

2018— 2021



Fire Sprinklers Greater London Review

FOLLOWING THE PUBLICATION of the Sprinkler Saves UK Annual Review 2021/22 the British Automatic Fire Sprinkler Association (BAFSA) have conducted further research to the effectiveness and efficiency of fire sprinklers.

This report focuses on incidents in Greater London where fire sprinklers were recorded as being present and operated having an impact. The fire data around the incidents provides powerful evidence as to the ability of fire sprinklers and other forms of Automatic Fire Suppression Systems (AFSS) in protecting our communities from fire.

Fire sprinklers play a significant role, as part of an appropriate package of fire safety measures reducing the impact of fire on people, property, and the environment.

Introduction

About BAFSA

BAFSA is the UK's leading professional trade association for the fire sprinkler industry, our primary objectives include providing authoritative information on the benefits of fire sprinkler systems and how fire sprinklers can play a significant role in saving life and property from the devastating effects of fire. To this end, BAFSA works closely with the government, Fire and Rescue Service (FRS), building control officers, insurers, architects, and town planners.

Our Vision

Fires are adverse events. They are destructive with their knock-on effects including their toxic and corrosive smoke and the environmental impact of fire water from firefighting operations.

We want to enhance protection against fire through the increased acceptance and use of fire sprinklers, protecting the most vulnerable residents in our communities from fire by the installation of fire sprinklers, and other forms of Automatic Fire Suppression Systems (AFSS) driving a culture change so that they are understood as the norm for the United Kingdom not the exception.

One way to support this is by raising awareness promoting, publishing data of fire incidents where sprinklers and other forms of AFSS have been present and operated having an impact. Providing further evidence of their reliability and effectiveness in containing, controlling, in some cases extinguishing fires, protecting life and preventing fire damage.

There is clear evidence that AFSS can be effective in the rapid suppression of fires preventing flashover and can therefore play an important role in achieving a range of benefits including protecting firefighters, individuals and the community in general. They also provide environmental benefits, reducing fire loss, damage to the environment, reducing carbon emissions and reducing the use of water

from the resulting firefighting operations preventing expensive restoration of buildings, replacing expensive equipment and plant machinery.

London

As the capital of the United Kingdom, London is also the largest city with a population of just over nine million and is projected to reach 10 million by 2035. It is home to one of the most ethnically diverse populations in the world. There are 32 boroughs in Greater London, except for the City of London which is a county and government district. The risk from fire in the capital is diverse, ranging from large industrial premises, complex retail shopping centres, major transport hubs, and large high-rise residential developments. The latter is a key area as half of the population of London live in flats compared to less than 20% in the rest of the country.

London Fire Brigade

London Fire Brigade (LFB) is one of the largest, firefighting, community safety rescue services in the world protecting residents and property in Greater London as well as those who work or visit the capital. They report attending 110,394 fire incidents for the year ending March 2022.

LFB vision is for London to be the safest global city in the world as set out in its current London Safety Plan, identifying how LFB will commit and contribute to that vision moving forward for the next four years. As part of this vision, LFB are committed to seeing a greater inclusion of AFSS in the capital, nationally supported by LFB AFSS Position Statement.

LFB have been promoting the benefits of fire sprinklers, encouraging housing providers, stakeholders, partners, and others to install AFSS to protect the most vulnerable residents from fire within Greater London. Resulting in a range of residential properties installed with AFSS following LFB sprinkler-funding to match fund their projects.

Electronic data

Fire and Rescue Services throughout the country feed fire data into the Incident recording system (IRS), which is collated on behalf of the Home Office and published in fiscal years. A reportable fire is an event of uncontrolled burning involving flames, heat or smoke attended by a UK fire and rescue service categorised as either primary fires, secondary fires, chimney fires or late call. This report focuses on primary fires involving buildings only within Greater London, where sprinklers were recorded as being present and operated.

Primary fires are generally more serious fires that harm people or cause damage to property and meet at least one of the following conditions: any fire that occurred in a (non-derelict) building, vehicle or (some) outdoor structures.

Primary fires are split into sub-categories for the purpose of this report we will be focusing on fires involving:

- **Dwellings** – includes all types of private residences, houses, purpose-built block of flats, houses in multiple occupation and self-contained specialized housing
- **Other residential** – includes places of communal living, care homes, residential accommodation like hostels, hotels, and student accommodation
- **Non-residential** – includes all types of commercial buildings/retail/industrial

Where fire sprinklers were recorded as being present and operated.

Review

This review is split into three parts.

Part A

Focuses on primary fire trends in Greater London for the period 2018-2021, Interrogating fire datasets captured by the IRS.

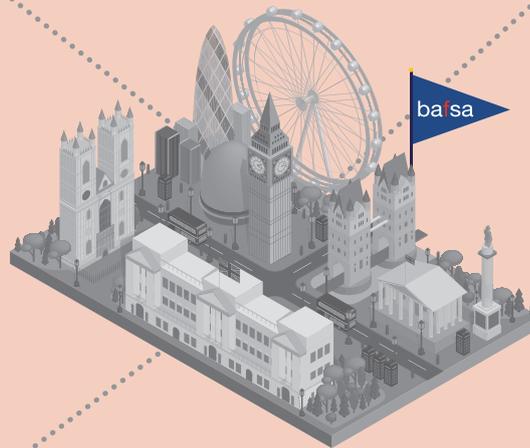
Part B

Interrogates fire datasets captured for the period 2018-2021 where fire sprinklers were recorded as being present and operated within the three property types contained within the primary fire sub-categories promoting the many ways AFSS protect lives and property.

