed Solutions

2 Hedley Lane, Carlton Coleville, Lowestoft, Suffolk, NR33 8BN

TELEPHONE	07938 734607
EMAIL	mark@MJA-Designed.co.uk
LINKEDIN	/mark-ashdown-031a714a
CATEGORY	Assoc Individual
CONTACT	Mark Ashdown

2D & 3D Design, Surveying and Consultancy for the Fire Protection Industry. QUALIFICATIONS Over 30 Years Experience Fully Qualified LPCB, Basic, Int & FHC Exams FM & NFPA Experience Revit MEP Accredited Training Canute FHC - BAFSA Accredited Training Effective Sprinkler Design FM Global Accredited Training BIM Level 2 Fundamentals BRE Certified Offering AutoCAD 2D & 3D design, full hydraulic design and analysis and Surveying & Consultancy including: - SERVICES Autodesk - AutoCAD 2D & 3D design Autodesk - Revit, Fabrication CADmep & Navisworks Autodesk AEC Collection Subscription Holder. Autodesk BIM360 Collaborate Pro Subscription Holder. BIM Level 2 Certified Full Hydraulic Design and Analysis Canute FHC AutoSPRINK RVT - Subscription Holder. MicroBIM Fire - Subscription Holder.

N

Nationwide Fire Sprinklers Ltd

Grinnell House, Private Road 7, Nottingham, NG4 2JW

TELEPHONE	0115 9408220
EMAIL	sales@nationwide-fire.co.uk
WEB	nationwidefiresprinklers.co.uk
CATEGORY	Installer Residential

Nationwide Fire Sprinklers is a family-owned and family-run business. For two generations we've been leading the industry in the design and installation of bespoke fire protection systems. Our mission is to keep you and your property safe. We do that by setting ourselves impeccably high standards, and maintaining strict quality control measures across every aspect of our business.

Nationwide Water Solutions

Swinton Bridge Industrial Estate, White Lea Road, Mexborough, S64 8BH

TELEPHONE	0345 5052540
EMAIL	sales@nationwidewatersolutions.co.uk
WEB	sprinklertank.co.uk
CATEGORY	Associate Trade
CONTACT	Michael Brightmore

Nick Groos

24 rue Dicks, Bertrange, Luxembourg, 8085, LU

TELEPHONE	+352 621 159736
EMAIL	nick@groos.lu
CATEGORY	Assoc Individual
CONTACT	Nicholas Groos

North Wales Fire & Rescue Service FSHQ

Ffordd Salisbury, St Asaph Business Park, St Asaph, Denbighshire, LL17 0JJ

TELEPHONE	01745 535250	FAX	01743 535296
EMAIL	paul.kay@northwalesfire.gov.wales		
WEB	nwales-fireservice.org.uk		

CATEGORY Assoc Fire & Rescue

CONTACT Paul Kay – Fire Safety Officer

Nottinghamshire Fire & Rescue Service

Joint Fire & Police Headquarters, Sherwood Lodge, Arnold, Nottingham, NG5 8PP

TELEPHONE	0115 8388100
EMAIL	jonathan.holford@notts-fire.gov.uk
WEB	notts-fire.gov.uk

CATEGORY Assoc Organisation

CONTACT Jonathan Holford

NPTC Group

1 College Green Port Talbot, Afan Campus, College Green, Margam, Port Talbot, Neath, SA13 2AL

TELEPHONE	01639 648209, 01639 648000
EMAIL	paul.rogers1@nptcgroup.ac.uk business@nptcgroup.ac.uk
WEB	nptcgroup.ac.uk

ACCREDITATIONS BAFSA Approved Training Centre

CONTACT Paul Rogers

NPTC group currently deliver a range of courses that are suitable for candidates looking to start their journey into the fire sprinkler industry, through to those with several years of experience looking to upskill or gain a recognised qualification. NPTC group use a variety of face to face, remote and blended learning that allows candidates to complete various assessments in their own time, reducing the need to physically attend college. Further information can be found on our website alternatively, please contact the college to discuss suitability, availability and anticipated start dates.

O

OCS M & E Services Ltd

Trafford Bank House, 32 Brindley Road, Manchester, M16 9SD

TELEPHONE	4.41E+11
EMAIL	info@thermotechsolutions.co.uk
WEB	ocs.com
CATEGORY	Installer L3

Orange Fire Protection Group

Queens Court, 24 Queen Street, Wakefield, WF1 1LE

TELEPHONE	+44 1924566320
EMAIL	info@orangefiregroup.co.uk
WEB	orangefiregroup.co.uk
LINKEDIN	orange-fire-protection-group-ltd
FACEBOOK	/orangefireprotectiongroup
X	@orangefiregroup
CATEGORY	Installer L1
ACCREDITATIONS	IFC, FPA, FIA, Constructionline, Safecontractor
CONTACT	Lewis Klimo

Orange Fire Protection Group Ltd are designers, suppliers, installers and maintainers of fire protection and fire detection systems. With over 60 years of combined experience within the fire protection industry, we have provided systems and subsequently service and maintenance packages to hundreds of properties in a wide variety of market sectors. With our experience, we can provide a solution for the following systems: Fire Sprinkler Systems Water Mist Fire Suppression Systems Wet & Dry Risers Kitchen Fire Suppression Systems Our engineers carry the latest, up to date equipment and a large quantity of spares on their vehicle thus allowing us to carry out maintenance and repair works to fire protection and detection systems on the spot.

P

PartB Group Ltd

Pera Business Park, Pera Business Park, Nottingham Road, Melton Mowbray, Leicestershire, LE13 0PB

TELEPHONE	07521625227 or 0203 935 6427
EMAIL	dougmackinnon@partb.co.uk
WEB	partb.co.uk
CATEGORY	Assoc Organisation

PartB (Certification) Ltd is an independent provider of third-party installer certification. Our certification helps installation contractors prove their skills and the quality of their services. Each qualified installer receives a certificate and quality mark to show their high standards. PartB Installer Certification schemes offers independent checks of installations, giving confidence to specifiers, contractors, enforcement authorities, regulators, and end users. This ensures the required level of fire performance is met, reducing risks of non-performance, premature failure, and safety issues.

