

Why Sprinklers?

NFCC and the National Fire Sprinkler Network (NFSN) carried out research to investigate the effectiveness and reliability of sprinkler systems. They found that sprinkler systems:

- Operate on 94% of occasions demonstrating very high reliability
- When they do operate they extinguish or contain the fire on 99% of occasions

In both converted and purpose-built flats, sprinklers are 100% effective in controlling fires¹.

Sprinklers 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 plant².



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extinguish the fire
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#ThinkSprinkler

NFCC
National Fire
Chiefs Council

Sprinklers will protect your family

Fire in the home is responsible for most fire deaths and injuries in the UK. Your chance of experiencing a serious fire in the home in your lifetime is around 1 in 5.

Sprinklers do not rely upon human factors such as familiarity with escape routes or emergency assistance. They go to work immediately to reduce the danger.

¹ <https://www.nationalfirechiefs.org.uk/campaigns> [28-04-2022].

² <https://www.bafsa.org.uk/sprinklers-life-safety/> [28-04-2022].

Sprinklers prevent the fast developing fires of intense heat which are capable of trapping and killing dozens of building occupants³.

Parkside Tower Chelmsford Case Study⁴

At approximately 20:10 hours on Sunday 27th March 2016 a kitchen fire occurred on the 13th floor of a 15 storey tower block in Chelmsford, Essex. The fire involved cooking oil within a chip pan which had ignited.

At the time of the fire, the occupier of the flat had gone into the bedroom to make a phone call leaving the pan unattended. The occupier was alerted to the fire by a smoke detector actuating and left the flat.



Photograph: Parkside Tower Chelmsford

Source: Essex County Fire and Rescue Service Sprinkler Funding Report 2013-2021 Fire Engineering Department .

The premises were fitted with a sprinkler system and the side-wall head nearest to the cooker reached its activation temperature and activated. The fire was controlled by the single sprinkler head and no other sprinklers in the flat or building operated as a result of the fire.

Fire damage is reported to have been confined to the kitchen itself (5m²) consisting mainly of smoke damage. No injuries are reported to have occurred.

³ <https://www.bafsa.org.uk/sprinkler-systems/faqs/> [28-04-2022].

⁴ Essex County Fire and Rescue Service Sprinkler Funding Report 2013-2021 Fire Engineering Department .

Occupier was able to return to their flat the same day, without the quick reactions of the sprinkler system the occupier would have been made homeless and had to be rehoused until repairs carried out.

The 53 flat building was the first to be awarded funding from the ECFRS in May 2014. The total cost of the project was £170,000. ECFRS contributed £50,000, the maximum amount allowable for a single project under the scheme⁵.

Worried about water damage ?

Often the worry of water damage will be the only factor preventing a Sprinkler system being installed, but what is often forgotten is that without a sprinkler system fire will destroy all in its path. BAFSA published the following facts⁶:

A sprinkler head discharges between 35 - 100 litres per minute (depending on the design of the system). The discharge will begin around 10 - 30 seconds after the fire produces enough heat to operate the sprinkler head. No fire brigade, however efficient and effective, is likely to reach the premises involved in less than four minutes and unlikely to get to the seat of the fire for five - ten minutes after they have arrived. When fire crews get to work, they are likely to pump 1000 – 3000 litres per minute on what will inevitably have become a much larger fire. You should remember that even if you have an automatic fire detection system linked to the fire service via a central alarm station it could take up to three minutes for the call to reach your nearest fire station.

A great example can be seen from London Library, there sprinkler system prevents fire damaging books of great value, books effected by fire are lost forever however a wet book can be professionally dried and returned to its original condition.

Sprinklers are proven to save lives and property, improve firefighters safety, minimise environmental damage and reduce economic loss⁷.

Additionally sprinklers play a vital role in reducing harm and protecting vulnerable people.

A study of all primary fires between 2013 and 2018 shows that hat you are 22% less likely to require hospital treatment if you are in a fire which is controlled by a sprinkler system. You are also 18% more likely to receive a precautionary check at the scene of the incident. A precautionary check is the lowest recordable level of support for a casualty by attending crews⁸.

The most recent report commissioned by The National Fire Chiefs Council (NFCC), and National Fire Sprinkler Network (NFSN) on efficiency of sprinklers can be accessed here:

⁵ Essex County Fire and Rescue Service Sprinkler Funding Report
2013-2021 Fire Engineering Department .

⁶ https://www.bafsa.org.uk/wp-content/uploads/bsk-pdf-manager/2020/08/BIF06a_v2020.pdf [28-04-2022]

⁷ <http://www.sprinklersaves.co.uk/> [28-04-2022].

⁸ <https://www.nationalfirechiefs.org.uk/write/MediaUploads/NFCC%20Guidance%20publications/Protection/Efficiency and Effectiveness of Sprinkler Systems in the United Kingdom-Supplementary Report.pdf> [28-04-2022].

[Efficiency and Effectiveness of Sprinkler Systems in the United Kingdom-
Supplementary Report.pdf \(nationalfirechiefs.org.uk\)](#)