- i. Dwellings – purpose-built block of flats
- ii. Other residential – Student Halls of Residence
- iii. Non-residential – retail, industry

Part C

- Collation of AFSS sprinkler save case studies focusing on the three primary sub-categories
- Sprinkler Saves UK, the designated website for reporting sprinkler activations



Part A

Fire trends ... Fires in Greater London

For the period 2018-2021, figure 1 identifies that the number of primary fires in Greater London each year has consistently decreased, over a four-year period.

Two explanations could account for this:

Firstly the positive ongoing effect of the LFB Community Strategy changing the focus of the LFB from being a predominately reactive emergency response service with fire prevention at the core of its activities increasing smoke alarm ownership by completing home fire safety visits. In 2021, LFB visited 80,449 dwellings.

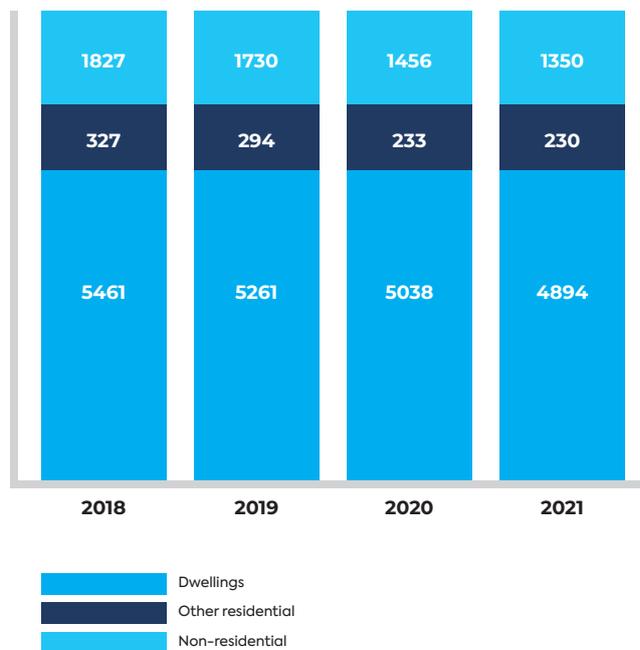
Secondly during the COVID-19 Pandemic 2020, London was one of the worst hit cities with high demands for the emergency services. Residents may not have called the LFB or were afraid to let the emergency workers into their home if it was a small fire.

This will need further investigation of fire data specifically the number of residential fires involving cooking since residents were forced to stay at home. Spending more time cooking will increase the risk of fire within the home as cooking fires are one of the main causes of fires in homes.

Many non-residential property types will have faced restricted access to the public and a reduction in face-to-face work plus changes in economic production.

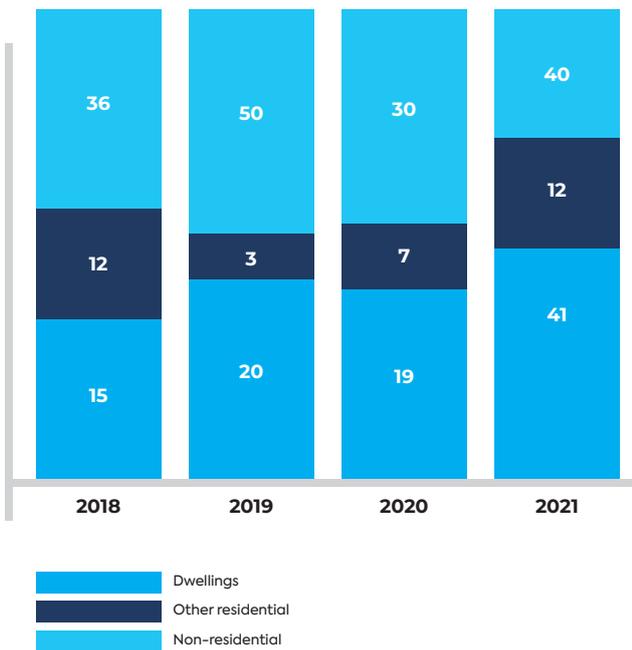
Overall, for the four-year period the number of primary fires accounted for 28,069 incidents with dwelling fires accounting for the largest number of primary fires representing 20,654 incidents.

Figure 1: Number of primary fires and property type 2018-2021



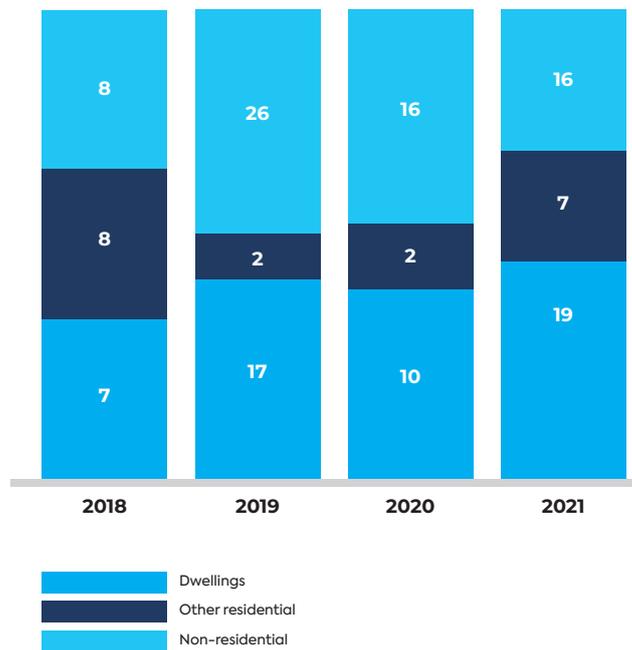
Source
The London Fire Brigade (LFB) publication,
Fire Facts, Fires in greater London 2021