Patron Fire Consulting

16 Carlton Road, Lowton, Warrington, Cheshire, WA3 2EP

TELEPHONE	07758824704
CATEGORY	Assoc Organisation

Peter Armstrong (Life Member)

Potter Electric Signal

13723 Riverport Drive St. Louis, MO 63043

TELEPHONE	001 314 595 6900
EMAIL	steveb@pottersignal.com
WEB	pottersignal.com
X	@potterelectric
CATEGORY	Sprinkler Comp Manf
ACCREDITATIONS	LPCB - Other Sprinkler Components; VdS; FM; UL; ULc; E
CONTACT	Steve Broadley

At Potter Electric Signal Company, QUALITY is the first order of business. Since 1898, we have served the Fire industry on a world-wide basis. Today, we manufacture a full line of sprinkler monitoring devices, corrosion monitoring, testing, and treatment products, as well as fire alarm systems and releasing control panels.

Powerpro UK Limited

Middlemore Lane West, Aldridge, Walsall, Walsall, WS9 8BG

TELEPHONE	0800 2321986
EMAIL	James@powerprouk.com
WEB	powerprouk.com
CATEGORY	Assoc Trade
CONTACT	James Roberts – Director

Powertec Pumps Ltd

Units 7 & 8 Powertec House, Calleva Park, Aldermaston, Reading, RG7 8PN

TELEPHONE	01189 409970
EMAIL	lukehaynes@powertecpumps.com
WEB	powertecpumps.com
CATEGORY	Assoc Trade
CONTACT	David Newman – CEO

Preheat Engineering

Unit A2, Deseronto Trading Estate, St Marys Road, Langley, Berks, SL3 7EW

TELEPHONE	+44 20 8848 1912
EMAIL	sales@preheat.co.uk
WEB	preheat.co.uk
LINKEDIN	/company/preheat-engineering-ltd
FACEBOOK	PreheatEngineering
X	@PreheatEng
INSTAGRAM	@preheatengineering
YOUTUBE	@PreheatEngineeringLtd
CATEGORY	Assoc Trade

Preheat Engineering is the British manufacturer of the PEREGRINE and FALCON engine heaters. We provide reliable engine preheaters and fuel storage heating solutions. Our client function across Genset, Marine, Fire Protection, Fuel Storage, Water, Construction and Data Centre industries.

Prokon Fire Solutions Ltd

Chestnut House. Kingswood Business Park. Holyhead Road, Albrighton, West Midlands, Albrighton, Staffordshire, WV7 3AU

TELEPHONE	0190 2906150
EMAIL	ken.williams@prokonsolutions.com
WEB	prokonsolutions.com
CATEGORY	Assoc Trade
ACCREDITATIONS	Constructionline gold, IFSM, FPA, NFPA
CONTACT	Ken Williams

Our management and engineers have experience collectively in all forms of water based, gaseous and foam suppression systems together with the full spectrum of fire detection and alarm systems. We offer a range of services including consultancy, auditing, surveys, project management, design (2D and 3D), calculations, fire risk assessments, and independent third party inspections.

Protec Camerfield Limited

Churchill Way, Nelson, UK, BB9 6RT

TELEPHONE	01282 717474
WEB	protec.co.uk
FACEBOOK	/protecgroup
INSTAGRAM	@protec.group
CATEGORY	Installer L4
ACCREDITATIONS	LPCB Level 4 Approved Sprinkler Contractor
CONTACT	Michael Trenbath

With over three decades of experience in the industry, we offer complete procurement of fire protection systems.Specialists in industrial, commercial, residential, and domestic fire sprinkler systems. Wet and dry risers. High and low pressure water mist systems. Gas suppression systems.

Protect and Detect Systems Limited

Units 2-4, Greenwich Business Park, Greenwich Close, Ipswich, IP3 0DD

TELEPHONE	+44 1473 340144
EMAIL	michael.hadley@protectanddetect.com
CATEGORY	Installer L1
CONTACT	Michael Hadley

Provincial Sprinkler Co.

Unit 3 Building 2500, Avenue 2000, Cork Airport Business Park, Cork, Cork, T12 P6PT

TELEPHONE	353 21 4965058
EMAIL	michael.rowe@jci.com
WEB	pscl.ie
CATEGORY	Installer L4
ACCREDITATIONS	LPC Level 4 & ISO 9001:2015

Provincial Sprinkler Company is a part of the Johnston Controls Group based in Cork Ireland. Provincial Sprinkler Company is a fire protection company specialising in the design, installation, inspection & maintenance of fire suppression sprinkler systems. Provincial Sprinkler Company have 45 years industry experience. Among our clients are Apple Computers, Eli Lilly, Biomarin, Dell, Pfizer, Pepsico, Stryker and Gilead. Provincial Sprinkler are an LPC 1048 Level 4 approved sprinkler contractor & ISO 9001:2015 accredited company.

Pure Power Ltd

Daisy Bank Lane, Unit 49 Cosgrove Business Park, Northwich, CW9 5PN

TELEPHONE	01606 272608
EMAIL	mark.fussey@purepoweruk.com
WEB	purepoweruk.com
CATEGORY	Assoc Trade
CONTACT	Mark Fussey

Fire Pump Service & Maintenance Packages to ensure compliance to BS EN12845 and or FM Global NFPA 2025 Technical support On Site Surveys On/off site Remedial repairs Engine overhaul to BS AU257 Electric Motor repair or replace. Pump Overhaul and or replace. Panel repair & or replacement Emergency call out service for all the above Turnkey solution for projects covering Removal & disposal of existing ,Supply of New equipment Installation commissioning including on-site fabrication, welding, and casting of new plinths. Submersible Pumps servicing, maintenance to SFG20 Service & Maintenance of Emergency standby generators & Load Bank Testing Can provide replacement or hire of Emergency standby generators. Emergency call out service for all the above.

