

This report is the fourth in a series that will provide a detailed analysis of compound data¹ on fire incidents in Great Britain where sprinklers systems were reported over the period of 2018/19 to 2020/21.

The aim of the analysis is to focus on identifying trends, discussion points and insights relating to the use of sprinklers in purpose-built blocks of flats within Great Britain. The outcome of which will provide evidence that can be used to influence change making the installation of sprinklers the norm not the exception.

INCIDENT DATA REPORT ... FOCUS ON SPRINKLERS

British Automatic Fire Sprinkler Association

bafsa

In the previous report it was identified that.

- 197 incidents accounted for all sprinkler activations in blocks of flats, with 56 activations inside the flat and 141 outside the flat
- Refuse store fire incidents account for the highest number of incidents where sprinklers are recorded as being present and activated outside the flat in blocks of flats. Whether the installation of sprinklers is limited to these refuse stores alone or extended across the whole building is unclear from the data.

- Inside the flat, kitchen fire incidents accounted for the highest number of events where sprinklers are recorded as being present and activated in purpose-built blocks of flats.

This report will focus on the number of sprinkler heads which have activated in the following building types:

1. Purpose built flats low rise, 1-3 storeys
2. Purpose built flats medium high rise, 4-9 storeys
3. Purpose built flats high rise 10 or more storeys

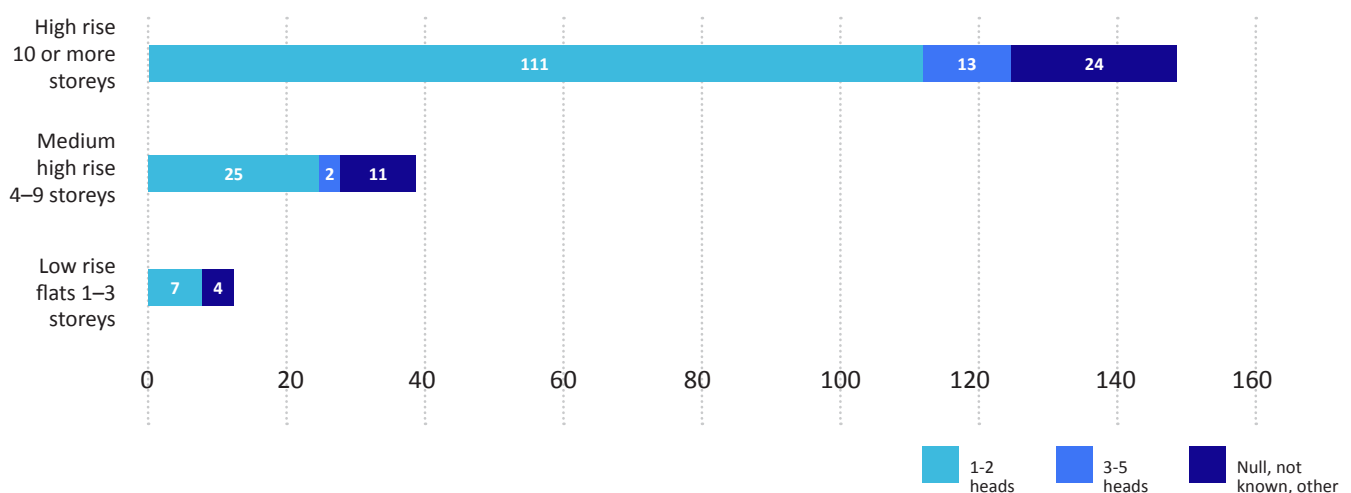


Figure 1. Number of sprinkler heads activated in purpose-built block of flats

73% of all incidents where sprinklers activated recorded 1 or 2 sprinklers heads operating.

1. Source: FOI Requests for Incident Recording System Data relating to primary fire building attended by FRSs in which sprinklers were present for England, Scotland, and Wales for the financial years 2018/19 to 2020/21