Figure 2: Number of primary fires 2018–2021, where sprinklers were reported as present by property type



Sources
 The National government fire data set collated from fire incidents for the period of 2018–2020 where sprinklers were reported as being present and operated
 LFB fire data set collated from fire incidents for 2021 where sprinklers were reported as being present and operated

Figure 3: Number of fires where sprinklers were reported as being present, operated by property type



Sources
 The National government fire data set collated from fire incidents for the period of 2018–2020 where sprinklers were reported as being present and operated
 LFB fire data set collated from fire incidents for 2021 where sprinklers were reported as being present and operated

When we compare these figures with figure 2 for the same corresponding period, there were 282 incidents where sprinklers were reported as being present for the above-mentioned sub-categories. This should be no surprise due to the limited regulatory guidance for the installation of sprinklers in England.

From the 282 incidents reported where fire sprinklers were recorded as present, 138 incidents accounted for where sprinklers operated.

Key results

- Dwellings accounted for 53 activations
- Non residential premises accounted for 66 Activations
- Other residential premises accounted for 19 Activations

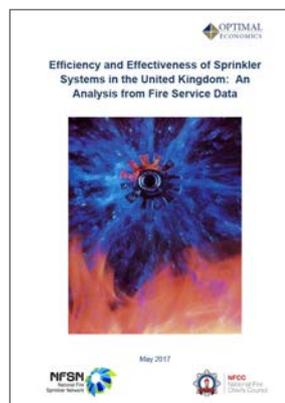
On average

2.87 incidents per month
 0.66 incidents per week

Supporting the evidence collated that sprinklers do work, the National Fire Chiefs Council and the National Fire Sprinkler Network have worked together to investigate the effectiveness and reliability of sprinkler systems, in an independent report completed by Optimal Economics¹ interrogating thousands of incidents providing detailed and

comprehensive analysis of the activation and performance of sprinkler systems used to control fires in buildings. The evidence indicates that sprinklers have an operational reliability of 94% and when they do operate, they extinguish the fire on 99% of occasions on a wide range of buildings.

This was further evidenced by the Sprinklers Saves UK Annual Review 2021/22, which reinforces the above-mentioned findings that fire sprinklers have been proven to have a good track record in reducing the impact of fire.



Notes

1. Efficiency and Effectiveness of Sprinkler Systems in the United Kingdom: An Analysis for Fire Service Data

Part B

Fire datasets

i. Dwellings: purpose-built blocks of flats

Post the Grenfell Tower fire, regulatory and sector changes relating to fire safety have occurred. One such change has been the increased installations of fire sprinklers across the country with housing providers, local authorities and developers voluntarily committing to install fire sprinklers in purpose-built block of flats on a new and retrofit basis.

The London Borough of Croydon was the first council to retrospectively fit fire sprinklers in their 26 high-rise residential blocks over 10 storeys with support and guidance from the LFB, this was completed in 2018-19. The benefits of this project were clearly identified following two separate flat fires in the same residential block in the space of two months in 2021. Both were controlled by the installed fire sprinklers.

It is anticipated the implementation of the Greater London Authority draft London Plan will have an impact in the future as it requires new developments in Greater London to achieve the highest standards of fire safety. This includes stating that suppression systems including fire sprinklers can reduce the risk to life and should be explored at an early stage of building design.

Figures are not available to confirm the number of fire sprinkler installations completed, or currently being undertaken in London. However, on the 10th anniversary of the Lakanal House Fire, an investigation by the Labour party² revealed 95% of high-rise social housing blocks are still without fire sprinklers.

Fire sprinklers in England have been required in all new high-rise blocks since 2007. Following changes to regulatory guidance in November 2020 for fire safety in England, the threshold height for sprinklers has been reduced from 30m to 11m for new residential purpose-built blocks of flats.

This is relevant as the 2020-21 English Housing Survey³ collated data on whether people felt safe from fires in their homes, it was found that those who live in low-rise (10%) and high-rise (26%) flats were more likely than those who live in other dwelling types (e.g. houses) to feel unsafe in their homes.