Pyro Protection Limited

Saddleworth Business Centre, Huddersfield Road, Delph, Oldham, Lancashire, OL3 5DF

TELEPHONE	01457 879 222	FAX	01457 879 888
EMAIL	info@pyroprotection.co.uk		
WEB	pyroprotection.co.uk		
CATEGORY	Installer L4		
ACCREDITATIONS	LPCB - Level 4		
CONTACT	Matthew Smith		

Sprinkler protection and allied fire suppression fields. We provide consultation, proposals, design, project management, commissioning, training and ongoing service and maintenance. Our areas of expertise encompass not only sprinkler systems but also deluge systems, foam enhancement, low/medium/high expansion foam systems, wet/dry risers, fire hydrants and hosereels. We are engineers and although we often produce innovative solutions to fire protection challenges we also ensure that our system designs are compliant with recognised international standards, including LPC Rules Inc. BS EN12845, NFPA and FM Global, using approved equipment throughout the UK.

R

R Tindall Fabricators Ltd

Unit 1, West Point Industrial Estate, Oldham, OL9 9ND

TELEPHONE 0161 6243961
EMAIL Aaron.Khan@tindall-fabricators.co.uk

CATEGORY Sprinkler Comp Manf

CONTACT Aaron Khan

RAD Fire Sprinkler Co Ltd

58A St Johns Rd, Tunbridge Wells, TN4 9NY

TELEPHONE 01892 680090
EMAIL paul@radfiresprinklers.com
WEB radfiresprinklers.com

CATEGORY Installer L3

Rapidrop Global Ltd

Rutland Business Park, Thorney, Peterborough, Cambridgeshire, PE1 5WA

TELEPHONE 01733 847 510 FAX 01733 553 958
EMAIL rapidrop@rapidrop.com
WEB rapidrop.com

CATEGORY Sprinkler Head Manf
ACCREDITATIONS LPCB, UL, FM, and VdS, Assessed to ISO 9001 & ISO 14001

CONTACT Afolabi Akinsanya

Rapidrop Global Ltd is comprised of British sprinkler head manufacturer Rapidrop, as well as sprinkler system monitoring solution specialists FloWatch plus our building products division IFI. Rapidrop are the only independent manufacturers of fire sprinkler heads in the UK, offering a full range of equipment including the market leading Rapidrop flexible sprinkler connection, alarm control valves, isolation valves and much more.

Reliable Fire Sprinkler UK (Ltd)

Origin One, 108 High Street, Crawley, West Sussex, RH10 1BD

TELEPHONE	01342 316800
EMAIL	uksales@reliablesprinkler.com
WEB	reliablesprinkler.com
CATEGORY	Sprinkler Head Manf
ACCREDITATIONS	LPCB Approved to ISO 9001 and assessed to ISO 14001
CONTACT	Brian Gallagher

The Reliable Automatic Sprinkler Co. Inc. is one of the worlds largest producers of automatic fire sprinklers and sprinkler system control equipment. The company was founded in 1920 and has continued to expand, now encompassing a 467,000 ft facility in South Carolina, USA, with sales offices lOCATEd throughout the world. Reliable aims to be the leading worldwide manufacturer of innovative, quality-oriented fire sprinklers and systems devices; to be a leading supplier of fire sprinkler system components; and to be the leader in providing the highest level of operational excellence in customer service.Reliable produces an unparalleled range of fire sprinklers and system control valves including alarm, dry, deluge and pre-action. Reliable products are listed and approved by approval bodies including FM, UL, LPCB and VdS.

Res-Com Fire Engineering (formerly Residential Sprinklers Solutions)

Little Manor, 49 The Lagger, Chalfont St Giles, Buckinghamshire, HP8 4DJ

TELEPHONE	020 8864 3914
EMAIL	info@rescomfire.co.uk info@residentialsprinklers.co.uk
FACEBOOK	/ResidentialSprinklers
X	@ressprinkler
CATEGORY	Installer L1
CONTACT	Paul Moody

Residential Fire Protection Ltd

Units 1 & 2 Charlotte Court, 14 Law Street, Cleckheaton, BD19 3QR

TELEPHONE	0113 426 3400
EMAIL	rh@residentialfire.co.uk
WEB	residentialfire.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	FIRAS - Domestic and Residential Scheme
CONTACT	Richard Haines – Director

Residential Sprinklers Ltd

Unit 3 Latherford Close, Four Ashes, Wolverhamption, WV10 7BY

TELEPHONE	07855 807945
EMAIL	mat@residentialsprinklersltd.co.uk
WEB	residentialsprinklersltd.co.uk
CATEGORY	Installer L1
CONTACT	Mat Rushton

Richmond Fire Engineers Ltd

Shaw House, Olliver, Olliver, Richmond, Richmond, North Yorkshire, DL105HX

TELEPHONE	01748 825612
EMAIL	enquiries@richmondfire.co.uk
WEB	richmondfire.co.uk
LINKEDIN	/company/richmond-fire-engineers-ltd
CATEGORY	Installer L4
ACCREDITATIONS	LPCB Level 4 LPS 1048 approved sprinkler contractor / I SO 9001:2000

Design, Installation, Service and Maintenance of Automatic Sprinkler Systems, Hydrants, Hose Reels and Associated Items.

