

## BAFSA discusses Grenfell and shares sprinkler report

THE BRITISH Automatic Fire Sprinkler Association (BAFSA) noted that 'many people will today be asking how such an incident occurs', with 'examination of the facts and a formal investigation' ongoing. The building was constructed in 1974, 'when sprinklers were not required in high-rise apartment buildings in the UK', and requirements to do so 'only took effect in England in 2007'.

All new high rise apartment buildings 'higher than 30m have had to fit sprinklers', while in Scotland this is 18m and in Wales since last year 'all new apartment buildings and houses must have sprinklers'. Grenfell had a 'major refurbishment', said BAFSA, noting that 'sprinklers are not required in an existing building, and all reports indicate that they were not fitted'.

The association believes 'the cost to do so would have been about £0.2 million (around 2% of the refurbishment cost) [...] new external cladding was fitted and it looks from all the visual evidence that this was combustible. We do not know if the cladding was fitted to improve thermal insulation or purely for aesthetic reasons'.

It did point out that 'at this stage we cannot be certain how the fire started',



citing reports 'it began in an apartment on the fourth floor. If that is correct, it is highly likely that a sprinkler system would have prevented the fire from developing as it did'.

BAFSA also shared its 2012 report on a sprinkler retrofit project in Sheffield, adding 'it has long been the view of many fire safety professionals that automatic fire suppression systems could be used to supplement existing fire safety provision in high-rise buildings and compensate in locations where this might not be adequate'.

BAFSA and UK fire and rescue services 'invited local authorities, central government and housing associations to more than 20 free-to-attend seminars' on protecting lives, high rise communities and properties from fire, and 'around 100 blocks of the estimated

4,000 throughout the UK have been retrofitted as a direct result'. The report's findings established that it was 'cost effective and practical to retrofit automatic fire sprinklers in existing high-rise tower blocks', particularly those built between 1950 and 1970.

*Safer High Rise Living... the Callow Mount Sprinkler Retrofit Project* was sponsored by the industry and overseen by BAFSA, and the building was successfully fitted with a sprinkler system. A primary objective 'was to determine the practicality of installing a complete system without the need to decant residents', the project taking less than four weeks and demonstrating 'how significant improvements in life and building safety can be achieved with minimal disruption'.

BAFSA concluded that findings 'permit national government, local housing authorities and private sector housing associations to give informed consideration to the wider use of automatic fire suppression systems as part of a comprehensive fire safety strategy for existing, unprotected high-rise blocks across the UK'. ■

## NFSN responds and reveals survey findings

THE NATIONAL Fire Sprinkler Network (NFSN) stated that 'clearly the fire spread and subsequent loss of life at this fire is unprecedented in this type of structure in the UK', and noted it had 'been watching the tragic events unfold at the horrendous fire', wishing to 'express our heartfelt sympathy to everyone who has been affected by this devastating incident'.

Continuing, it stated that 'clearly the fire spread and subsequent loss of life at this fire is unprecedented in this type of structure in the UK. We know of no other high rise residential building on our shores that has suffered such extensive damage, with fire spreading throughout the building to the extent we have seen at Grenfell House. The scale of the fire, significant loss of life and impact on the local community is immeasurable, the effect of this fire will be felt for years to come in terms of human and financial loss'.

'It must also be stated that the risks to firefighters posed by an incident of this magnitude were also far in excess of normal firefighting expectations. There will now follow a detailed and thorough

investigation into the cause of the fire and reasons for the fire spread.

'The whole of the fire sector including architects, fire engineers, fire investigators and right the way through to firefighters will be keenly awaiting the outcome of this investigation to provide answers around the cause and spread of the fire and to establish what can be learned to prevent reoccurrence'.

In addition, the NFSN believed that it was 'premature and inappropriate to pass judgement on the effectiveness of sprinklers in relation to this particular fire in advance of the official investigation being completed'.

'Whilst it is too early to speculate on the cause of the fire and the reasons for the rapidity of the fire spread, the subject of sprinklers is being raised up in the discussions and the NFSN are being approached for comment and opinion as to the effectiveness of sprinklers'.

It has 'over the past year coordinated the collection of data from all UK fire and rescue services, in a bid to describe the general effectiveness of sprinklers', with data 'taking information from fire reports

that have been completed after fires have occurred in buildings where sprinklers were fitted' captured over five years.

This survey aimed to establish reliability and effectiveness, with results including that 'across all premises types sprinklers are 99% effective' and 'operational reliability of sprinklers is 94%'; that 'average fire damage in dwellings not fitted with sprinklers is 18-21sq.m', while in 'dwellings where sprinklers are present, the average is under 4sq.m'; and that 'average fire damage in other building types with sprinklers is 30sq.m which is half that of buildings without'.

In conclusion, the NFSN said 'it remains to be seen if sprinklers would have been effective at Grenfell [Tower]. The NFSN are not about to speculate on this in advance of the official investigation'.

'The NFSN are committed to sharing expertise and advice across the fire sector and to working in continued partnership with the National Fire Chiefs Council to promote fire safety solutions involving the use of sprinklers and other automatic water suppression systems' ■