Fire data allows us to capture where sprinklers are reported as being present and operated

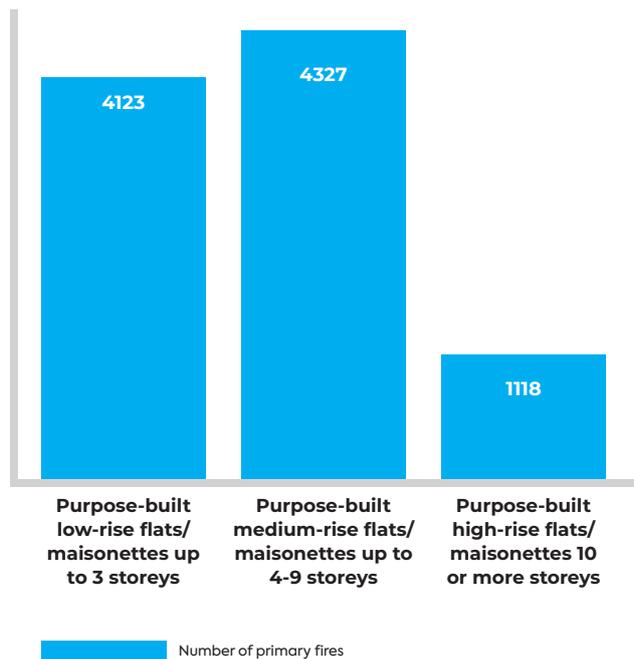
This provides a means to look at the trend of sprinkler incidents capturing an indication of presence of sprinkler installations in the building population of Greater London

Rate of fires within purpose-built block of flats

For fire data purposes, primary fires within purpose-built block of flats are sub categorised into three sections.

- Purpose-built low-rise flats/maisonettes up to 3 storeys
- Purpose-built medium-rise flats/maisonettes up to 4-9 storeys
- Purpose-built high-rise flats/maisonettes 10 or more storeys

Figure 4: Total primary fires in Greater London involving purpose-built block of flats 2018-2021



Source: The London Fire Brigade (LFB) publication, Fire Facts, Fires in greater London 2021

9,568 primary fires were reported in purpose-built low-rise, medium-rise, high-rise flats/maisonettes dominates the number of primary fires compared to those of purpose-built high-rise flats which is not surprising when you interrogate the English Housing Survey, Household report 2017/2018, which identified that:

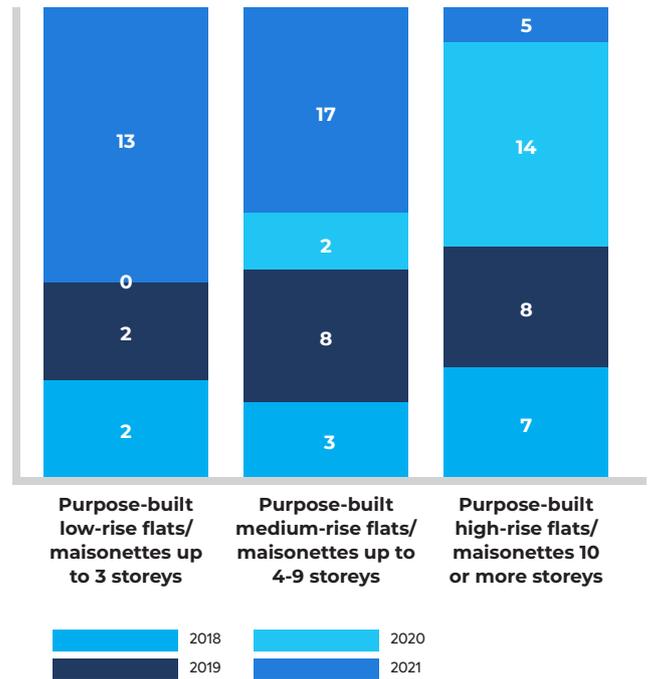
- 20% (4.7 million) of all households lived in flats.
- 14% (3.3 million) of all households lived in blocks of three storeys or less.
- The proportion of all households living in blocks of four to five, six to nine or 10 or more storeys was comparatively small; 4% (908,000), 1% (250,000) and 1% (193,000) respectively.

What is surprising is that purpose-built medium-rise flats/maisonettes account for the highest number of primary

Notes

- 2. Source, Labour press release, Housing/Sarah Jones
- 3. Source, National Statistics, English Housing Survey, 2020 to 2021: feeling safe from fire

Figure 5 Primary fires recorded where sprinklers were reported as being present for purpose-built flats 2018 - 2021



Sources: The National government fire data set collated from fire incidents for the period of 2018-2020 where sprinklers were reported as being present and operated.

LFB fire data set collated from fire incidents for 2021 where sprinklers were reported as being present and operated

fires which you would expect to be dominated by low-rise flats/maisonette fires. Further research into London's housing stock would have to be completed to identify a trend for this anomaly.

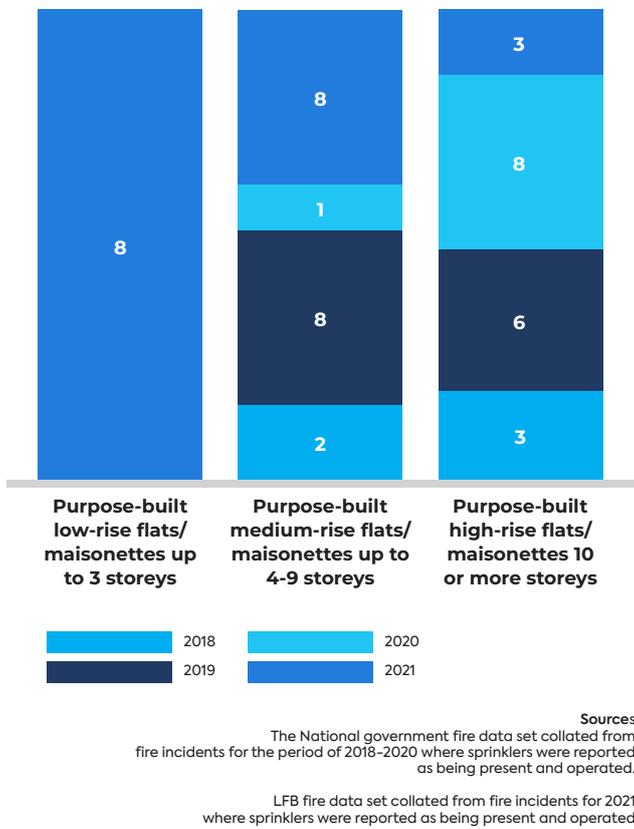
Of the 9568 primary fires recorded only 81 (0.84%) of these fires reported sprinklers being present. This low figure should be expected, London has experienced two booms in tall building construction, with over 500 built between the late 1950's and 70s and a smaller number constructed in the late 1990s. During this period regulatory guidance did not stipulate for the installation of residential sprinkler systems.