Royal Berkshire Fire & Rescue Service

Newsham Court, Pincents Kiln, Calcot, Reading, RG31 7SD

TELEPHONE	0118 9384000
EMAIL	jamesj@rbfrs.co.uk
WEB	rbfrs.co.uk
CATEGORY	Assoc Fire & Rescue
CONTACT	Jess James, Lynn Walters

RSP Fire Sprinkler Systems

5 De Clare Court, Sir Alfred Owen Way, Caerphilly, CF83 3HU

TELEPHONE	0800 954 5999
EMAIL	info@rspsprinklersystems.co.uk
WEB	rspsprinklersystems.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	FIRAS Residential and Domestic

RSP was the first contractor in Wales to achieve third party certification for the design and install of residential and domestic sprinkler systems. Widely recognised as experts in our field, we are keen collaborators and work with our customers to ensure the system is tailored to the job without risking quality. When choosing RSP, you will benefit from our breadth and depth of experience gathered from a diverse range of projects including housing estates, retrofits, high rises, care homes and social housing. Our sprinkler installations are complemented by our pre contract design consultations which aim to keep the system cost-effective in both development and ongoing asset without compromising compliance.

S

Sale Engineering Products Ltd (SEP)

45 Lambeth Road, Reddish, Manchester, SK5 6TW

TELEPHONE	+44 161 428 1180
EMAIL	info@SEPfiresprinkler.co.uk
WEB	firesprinkler.co.uk
LINKEDIN	sale-engineering-products-limited
X	@SaleEngineerPro
CATEGORY	Rob Bell – Managing Director

SEP is well-known throughout the UK fire sprinkler industry as a manufacturer and supplier of specialist products for the industry. Air compressors, pump initiation boards, LPCB/FM-approved zone test assemblies (ZONE GUARDIAN), jockey/booster/residential pumps, Priority Demand Valves are just some of our specialities alongside a full range of gauges, switches, orifice fittings and many other spares and ancillaries. Our Ethos encompasses top quality, unrivalled customer service and almost endless flexibility all factors which have seen us grow significantly over recent years with the help of our valued customers.

SCM Sprinkler Services Ltd

The Business Centre, 165 Brook Street, Broughty Ferry, Dundee, DD5 1DJ

TELEPHONE	7545490555
EMAIL	Simon.Murphy@SCMSprinklers.co.uk
WEB	scmsprinklers.co.uk
CATEGORY	Assoc Organisation

We offer a design service covering all types of fire protection systems in both AutoCAD and Revit formats including but not limited to: Dry and West Risers; Hydrant Systems; Residential and Domestic Sprinkler Systems; Commercial and Industrial Sprinkler Systems & High Pressure Water Mist.

Scottish Fire & Rescue Service

Westburn Drive, Cambuslang, G72 7NA

TELEPHONE	01851 705051
EMAIL	kenneth.barbour@firescotland.gov.uk
WEB	firescotland.gov.uk
CATEGORY	Assoc Fire & Rescue

Senseco Sprinkler Systems

Fitzroy Business Park, Sandy Lane, Orpington, Sidcup, Kent, DA14 5NL

TELEPHONE	0208 309 5203
EMAIL	danny.towler@sensecosystems.com
CATEGORY	Installer L3
CONTACT	Danny Tower

Shawston International

Office 33 The Forum, Tameside Business Park, Windmill Lane, Denton, M34 3QS

TELEPHONE	0161 336 3818
EMAIL	benji@shawston.co.uk
WEB	shawston.co.uk
LINKEDIN	shawston-holdings
CATEGORY	Sprinkler Comp Manf
CONTACT	Benjamin Crossley

As the UKs leading fire protection supplier Shawston are skilled in working with project managers, fire safety engineers and contractors to ensure that adequate and appropriate fire safety products are available to minimise the risk of injury or loss of life in the event of a fire. Shawston work hard training and advising our fire team on relevant regulations and approvals required within the fire sector. Working with premium brands to ensure all components comply with BS5041, BS5306, BS990 & building approval regulations, our range guarantees high product quality, manufactured to ISO 9001, authentiCATEd with certification, supplied through our nationwide branch network. Offering fire safety products including Victaulic, BlazeMaster CPVC, fire sprinkler heads, test valves, brackets, supports, dry and wet riser cabinets, flow and monitoring switches, wet riser valves, tubes, and fittings. All delivered from our nationwide locations via our own vehicle fleet with unrivalled customer service.

SHIELDFire, Safety&SecurityLtd

Unit 3 Endeavour Drive, Basildon, Essex, SS14 3WF

TELEPHONE	01708 377731
EMAIL	keith.johnson@shieldglobal.com
WEB	shieldglobal.com
CATEGORY	Sprinkler Comp Manf

SIKA Instruments Ltd

8 Astley House, Cromwell Business Park, Chipping Norton, Oxfordshire, OX7 5SR

TELEPHONE	07944 453718
EMAIL	sales@riserteq.com
WEB	riserteq.com
LINKEDIN	company/78105487
X	@SIKAInstruments
CATEGORY	Sprinkler Comp Manf
ACCREDITATIONS	LPCB product certification
CONTACT	Chris Cocklin

SIKA manufacture high quality flow switches for the Residential and Domestic fire sprinkler industry and is a family owned group which was founded in 1901. RiserTeQ use this latest VKF flow switch alarm which is LPCB certified to EN 12259-5 and WRAS approved on their Risers, making it suitable for all BS 9251:2021/ EN 16925:2018 installations. RISERTEQ Resi Riser valve sets solutions are ranging from 1 through to 2. Now also including a complete range of Drink Water approved Monitored ball valves 1 to 3 and Priority Demand Valves with Relays.

Snowdonia Fire Protection Ltd

The Old Smithy, Waunfawr, Caernarfon, LL55 4YS

TELEPHONE	01286 650235	FAX	01286 650413
EMAIL	sion@snowdonia-fire.co.uk		
WEB	snowdonia-fire.co.uk		
CATEGORY	Installer L1		
ACCREDITATIONS	IFCC		
CONTACT	Sion Greasley		

Solent Fire Protection Services Ltd

N4 Invincible, Daedalus Park, Daedalus Drive, Lee-on-the-Solent, Hampshire, PO13 9FX.

