Grenfell Tower: How the warnings of cladding dangers were ignored

Steve James 10 August 2017

The destruction of Grenfell Tower in North Kensington and the murder of a still unconfirmed number of residents have horrified millions worldwide. But for all the leading British political parties, the disaster did not come out of the blue. The dangers of flammable and incorrectly installed cladding have been known for decades.

As early as 1988, the British authorities introduced a building regulation, BR135, to oversee external cladding systems on residential tower blocks. In 1991, the fire that raced up all 11 storeys of a residential tower block in Knowsley Heights, Liverpool, underscored the warning that retrofitting elderly tower blocks with external rain screen and insulation created potential deadly fire risks. A gap between the cladding and the wall of the building functioned as a chimney, allowing fire to spread vertically and with terrifying speed.

Between 1990 and 1999, serious fires internationally, in Winnipeg, Munich, Philadelphia and Te Papa, New Zealand, underscored the emerging threat. In the United States, flammable cladding similar to the type used at Grenfell was banned in 1998. US building codes currently require new buildings or major refurbishments to come with sprinkler systems, fire alarms, emergency loudspeakers, multiple escape routes and stairwells that expel smoke.

In 1999, there was another, this time fatal, fire in the UK.

One afternoon, a fourth-floor flat in a 13-storey tower block caught fire in Irvine, Scotland. Flames leapt from the flat, tore upward over the external cladding and consumed the living rooms of all eight flats directly above. William Linton, a disabled worker, died in the blaze, while four people, including an 85-year-old woman, were taken to hospital. Firefighters warned

temperatures reached between 700 and 800 Centigrade. If the blaze had started at night, there would have been many more deaths.

In response, the House of Commons Environment, Transport and Regional Affairs Committee heard evidence little more than a month later. The record of the hearing and submitted evidence, available online, stand as an indictment of the entire British political system.

Committee members in attendance included MPs from Labour, the Conservatives and the Liberal Democrats. Having attended these hearings, the parties involved know exactly the risks posed by cladding.

A submission from the Fire Brigades Union (FBU) noted:

"The primary risk therefore of a cladding system is that of providing a vehicle for assisting uncontrolled fire spread up the outer lace of the building, with the strong possibility of the fire re-entering the building at higher levels via windows or other unprotected areas in the face of the building. This in turn poses a threat to the life safety of the residents above the fire floor."

The FBU warned that fighting fire externally in a building of over 25 metres in height was impossible because no fire appliances could reach beyond this height. Grenfell Tower, like hundreds of tower blocks in Britain, is more than 67 metres tall. Firefighters were therefore dependent on fighting an external fire from within a burning building.

The FBU stated unequivocally:

"It is for these reasons that we believe that all cladding used on multi-storey buildings over 25 metres in height and the fixing systems should be completely non-combustible, or achieve a fire resisting standard equivalent to the external walls."

The FBU also warned that current regulations were

inadequate for dealing with fires spreading vertically and that fire safety testing was unrealistic.

The committee also heard evidence from the Fire Safety Development Group, representing companies manufacturing fire safety equipment. This pointed to "widespread concern amongst many fire fighters about the safety of external cladding systems consisting of metal-faced foam plastics. These systems will generally have Class 0 fire performance [to inhibit the spread of fire across a surface], but in real fires the foam plastic lining can ignite and burn. This helps to spread the fire via the building fabric and there will be an increase in the generation of smoke and toxic fumes."

The committee recommendation was weaker than the FBU demands. "We believe all external cladding systems should be required either to be entirely non-combustible, or to be proven through full-scale testing not to pose an unacceptable level of risk in terms of fire spread" (emphasis added).

What an "acceptable risk" entailed was anyone's guess.

Letters were sent to local authorities and social housing landlords to this effect, and the report produced changes in building regulations. But in a further erosion, the regulation updates in England and Wales were still less clearly worded than those in Scotland.

After 2005 in Scotland, all materials used for external cladding and associated cavities were finally required to be "non-combustible" and the entire system should inhibit the spread of fire. In England and Wales, however, materials of "limited combustibility" were deemed acceptable as insulation material, while less-restrictive conditions were placed on the system as a whole.

In the aftermath of the June 14 Grenfell fire, not one of Scotland's 300 or so residential tower blocks, most of which have been refurbished, have been identified as having external cladding systems comparably dangerous to that installed at Grenfell Tower.

Why did the Labour Party, which was in power in both Westminster and Holyrood at the time, consider it appropriate for tower block residents in Glasgow's concentration of tower blocks over 20 storeys to be better protected than those in London? This goes to the heart of the devolution of powers to regional assemblies in Scotland and Wales, which was instigated by Tony Blair to enable the fragmentation

and destruction of Britain-wide standards and provisions while dividing the working class against itself—all in the name of greater local democracy and accountability!

This is a far cry from suggesting that Scotland's tower blocks and public buildings are without problems.

Only three tower blocks, in Ayr, are reported to have internal sprinkler systems. On at least two occasions, external panels installed during refurbishments have caught fire.

In 2009 in the Gorbals, Glasgow, a 61-year-old man, Thomas Smith, was killed and several people needed treatment when newly installed panelling protecting a balcony from the elements caught fire. One of the fire officers in charge said, "In my 20-plus years in the fire service I have never seen such a fierce fire."

In 2015 in Springburn, Glasgow, another fire involving similar balcony panelling spread over several floors. Dripping plastic carried the fire downwards as well as upwards. Remedial steps in both cases amounted to blocking off the routes used by the fire to travel from one flat to another.

Potentially dangerous cladding has also been found in schools and hospitals. Reynobond PE aluminium, used at Grenfell Tower, has been used in 44 Scottish schools. As with the rest of the UK, no plans are in place to remove it, as none of buildings are over 18 metres in height—the arbitrary height set for removal after Grenfell. Napier University in Edinburgh has, however, begun removing similar cladding from one of its student halls of residence. Kooltherm K15 Rainscreen, also used in Grenfell, has been installed on a recently completed 14-storey super-hospital in Glasgow, the Queen Elizabeth University Hospital. NHS Greater Glasgow and Clyde have no plans to remove the material, either.

For its part, the Scottish National Party's austerity drive has resulted in the loss of 1,024 firefighter jobs since 2010, a 13 percent cut.



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