Whilst figure 5 shows an increase in the number of reported sprinklers present year on year, further investigation of fire data is required to identify a long-term trend. Following the post Grenfell Tower Fire, regulatory and sector changes relating to fire safety could account for the increase of fire sprinklers reported.

Further investigation of fire data is needed to identify a trend regarding the increase of sprinkler actuations, the numbers are still very low when compared to the overall number of primary fires for purpose-built flats.

“an investigation revealed 95% of high-rise social housing blocks are still without fire sprinklers”

Figure 6: Primary fires recorded where sprinklers were reported as being present, operated for purpose-built block of flats 2018/2021



From the 47 fire sprinkler activations, identified in figure 6, purpose-built flats/maisonettes of 10 or more storeys accounted for the highest number of incidents with 20 (42%), and a further 19 fire sprinkler activations for purpose-built flats/maisonettes four-nine storeys.

ii. Other residential: Student Halls of Residence

Student Halls of Residence are undoubtedly a challenging environment from a fire safety perspective with their own individual challenges. The student’s lifestyle is typically associated with a reduced level of caution when it comes to appreciating risk.

Regulatory guidance includes a specific requirement to install sprinklers in high-rise residential buildings with a top floor height of 11m above ground floor level. This does not apply to Student Halls of Residence regardless of height.

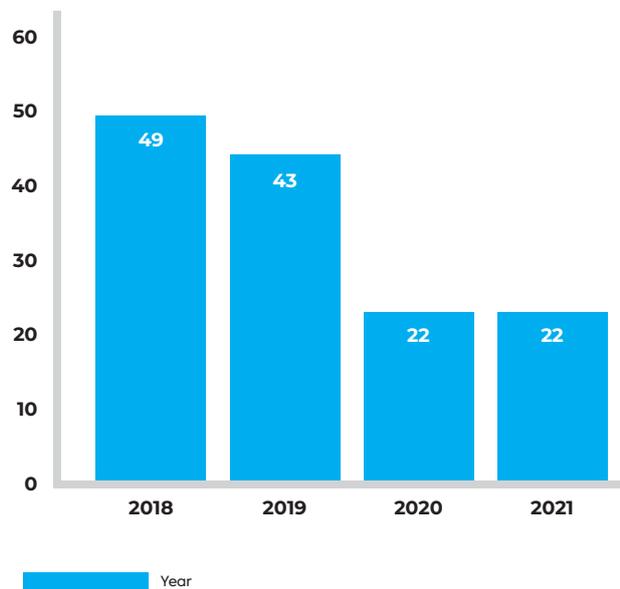
It is the view of BAFSA and the National Fire Chiefs Council that sleeping accommodation regardless of height should be provided with a further layer of safety from fire by the installation of AFSS.

The dangers of this discrepancy were identified following a fire that tore through the Cube high-rise student accommodation located in Bolton in 2019 resulting in over 200 firefighters and 40 fire pumping appliances to tackle the blaze at the six-storey Cube building housing students at Bolton University.

From 2018-2021, Student Halls of Residence in London accounted for 136 primary fires resulting in 10 injuries reported, with no fire-related fatalities. Of the 136 primary reported fires, only four fires were reported as having sprinklers present and operated, reflecting again the poor statutory guidance in England.

The number of fires were at their highest in 2018 when there were 49 fires that year reducing to 22 in 2021 during the recent years of the pandemic.

Figure 7: Number of fires in Student Halls of Residence



Source
 Fire Facts, Fires in Greater London 2021 - May 2022 – London Fire Brigade

Three of the fires were in the kitchen, two of which were extinguished, one contained/controlled, the remaining fire was in a bedroom, extinguished by the residential sprinkler system before the arrival of the LFB, clearly demonstrating the benefits of fire sprinklers

The dangers of cooking related fires were reinforced from Home office fire statistics, 66% of the 160 plus fires attended by FRS at Student Halls of Residence in 2019/20 were started by cooking appliances.

iii. Non-residential: industrial premises

London was a leading centre of manufacturing in the United Kingdom from the late 18th to mid-20th century with one sixth of the country’s manufacturing workforce being employed in the capital.

The manufacturing base has declined significantly over the last 50 years within London. Today the manufacturing sector accounts for only 2.2% of total employment and while this is a small proportion, more people are employed in manufacturing than other UK regions such as Greater Manchester and West Yorkshire both often perceived as manufacturing centres.