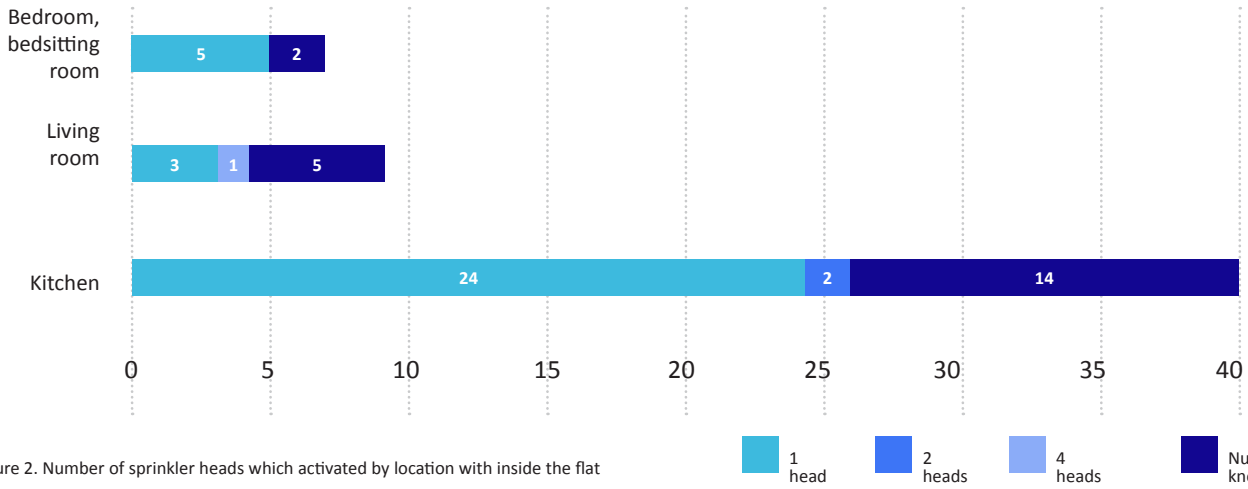


Figure 2. Number of sprinkler heads which activated by location with inside the flat

61% of fire incidents reported as starting inside of flats involved the operation of 2 heads or less. 57% with one head only. The majority as expected were reported to start in the kitchen.

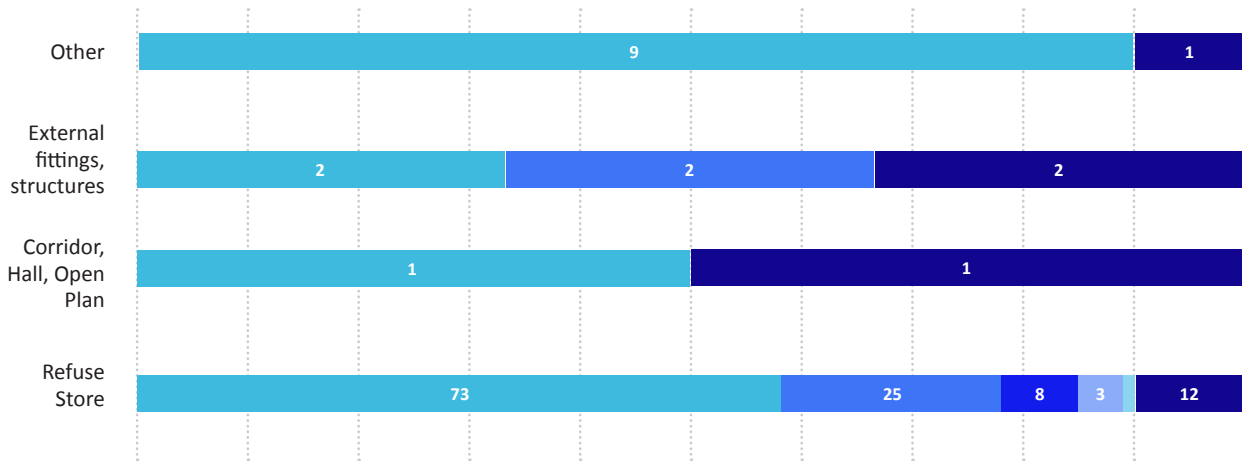


Figure 3. Number of sprinkler heads which actuated by location outside the flats

79% of fire incidents reported as starting outside of flats involved the operation of 2 heads or less. 60% with one head only. The majority as expected where reported to start in the Refuse Store.

GENERAL OBSERVATIONS

- This fire incident data report is further evidence supporting the most recent UK research² commissioned by The National Fire Chiefs Council (NFCC), National Fire Sprinkler Network (NFSN) and supported by BAFSA. The report identified of the 788 incidents, in 65% of fires, only one sprinkler head was activated with a further 20% of fires activating two heads.
- What the data is unable to confirm is the number of heads actuated that are recorded as null, not known, or other or blank. To identify the number of heads for a specific actuation, further investigation. For example an incident reported in the dataset as null heads operating involved a balcony fire which was the subject of a London Fire Brigade report. The West Hampstead balcony fire which reported that 12 sprinkler heads activated in the space of 19 minutes.

2. Efficiency and Effectiveness of Sprinkler Systems in the United Kingdom: An Analysis from Fire Service Data – Optimal Economics 2017