TELEPHONE	023 9251 0230	FAX	023 9251 1510
EMAIL	info@solentfire.co.uk		
WEB	solentfire.co.uk		
CATEGORY	Installer L2		
ACCREDITATIONS	LPCB - Level 3		
CONTACT	Barrie Dickinson, Simon Tooth		

South Wales Fire & Rescue Service

HQ Forest View Business Park, Llantrisant, Pontyclun, CF72 8LX

TELEPHONE	01443 23 2000
EMAIL	firesafety@southwales-fire.gov.uk
WEB	southwales-fire.gov.uk
CATEGORY	Assoc Fire & Rescue
ACCREDITATIONS	BSC (HONS) Fire Safety Engineering L5 Diploma Fire Engineering Design

South Wales Fire and Rescue Service continue to support, eduCATE and promote the installation of sprinkler systems to further reduce the risk from fire in existing building stock. The changes to Welsh legislation in 2014 focused on residential property reflecting the will and determination of the Welsh Government to change the way developers and providers THINK about fire safety and design of their properties and to direct measures towards a reduction in deaths and injuries from fire. It is our aim to protect the sustainability of new-build residential premises, encourage the protection of existing properties and safety of first responders in Wales.

South Yorkshire FRS

HQ, Eyre street, Handsworth, Sheffield, South Yorkshire, s1 3fg

TELEPHONE	0114 2532935
EMAIL	indocs@syfire.gov.uk
WEB	syfire.gov.uk
CATEGORY	Assoc Fire & Rescue

Spectrum Fire Protection (UK) Ltd

Middlemore Lane, Aldridge, Walsall, WS9 8SP

TELEPHONE	01922 744 466
EMAIL	enquiries@spectrumfire.co.uk
WEB	spectrumfire.co.uk

FACEBOOK Spectrum Fire Protection UK Ltd
INSTAGRAM spectrumfireprotection

ACCREDITATIONS BRE ISO 9001, BAFE SP101, LPS 1014, LPS 1048, LPS 1204, SafeContractor, Investors In People

CONTACT Emma Scott

Spectrum Fire Protection is a leading mechanical & electrical fire and life safety engineering company, based in the West Midlands with nationwide coverage. We specialise in the supply, design, installation, and commissioning of a comprehensive range of fire alarm and detection systems, suppression systems, sprinkler systems, and portable extinguishers. For over 30 years, we've been a trusted provider of compliant, tailored, and reliable services delivered by industry experts.

SPP Pumps Ltd

1420 Lakeview, Arlington Business Park, Theale, Reading, RG7 4SA

TELEPHONE 0118 932 3123 FAX 0118 932 3302
EMAIL Dave_Rumble@spppumps.com
WEB spppumps.com

CATEGORY Sprinkler Comp Manf
ACCREDITATIONS LPCB - Pumps

CONTACT Dave Rumble

Sprinkler Pumps UK Ltd

Ty Myrddin, Old Station Road, Carmarthen, Carmarthenshire, SA31 1LP

TELEPHONE 01269 847004
EMAIL Neil@sprinklerpumps.co.uk
WEB sprinklerpumps.co.uk

CATEGORY Assoc Trade

CONTACT Neil Hunt

Sprinkler Tech Ltd

Unit B1, Leasows Court, Hortonwood West, Telford, TF1 7AF

TELEPHONE 0800 040 7738
EMAIL dave@sprinklertech.co.uk
WEB sprinklertech.co.uk

CATEGORY Installer L1
ACCREDITATIONS IFCC

CONTACT Dave Vicarey

Sprinktec Ltd

TELEPHONE	+44 07477906105
EMAIL	Admin@sprinktec.co.uk
WEB	sprinktec.co.uk
LINKEDIN	Sprinktec
CATEGORY	Assoc Organisation
ACCREDITATIONS	SQA Approved Training Centre & BAFSA Approved training provider.

Sprinktec is the Leading Fire sprinkler system consultancy in the UK and Ireland, we carry out consultancy work for end users, builders and MEP Consultants, on line design training and we also carry out sprinkler designs for end users and Installers.

Staffordshire Fire & Rescue Services

Central Prevent & Protect, Headquarters, Pirehill, Stone, Staffordshire, ST15 0BS

TELEPHONE	01785 898752	FAX	01785 898395
EMAIL	Mark.Wetherill@staffordshirefire.gov.uk		
WEB	staffordshirefire.gov.uk		
FACEBOOK	/StaffsFire		
X	@StaffsFire		
CATEGORY	Assoc Fire & Rescue		
CONTACT	Mark Wetherill		

Staffordshire Fire and Rescue Service plays a key leadership role in promoting a better understanding of the benefits of automatic fire sprinklers and work continually to encourage building owners and developers to install these systems where there is a risk-based case for doing so. Whilst automatic fire sprinkler systems reduce the human, economic and environmental costs of fire in any building they are installed in, our focus is directed to those properties where the most significant impact can be achieved.

Suffolk Fire & Rescue Service

8 Russell Road Ipswich, Endeavour House, Ipswich, Suffolk, IP1 2BX

TELEPHONE	01473 260588
EMAIL	philip.cornford@suffolk.gov.uk
CATEGORY	Assoc Fire & Rescue
CONTACT	Philip Cornford

SureFire Sprinklers

Unit 11, The Granary, Stoke Mill, Mill Road, Sharnbrook, Bedford, MK44 1NP

TELEPHONE	01234 880514
EMAIL	matt@surefiresprinklers.com
WEB	surefiresprinklers.com
CATEGORY	Installer L1
ACCREDITATIONS	Firas, Construction Line Silver and Acclaim
CONTACT	Matthew Lander

Sureserve Compliance Fire Ltd

Wilson House, North Heath Lane, Horsham West Sussex, RH12 5QE

TELEPHONE	01444 460 140
EMAIL	Colin.packer@sureserve.co.uk
WEB	sureserve.co.uk
LINKEDIN	sureserve-fe
CATEGORY	Installer L1
ACCREDITATIONS	Level 1 Installer, IFCC