Regulatory guidance in England & Wales has no guidance for fire sprinklers in industrial premises. There is guidance for fire sprinklers in warehouse premises 20,000m² or above. Due to the nature of warehousing BAFSA supports the LFB position that AFSS for warehouses should be fully reviewed due to the potential risks posed to attending firefighters because of their size, height, complexity, and the way these buildings are used.

Figures are not available to confirm the number of sprinkler installations completed, or currently being undertaken across the country for industrial premises including warehouses. However, data on fire incidents allow us to capture where sprinklers are reported and if they have activated. This provides a means to look at the trend of sprinkler incidents and by extension, capture an indication of the presence of sprinkler installations in these types of premises.

For the period 2018-2021, 404 fires were reported involving industrial manufacturing, processing, and warehouses. Fire sprinklers were reported as being present in only 31 of these fires operating on 17 occasions.

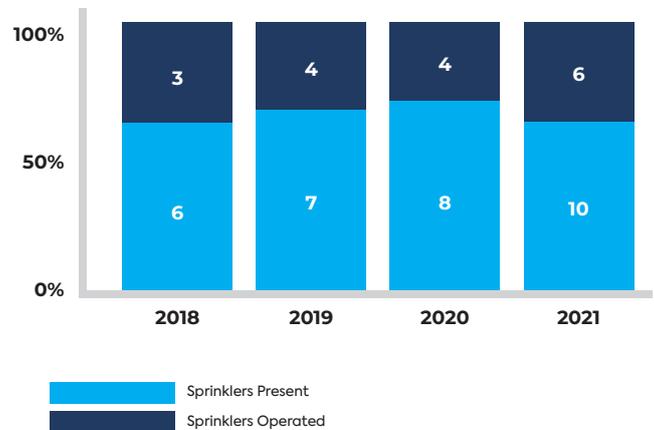
Whilst the figures are disappointing, until regulatory guidance is reviewed, the number of fires where sprinklered buildings were reported as being present and operated for industrial premises will remain relatively small compared to other categories.

iv. Non-Residential: retail

London contains some of the capitals most iconic department stores and complex shopping centres in the world with the building regulations having a strong emphasis on the provision of life safety systems in these locations. To emphasise this LFB, wrote an open letter to those responsible for fire safety in shopping centres to remind them of the importance of having properly working fire systems including AFSS.

Guidance to the Building Regulations for England and Wales (Approved Document B) calls for fire sprinklers in single-storey non-compartmented retail outlets with a floor

Figure 8: Industrial fires where sprinklers were reported as being present, operated.



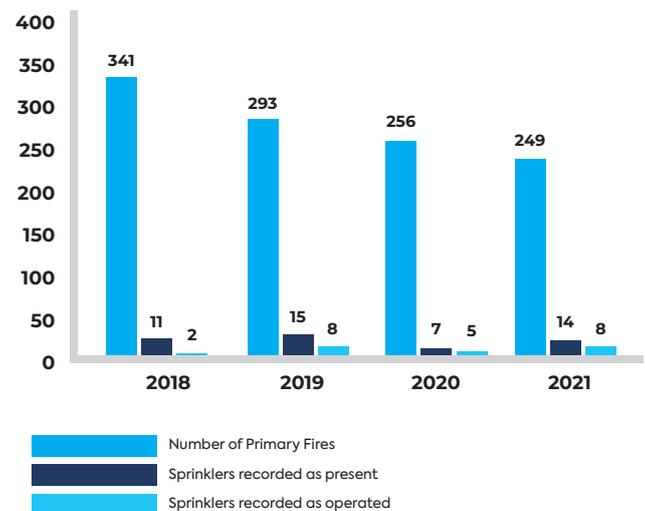
Sources
The National government fire data set collated from fire incidents for the period of 2018-2020 where sprinklers were reported as being present and operated.
LFB fire data set collated from fire incidents for 2021 where sprinklers were reported as being present and operated

area exceeding 2,000m². (Scotland and Northern Ireland have their own building standards which make similar recommendations).

For the period 2018-2021 retail primary fires accounted for 1,139 fires, a relatively small number when compared to dwelling fires for the same period which accounted for 20,654 (62%) fires.

The number of reported incidents where sprinklers were reported as being present was relatively low with only 47, of which 23 activations were reported.

Figure 9: Retail fires sprinklers reported as being present, operated



Sources
The National government fire data set collated from fire incidents for the period of 2018-2020 where sprinklers were reported as being present and operated.
LFB fire data set collated from fire incidents for 2021 where sprinklers were reported as being present and operated

Part C

Collation of AFSS case studies

To demonstrate the benefits of sprinklers, individual sprinkler saves have been chosen for each building category. The story around the incident provides powerful evidence to the ability of sprinklers to reduce the effects of fire.

Dwelling: purpose-built blocks of flat fire

Three incidents, two different outcomes:

- occupancy: purpose-built block of flats, 10 or more storeys
- where: Croydon
- when: 29th September 2021
- Fire and Rescue Service: London Fire Brigade (LFB)
- time of call: 07:07
- ignition source: candles/tea lights
- location of fire: bedroom
- AFSS: residential sprinkler system installed to BS9251:2014
- water supply: designated tank/pump

The benefits of a purpose-built block of flats retrofitting programme clearly demonstrated by Croydon Council following the tragic effects of the Grenfell Tower fire in June 2017. This was the second identical flat fire attended by LFB in the space of two months at the above property involving the use of candles/tea lights, the first incident took place on 21st July 2021.

