

Appendix 1 - Greater Manchester Fire and Rescue Service (GMFRS) Website Statement - 20th September 2018

Position statement

It is the position of both the National Fire Chiefs Council (NFCC) and GMFRS, that sprinklers are an invaluable active fire safety feature that saves lives in the event of a fire, reducing both property damage and the business impact on the premises

SPRINKLERS CAN:

- Reduce death and injury from fire
- Reduce the risks to fire fighters
- Protect property and heritage
- Reduce the effects of arson
- Reduce the environmental impact of fire
- Reduce fire costs and the disruption to the community and business
- Permit design freedoms and encourage innovative, inclusive and sustainable architecture

More questions answered...

Why are sprinklers important for life safety?

In a large, fast moving fire people often do not know which way to go and may not be able to use hose reels or fire extinguishers.

Sprinklers are completely automatic. They work by themselves and can stop heat and smoke from trapping people.

How can we be sure sprinklers will work in a fire?

Most sprinkler systems are very simple. There are normally no moving parts to fail. The pipes are full of water, usually from the mains. The sprinklers over the fire burst open when they get hot and spray water on the fire. If you have water in your pipes the sprinklers will work.

What do sprinklers cost?

The cost will vary depending on what your building is made of, what you store in it, what you use it for and how good your water supply is.

A useful comparison is that sprinklers cost less than carpet. But unlike carpet, which wears out, your sprinkler system will protect you for the life of the building.

How do sprinklers operate?

Fire sprinklers are individually heat-activated and connected to a network of water pipes. When the heat from the fire plumes hot gases reach the sprinkler and at a specific temperature (usually about 68 deg. C) that sprinkler activates delivering water directly to the source of the heat.

Why are sprinklers so effective?

A fire starts small. If detected and tackled early enough a fire can be controlled with very

little water. Fire sprinklers operate automatically even if you are not at home releasing water directly over the source of the fire and sounding the alarm.

How reliable are sprinklers?

Records from Australia and New Zealand (where all fires must be reported) between 1886 and 1986 show that sprinklers controlled 99.7% of all fires where they were fitted.

What about smoke?

Smoke damage is a major cause of loss in fires. In serious cases smoke is the main cause of death. Sprinklers wash the larger particles out of smoke reducing its density and toxicity. In addition the water cools the smoke making it less harmful.

Quick response sprinklers are now available that will attack a fire even earlier in its growth. Fast attack dramatically reduces the amount of smoke that a fire can produce.

What is the life safety record for sprinklers?

Apart from explosions there have never been multiple fatalities in a fully sprinklered building in the United Kingdom.

The total number of deaths from fire, world-wide in sprinklered buildings is only 50 compared to thousands in unprotected buildings. This is a record no other fire system can match.

Can sprinklers reduce damage to the environment?

Sprinklers can increase the sustainability and life expectancy of buildings, by limiting fire development and significantly reducing the amount of smoke, CO₂ and other pollutants. Sprinklers use much less water to put a fire out than fire service hoses - and lead to much less water damage.

Do sprinklers allow greater building design freedoms?

Sprinklers can allow much more interesting use of space. New building codes work on a performance-based approach to the safety of a building, so by including sprinklers, designers can achieve greater freedom to fulfil their overall vision. They can include features such as:

- Larger compartment sizes
- More open spatial designs
- Reducing exit door widths
- Reducing periods of fire resistance to elements of structure
- Reducing constraints such as distances between buildings

How sprinklers can benefit different building-types

Residential care homes

Older people, people with mental health problems and those with mobility issues are groups that are most at risk from fire. We consider that all residential care homes should be fitted with sprinklers. In Scotland there is already a requirement within Building Standards for all new build residential care buildings to have automatic fire suppression systems installed and we think that there should be the same level of protection throughout Britain.

Schools

Hundreds of schools in the UK have a fire each year. The impact of these fires is significant, not just in financial terms, but also in terms of the devastating effect on the communities they serve and the disruption to students, teachers and families. The effects on children's education are not confined to lost course work but often include longer travelling times, disrupted social groups and poorer facilities. If sprinklers were considered at the design stage of building a new school or the refurbishment of existing buildings, the costs can be kept to a minimum (as low as one per cent of build costs).

Domestic premises

Fires in the home still account for the greatest number of fire deaths and injuries each year. While it would be ideal for all domestic premises to have sprinklers, it is recognised that this is not practical or realistic. We advocate the fitting of sprinklers in the homes of people most at risk from fire - younger people, older people, people with mental health problems and those who have mobility problems. We work in partnership with developers, local authorities and social housing landlords to encourage the installation of sprinklers in the homes of the most vulnerable people.

Commercial premises

There is a compelling case to be made for sprinklers in any commercial premises on the basis of loss of production or interruption to business as this is a real impediment to business continuity and productivity. It is a recognised fact that 85 per cent of small and medium businesses that suffer a serious fire either never recover or cease trading within 18 months. The installation of sprinklers in these types of premises could prevent this. Losses due to fire would reduce and fewer businesses would be forced to relocate.

Appendix 1 (continued)

GMFRS website statement on Myths and Facts about sprinklers

Sprinklers: myths and facts - 23rd March 2016

Sprinklers have been proven to reduce the impact of fire. They are a potentially life saving tool that bring many benefits. There are some common misconceptions about sprinklers that are stopping people installing them. It is important that these sprinkler myths are dispelled.

MYTH: In a fire all the sprinkler heads go off together.

THE TRUTH: Only the sprinkler head(s) directly affected by the fire is triggered.

MYTH: Water from the sprinkler causes more damage than the fire.

THE TRUTH: Sprinklers attack the fire quickly and directly so less water is needed. As they also operate the fire alarm, the flow can be quickly turned off when the fire is out.

MYTH: A smoke detector will always provide enough protection.

THE TRUTH: Operational smoke detectors do save lives, however they do nothing to extinguish a growing fire.

MYTH: Sprinklers go off accidentally.

THE TRUTH: The odds of winning the lottery are greater than the 16 million to one chance of a sprinkler malfunction.

MYTH: Sprinklers are ugly and unsightly.

THE TRUTH: Modern sprinklers are specially designed to meet the needs of architects in offices, hotels, shops, hospitals and prestige buildings. They are compact and elegant. In most buildings the public are usually unaware that sprinklers are fitted.

Miniature sprinklers are little bigger than a 50p piece and are neat and robust. They can be fitted with ceiling rosettes and painted to match any colour scheme.

Concealed sprinklers are recessed and covered by a flat plate flush with the ceiling. They are unobtrusive and almost invisible. Concealed sprinklers are ideal for clean areas, where there is restricted headroom or vandalism is a problem.

MYTH: Sprinklers cause water damage.

THE TRUTH: Reports of water damage from fires in buildings with sprinklers are often exaggerated. Only the sprinklers over a fire open. All the others stay shut. A sprinkler opening by accident is almost unheard of.

Firefighters will use significantly more water from hoses to do the same job as a sprinkler.

A valuable item sprayed with water from a sprinkler as it puts out a fire can usually be recovered or restored. One that is burnt to a cinder and flushed down the drain by a fire hose is another matter!

If there is a fire the water from one or two sprinklers is a small price to pay for saving a complete building, its contents or even a life/lives.