Sureserve Fire & Electrical, a specialist in the design, supply, installation and maintenance of Fire Safety Systems. This covers a comprehensive range of physical infrastructure and fire safety materials required for a building to respond to the outbreak of fire, save lives & protect buildings. Based in West Sussex, we have operatives distributed nationwide, allowing us to offer a comprehensive service maintaining and servicing nationwide offering the following services: - Sprinklers (BS9251) Fire alarms (BS5839) (BAFE Accredited) Passive Works & Fire Doors (Warrington FIRAS) Emergency lighting (BS5266) (BAFE Accredited) Dry risers & smoke vents (BS9990) Firefighting extinguishers (BS5306) (BAFE Accredited) Fire safety signage (BS:5499) Electrical compliance services (EICR Works) (NIC) . Fire Evacuation Systems . No Technical Fire Safety Checks.

Sustainable Fire Protection Limited

Unit F, Watton Farm, Watton Lane, Droxford, Southampton, S032 3HA

TELEPHONE	02394 226007
EMAIL	guy.watson@sustainablefireprotection.com
WEB	sustainablefireprotection.com
CATEGORY	Assoc Trade
CONTACT	Guy Watson

T

Tandi Sprinklers LLP

Unit 17, Furmston Court, Letchworth Garden City, Herts, SG6 1UJ

TELEPHONE	01462 671301
EMAIL	info@tandisprinklers.co.uk
WEB	tandisprinklers.co.uk
CATEGORY	Installer L1
ACCREDITATIONS	IFCC

Target Fire Systems Ltd

Otters holt, 3 West Lodges, Dunston Business Village, Dunston, Stafford, Staffordshire, ST18 9AB

TELEPHONE	+44 1753 549496
EMAIL	demi.ellsmore@targetfiresystems.co.uk
WEB	target-fire.co.uk
CATEGORY	Installer L1

Team Services Fire System

14 Stroud Road, East Kilbride, Glasgow, G75 0YA

TELEPHONE	+44 1355 454494
EMAIL	info@teamservicesscotland.com
WEB	teamservicesfiresystems.com
CATEGORY	Installer L1
ACCREDITATIONS	LPCB Level 1

Thameside Fire Protection Ltd

Unit 4 Sovereign Park, Cranes Farm Road, Basildon, Essex, SS14 3JD

TELEPHONE	01268 597999	FAX	01268 597998
EMAIL	quality.control@thamesidefire.co.uk		
WEB	thamesidefire.co.uk		
CATEGORY	Installer L3		
ACCREDITATIONS	LPCB - Level 3		

CONTACT Jake Harries – General Emails/Contact Information, John Allen

Design, fabrication, installation and maintenance of all fire sprinkler systems. All related fire protection work undertaken: fire alarms, extinguishers, dry risers, passive fire protection etc. Established 1985. Systems designed to BS EN 12845, BS 9251 and NFPA and FM Standards. Fabrication facilities. National coverage, including service contracts and 24 hour breakdowns Directly employed installation and service staffSpecial risk work and confined space operations Health and safety paramount Environmental accreditation to BS 14001. Emphasis on client satisfaction which brings 85% repeat business All market sectors covered, from high street retail to petrochemical.

Thermocable Flexible Elements

Pasture Lane, Clayton, Bradford, BD14 6LU

TELEPHONE 01274 882359 FAX 01274 882229
EMAIL philipwilkie@thermocable.com
WEB thermocable.com

CATEGORY Assoc Trade

CONTACT Philip Wilkie

Thermocable is a world leading UK based manufacturer with over 50 years experience in the design & manufacture of specialised heaters along with cable based sensing & detection technologies. Thermocable carries approvals with many global testing authorities. Our ProMinder range of products are designed to meet the requirements of BS12845 for trace heating and control of sprinkler pipe frost protection and can be operated as stand alone systems or can be interfaced with many common communication/fire control panels. The range consists of our ProMinder Standard control units and our ProMinder Advanced systems. ProMinder Standard control units can operate with any fixed wattage heater tapes, up to 3Kw loading along with self regulating heater tapes with a maximum loading of 2Kw. Our ProMinder Advanced system consists of a control unit and Thermocables own ProMinder Advanced trace heating cable. The system offers dual heating circuits within the same cable for additional reliability and has a power boost feature that provides rapid heat- up in extreme cold temperature.

Thor Fire Limited

Caroline house, High street, Stalybridge, Staylbridge, Greater Manchester, SK15 1PD

TELEPHONE 01613 397736
EMAIL aaron@thorfire.co.uk
WEB thor-fire.co.uk

CATEGORY Installer L1
ACCREDITATIONS LPS1048 Level 1

CONTACT Aaron Ashton

Tornatech Europe SA

Rue Des Sablieres Numero 45 Unite 68, 1435 Mont-Saint-Guibert, Belgium,

TELEPHONE	+32(0)10 84 40 01
EMAIL	deanc@tornatech.com
WEB	tornatech.com
LINKEDIN	/company/tornatech-inc
FACEBOOK	/tornatech
X	@Tornatech
CATEGORY	Assoc Trade
ACCREDITATIONS	SUL/FM
CONTACT	Dean Chilvers

Founded in 1985, TORNATECH is a family-owned company specializing in the conception and manufacturing of fire pump controllers listed by UL and approved by FM and in accordance with the widely recognized NFPA 20 Standard. In addition, we have developed controllers that meet various local standards and approvals such as A2P (France) and LPCB (UK), to name a few. We also manufacture related specialty products. We have manufacturing capabilities in Canada, Europe, and Dubai, a sales office in Singapore as well as sales representatives in the United States.