On both occasions:

- 1 x sidewall fire sprinkler head actuated
- extinguishing the fire before the arrival of the LFB
- location of fire: bedroom in flat
- no fire damage reported
- no injuries reported

As part of the design specification, Croydon Council had taken the decision for the sprinkler alarm to be connected to a remote monitoring station allowing LFB to be immediately mobilised to deal with the incident.

Benefits:

- No delay.
- Relying on a third party to call the emergency services.
- Isolating the water supply on arrival following confirmation the fire was extinguished.

Croydon Council estimated that rebuilding costs for both incidents involved the repair of one flat entrance door where entry was affected by the LFB to gain access to the flat.

In contrast on 12th October 2021 a similar fire occurred in a high-rise residential block involving a candle in Battersea a residential fire sprinkler system was not fitted.

The outcome on this occasion:

- Flat on the 20th floor destroyed by fire.
- Two people evacuated the affected flat before the arrival of the fire and rescue service.

- A woman and child taken to hospital
- LFB resources, 10 fire pumping appliances, around 70 Firefighters
- Residents requiring temporary accommodation



Credit LFB

Other Residential: Residential Care Home fire

- occupancy: Residential Care Home
- where: Hillingdon
- when: 10th July 2021
- Fire and Rescue Service: London Fire Brigade (LFB)
- ignition source: batteries
- location of fire: bedroom
- AFSS: Residential sprinkler system

A fire involving batteries located in the first-floor bedroom activated the premises residential sprinkler system resulting in one fire sprinkler head operating, raising the alarm. Outcome the fire was contained/controlled with no rapid-fire growth reported before the arrival of operational crews.

Residents living in care homes are often some of the most vulnerable people in our communities with physical or cognitive impairment that can present increased fire risk and impair the ability to:

- react to a fire and/or an alarm
- respond to and/or escape a fire

This incident clearly identifies the benefits of fire sprinklers in the event of a fire:

- Further layer of safety from fire for the most vulnerable residents of our community.
- Staff provided with extra time to implement the premises emergency action plan.
- The safety of firefighters reinforced, providing time for crews to implement their tactical action plan.
- Fire contained to compartment of origin.

Unfortunately, there is still no Building Regulation requirement in England for care homes to be fitted with

sprinklers. Unlike Scotland and Wales, where the installation of sprinklers is mandatory in new residential care homes.

This is despite the National Fire Chiefs Council (NFCC) urging the government to improve sprinkler regulations in England, further supported by LFB, whose vision is to encourage the promotion of AFSS both within London and nationally, to meet the aims and objectives contained within their LFB, London Safety Plan and AFSS Position Statement. Which states “We recommend the inclusion of AFSS in all new, existing residential care homes (retrofitting) subject to a risk-based approach that should include consideration of the vulnerability of the residents.”

In contrast in London on 21st April 2022, in the early hours of the morning at 01:46, LFB were mobilised to a residential care home fire in Raynes Park.

It was established a residential fire sprinkler system was not installed, the outcome:

- six fire pumping appliances and round 40 firefighters required to extinguish the fire
- multiple evacuations of the premises
- one bedroom destroyed by the fire, with smoke damage to adjacent rooms

Fortunately no injuries or deaths were reported unlike the tragic residential care home fire in Hertfordshire in April 2017 that sadly killed two residents with 33 residents rescued by Hertfordshire Fire & Rescue Service, where it was reported fire sprinklers were not installed.

The families of the two much loved mothers who lost their lives in this tragic fire have backed the NFCC campaign urging government to improve fire safety regulations in England. The inquest into the deaths concluded “inadequate compartmentation in the roof space had contributed to the deaths”.

Evidence from the fire service and an independent fire safety expert highlighted if a sprinkler system had been installed, the two deaths were likely to have been prevented.



Credit Hertfordshire FRS

**Put a
firefighter
in every room**

**INSTALL
SPRINKLERS**

British Automatic Fire Sprinkler Association

bafsa



Non-residential: industrial processing fire - a tale of two similar fires

- occupancy: industrial processing
- use of premises: Customer Fulfilment Centre (CFC)
- where: Erith
- when: 16th July 2021
- time of call: 12:42
- Fire and Rescue Service: London Fire Brigade (LFB)
- ignition source: batteries
- location of fire: the grid
- AFSS: Residential sprinkler system

LFB mobilised 15 fire pumping appliances with over 100 firefighters to a fire involving a large three-storey warehouse divided into 30 loading bays where robots carry out food picking and packaging. The fire was identified as being deep seated creating a developing/complex operation for the LFB.

Four fire sprinkler heads actuated containing/controlling the fire, providing time for the LFB to develop an operational tactical plan to extinguish the fire, fire damage was limited to a small section of less than 1% of the grid. The cause of the fire was a collision of three bots on the grid.

The incident caused short term disruption to operations with customer orders recommenced from 18th July with bots working on the grid. In contrast compare this incident to similar fire in Andover involving a CFC in February 2019 requiring the attendance of over 20 fire pumping appliances with over 200 firefighters. The fire service declared a major incident with a total loss of the building due to the fire.

The cause of the fire was due to arching occurring in the charging process of a robot, the building was fully sprinklered. A report from Hampshire Fire & Rescue Authority now reveals that the warehouse operator turned off the sprinkler system for five minutes in the hope that employees could complete extinguishment.

It was not until after this time that Hampshire Fire & Rescue Service (HFRS) were called. Five minutes is a long time when a fire has already caused a sprinkler actuation. On arrival, instead of finding a fire suppressed most probably by one or two sprinklers, HFRS met a large fire that was out of control and in an area difficult to access.

Had the sprinkler system not been turned off, the fire would have been contained or controlled. The benefits:

- HFRS provided time to devise a tactical operational plan.
- An extra layer of safety from fire provided for operational crews.
- Increased time allocated for evacuation of the premises.

Non-residential: retail

- occupancy: Shopping centre
- where: Stratford
- when: 17th October 2021
- time of call: 10:03
- Fire and Rescue Service: London Fire Brigade (LFB)

LFB were called to an electrical fire within a first-floor retail unit, resulting in the shopping centre being evacuated with no injuries reported.

The commercial fire sprinkler system activated controlling/containing the fire before the arrival of operational crews who extinguished the fire using two jets. It should be noted fire sprinklers control the size of the fire, reducing the amount of heat, smoke generated.

In shopping centres, it is common practice to protect the commercial unit/shop unit with fire sprinklers to contain the fire. Fire sprinklers are not normally installed in the malls due to limited combustible load in these zones.

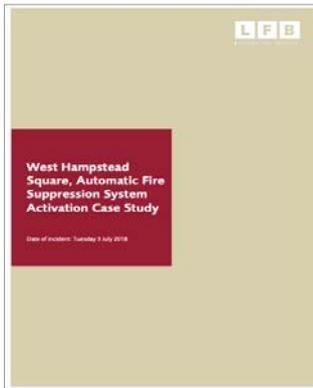
Fires have significant impact on business continuity which can lead to business closures and environmental impacts and require major FRS resources.

This was clearly demonstrated at a fire that occurred in July 2019 at the Walthamstow Mall resulting in over 20 fire appliances and more than 110 firefighters attending the incident. The shopping centre remained closed for two months with the damaged portion of the mall reopening in October 2020.

Shopping centres are complex buildings that often include a variety of uses within them, leisure areas, hotels, apartments, cinemas, and offices. Therefore, retail centres require a high standard of management compared to other building uses. This vitally extends to ensuring the premises fire safety systems are operable in the event of a fire including fire sprinklers, fire alarm system, dry/wet risers, smoke extraction units and fire curtains

As a consequence, LFB published an open letter in 2020, to those responsible for fire safety in shopping centres highlighting the importance of maintaining fire safety systems including the premises fire sprinkler system.

“A sprinkler system can only suppress and contain a fire thus protect a building, if it is allowed to operate as installed to do so.”



West Hampstead Balcony Fire Case Study

One of the most high-profile sprinkler saves in London occurred in the balcony fire at West Hampstead on 3rd July 2018 involving a purpose-built block of flats of seven floors. In the space of 19 minutes from the actuation of the first fire sprinkler head, five apartments were exposed to fire and heat activating 12 fire sprinkler heads which is unprecedented in a residential fire.

LFB commenced an investigation into the incident commissioning the case study report to raise awareness in the residential sector of the beneficial/effectiveness impact that incorporating Automatic Fire Suppression Systems can have in a multipoint residential high-rise fire.

The Sprinkler Saves Annual Review 2021/22

Adds further evidence, highlighting the importance of collating, reporting sprinkler saves from across the United Kingdom. A sprinkler save is where one or more sprinkler heads activate containing, controlling or in some cases extinguishing a building fire. The story around the incident provides powerful evidence as to the ability of sprinklers to reduce the effects of fire.

The review uses information collated from 51 fire incidents, during financial year ending March 2022, in which sprinklers were reported as having an impact. The reported incidents span a wide range of building types and occupancies

- The evidence clearly identifies fire sprinklers:
- Can provide an additional layer of fire protection before the arrival of the fire and rescue service.
 - As part of a holistic approach a reliable, cost-effective fixed fire installation that can reduce risk of death, injury, property damage.
 - Should be made mandatory in all new residential buildings as has been the case in Wales since 2016.

Find details of all the latest sprinkler activations reported to the website at www.sprinklersaves.co.uk



Reporting a Sprinkler Save

The importance of reporting a sprinkler save should not be underestimated. We want to enhance protection against fire through the increased acceptance and use of fire sprinklers by encouraging the wider acceptance and installation of fire sprinklers driving a culture change so that fire sprinklers are understood and accepted as the norm in the United Kingdom.

Reporting a sprinkler save will make a difference if you hear of a save report it.

To submit a sprinkler save use the designated sprinkler activation report form downloadable from www.sprinklersaves.co.uk. All completed sprinkler saves to be forwarded to: nick.coleshill@bafsa.org.uk

British Automatic Fire Sprinkler Association

bafsa



BAFSA.ORG.UK

British Automatic Fire Sprinkler Association

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Ensure the highest level of protection from fire

Demand an automatic fire sprinkler system which ticks all the boxes



Designed to BS9251 or EN 12845



Installed by a 3rd Party approved contractor



Utilising 3rd Party certificated products

Anything less will not protect you or your property



**FIRE KILLS
SPRINKLERS KILL FIRES**

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