TPT Fire Systems Group Ltd

Avocet House, Aviary Court, Wade Road, Aviary Court, Wade Road, Basingstoke, Basingstoke, Hampshire, RG24 8PE

TELEPHONE	01256 365000	FAX	01256 365005
EMAIL	info@tpt-fire.co.uk		
WEB	tpt-fire.co.uk		
FACEBOOK	@TPTFireProjects		
X	@TPTFireMaint		
CATEGORY	Installer L4		
CONTACT	Gareth Richards		

At TPT Fire, we have over 40 years experience working with clients in London and beyond. Experts in installations, servicing and maintenance of your fire protection systems, we make it our priority to protect everything that matters most to you.With our comprehensive service and maintenance package, you can be confident that your domestic or commercial property is fully protected.

Triangle Fire Systems

Haywood Way, Hastings, TN35 4PL

TELEPHONE	01424 812557
EMAIL	info@trianglefiresystems.co.uk
WEB	trianglefiresystems.co.uk
X	@trianglefiresys
CATEGORY	Installer L1
ACCREDITATIONS	IFCC, LPCB ISO 9001:2015, ISO 14001: 20015
CONTACT	Colin Chantler – Head of Estimating.

Triangle Fire Systems (TFS) specialise in the design, supply, installation, testing and commissioning of fire sprinkler systems, dry & wet riser systems and passive fire protection. Our technical expertise, attention to detail, quality of support, on site supervision and workmanship has seen us establish a sound reputation within the fixed fire fighting systems industry. In addition to our Hastings Head Office we now have a London Office and Midlands Office. In 2019 and 2020, TFS was listed by the London Stock Exchange Group (LSEG) as a company to inspire Britain.

TT Electronics

2 Downgate Drive, Sheffield, South Yorkshire, S4 8BT

TELEPHONE	+44 (0)7736 083 497
EMAIL	thomas.aylward@ttelectronics.com
WEB	ttelectronics.com/brands/roxspur-measurement-and-control
CATEGORY	Sprinkler Comp Manf

Tyco Fire & Integrated Solutions (UK) Ltd

Tyco Park, Grimshaw Lane Newton Heath, bristol, Manchester, Bristol, M40 2WL

TELEPHONE	0161 455 4400
EMAIL	michael.scragg@jci.com
WEB	johnsoncontrols.com
CATEGORY	Installer L4
ACCREDITATIONS	LPCB Level 4

Tyco manufacture, configure, design and install the full range of fire suppression systems, all in accordance with the recognised British, European and International Standards. Our product range includes sprinklers and valves, special hazard systems and a wide range of related components and fittings. We serve a UK-wide client base through our network of branch offices and use in-house software to assist our teams in designing bespoke systems to meet a clients individual requirements. Fire suppression solutions from Johnson Controls can help you meet your most vital missions: safety and protection of people and property.

Tyco Fire Protection Products Ltd

Tyco Park, Grimshaw Lane Newton Heath, Manchester, M40 2WL

TELEPHONE	0161 259 4000
EMAIL	kate.scourfield@jci.com
WEB	johnsoncontrols.com
CATEGORY	Sprinkler Head Manf
CONTACT	Kate Scourfield

U

UK Sprinklers Ltd

Alma House, Grimshaw Lane, Middleton, Manchester, M24 1GQ

TELEPHONE	0161 762 0225
EMAIL	sales@uksprinklersltd.co.uk
WEB	uksprinklersltd.co.uk
FACEBOOK	/UKSprinklersLtd
X	@SprinklersUk
CATEGORY	Installer L4
ACCREDITATIONS	FIRAS Domestic and Residential Scheme FIRAS FHC self Certification (Equivalent to LPCB 1048 level 4)
CONTACT	Steve Griffiths

UK Sprinklers are part of PTSG Fire Solutions Group within PTSG Plc a niche service provider. UK Sprinklers carries out installation of residential, mixed-use, commercial sprinkler systems and dry/wet riser systems across the UK and Ireland. UK Sprinklers are FIRAS FHC and FIRAS R&D CertifiCATEd and can carry out self certification of all types of residential and commercial fire sprinkler systems. UK Sprinklers specialise in tall buildings with a residential bias and have installations in buildings up to 78 floors.

V

Victaulic

Units B1 & B2, Unit 14, The io Centre, off Gunnels Wood Road, Stevenage, SG1 2NB

TELEPHONE	01438 310690	FAX	01438 310699
EMAIL	Daniel.Bouttell@victaulic.com		
WEB	victaulic.com		
FACEBOOK	/VictaulicCompany		
X	@Victaulic		
CATEGORY	Sprinkler Head Manf		
ACCREDITATIONS	LPCB - Other Sprinkler Components, LPCB Sprinkler Heads		

Since 1919, Victaulics innovative solutions and design services continue to increase construction productivity and reduce risk, ensuring projects are completed safely, on time and within budget. With more than 3,500 employees and 40 international facilities, Victaulic helps customers in 120 countries succeed in the global construction industry. Learn more about how our solutions engineer confidence into every build at victaulic.com.

Viking SupplyNet Ltd

Unit 2, Byram House, Newborn Court, Chapel Street, Epworth, DN9 1HQ

TELEPHONE	01427 871000
EMAIL	vikinguk@viking-emea.com
WEB	viking-emea.com
CATEGORY	Sprinkler Head Manf
ACCREDITATIONS	LPCB - Other Sprinkler Components, LPCB Sprinkler Heads, Foam, Water Mist, Gas Suppression & Detection, Cibse CPD Course Provider
CONTACT	Stuart Stacey – Sales Manager, UK & Ireland

For more than 100 years, Viking has been a dependable partner in fire protection. We supply high quality fire protection technologies from Minimax Vikings research, development and manufacturing facilities, and complimentary quality products from other manufacturers. Installers, specifiers and users of fire protection systems are able to access a full range of components for water, water mist, foam, detection and gas-based fire suppression systems. Excellent technical support and high levels of product availability complete the market leading service offering. In addition, Viking understands the fire risks of various vertical markets such as hangars, oil & gas, data centers, logistics and more, and offers solution advice.

VVB Engineering UK Ltd

25 Watling Street, London, London, EC4M 9BR

TELEPHONE	0759 356 3714
WEB	vvb-eng.com
CATEGORY	Installer L1

W

Warrington Fire Testing and Certification Ltd t/a BM Trada

Holmesfield Road, Warrington, WA1 2DS

TELEPHONE	01925 646666	FAX	01925 646667
EMAIL	ian.donlon@warringtonfire.com		
WEB	warringtonfire.net		
CATEGORY	Assoc Organisation		

West College Scotland

Paisley Campus, Renfrew Road, Paisley, Renfrewshire, PA3 4DR

TELEPHONE	0800 052 9612
EMAIL	energy@wcs.ac.uk
WEB	westcollegescotland.ac.uk
FACEBOOK	/WestCollegeScotland
X	@WCS_EnE
CATEGORY	Assoc Organisation

West College Scotland has three campuses in Clydebank, Greenock and Paisley, and we are proud to be the only college in Scotland to deliver and certifiCATE fire sprinkler installation courses in association with BAFSA.

West Midlands Fire Service

Fire Service HQ, 99 Vauxhall Road, Birmingham, B7 4HW

TELEPHONE	07973 810 882
EMAIL	Darren.Marshall@wmfs.net
WEB	wmfs.net
CATEGORY	Assoc Fire & Rescue
CONTACT	Darren Marshall

West Sussex Fire & Rescue Service

Horsham Fire Station, 72 Hurst Road Horsham, West Sussex, Bognor Regis, West Sussex, RH12 2DN

TELEPHONE	0330 2223333
EMAIL	david.bray@westsussex.gov.uk
WEB	westsussex.gov.uk/fire
CATEGORY	Assoc Fire & Rescue
CONTACT	Debi Booker

West Sussex County Council (WSCC), is the Enforcing Authority for the Regulatory Reform (Fire Safety Order) 2005. WSCC is also the enforcing authority for the Safety of Sports Grounds Act 1975 and the Fire Safety and Safety at Places of Sports Act 1987. The contact details above should be used for queries regarding: Fire Safety Enforcement; General Fire Safety Advice -if there is no conflict with Fire Safety Order 2005 matters; information required under the Fire and Rescue Act 2004 Section 7 (ii) d which is required to ensure that incident commanders have up to date risk information to enable them to make effective tactical plans to resolve incidents; and Fire Investigation.

Woodward Fire Protection

The Courtyard, Severn Drive, Tewkesbury, Gloucestershire, GL20 8GD

TELEPHONE	01684 645860
EMAIL	richard.thompson@woodwardfire.co.uk
WEB	woodwardfire.co.uk
CATEGORY	Installer L3
ACCREDITATIONS	LPCB, FPA, ISO 9001, ISO 14001, ISO 45001, CHAS Premium Plus
CONTACT	Richard Thompson

Woodward & Co Fire Protection Ltd are a Level 3 LPCB accredited company who can provide the full package of design, supply, installation and commissioning of Fixed Fire Protection systems such as Sprinklers, Water Mist, Wet/Dry Risers, Hydrant Mains, Special Risk and Gas Suppression. We work nationally in all sectors including Commercial, Retail & Leisure, Manufacturing, Health & Education and Residential & Domestic.

Writech Industrial Services Ltd

Zone C, Mullingar Business Park, Mullingar, Mullingar, Westmeath, N91Y657

TELEPHONE	0161 820 5762	FAX	00 35344 934 9858
EMAIL	info@writechltd.com		
WEB	writechltd.com		

CATEGORY	Installer L3
ACCREDITATIONS	LPCB Level 3 / FIRAS FHC Self Certification (Equivalent to LPCB Level 4)
CONTACT	Eddie Pearson

Writech Industrial Services Ltd is an international Fire Protection Engineering company that offers a complete and comprehensive service in the Design, Fabrication, Installation, and Maintenance of ALL automatic fire suppression systems. Our Service department covers the whole of the UK (Including Northern Ireland, ROI, Germany, Holland, Sweden & Norway). We are fully conversant with all usual Fire Protection/ Suppression design standards such as BSEN12845, BS9251, NFPA, FM, VDS, FG, SDS. We can also work with other client/insurance-driven specifications to provide the required fire suppression solutions to suit client requirements.

X

Xylem Water Solutions UK ltd

Millwey Rise Industrial Estate, Axminster, Devon, EX13 5HU

TELEPHONE	+44 7827256382
EMAIL	daniel.hazlehurst@xyleminc.com
WEB	xylem.com
LINKEDIN	/company/xylem-inc/
FACEBOOK	/XylemIncorporated/
CATEGORY	Assoc Trade

Z

Zurich Resilience Solutions

6th Floor, The Colmore Building, 20 Colmore Circus, Queensway, Birmingham, B4 6AT

TELEPHONE	0161 683 5214
EMAIL	stuart.1.lloyd@uk.zurich.com
WEB	zurich.co.uk/business/our-expertise/risk-engineering
CATEGORY	Assoc Organisation
CONTACT	Stuart Lloyd – Global Practice Leader - Fire Protection

Zurich Resilience Solutions has a global risk management field team of more than 900 staff with over 150 in the UK using our insight and expertise to provide risk management solutions beyond insurance programs, including climate change, cyber risk, supply chain and fire protection.Guiding and supporting new and existing customers on selection, design, installation, acceptance testing and maintenance of all types of active fixed fire protection and detection systems, including sprinklers, gaseous, foam, wet chemical and water mist. Developing and testing new fire system technology and solutions to meet customers needs, Strong representation in multiple UK, European and global standards committees, and research activities to provide a more sustainable future for business, premises and people against the risk of fire and other perils.

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This eleventh edition of the British Automatic Fire Sprinkler Association Yearbook, published by BAFSA, is intended to serve as an essential reference book and a valuable addition to every fire safety professional's library and contains a full directory of BAFSA member companies.

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