

# UK: 228 high-rise buildings fail mock-up fire tests post-Grenfell

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Tests on the fire resistance of aluminium cladding systems in England currently suggest that at least 228 high-rise buildings, over 18 metres in height, are potential death traps.

The tests, carried out on behalf of the British government by the British Research Establishment (BRE), are the latest in a hastily arranged series following the catastrophic June 14 fire at Grenfell Tower in North Kensington, London, which killed at least 80 people.

The tests involved a large-scale test fire on an aluminium composite material (ACM) filled with retardant polyethylene installed with phenolic foam board insulation. Twenty-two buildings are known to use this specific type of cladding, adding to the 206 buildings clad with ACM using differing types of filler and insulation. So far, of systems installed, only those with fire retardant ACM and mineral wool insulation have passed the tests.

No complete list of the buildings involved has been publicly provided, but all are likely residential tower blocks, each housing hundreds of working people and run either by housing associations or local authorities. The government is reported as having informed the buildings' owners and recommended remedial measures. If the experience of evacuated residents in London's Chalcots Estate is a guide, emergency measures amounted to improving fire doors and installing fire stopping measures between flats and floors, and unblocking stairwell ventilation. An unknown number of low-rise and private sector buildings may use the same dangerous combinations of materials.

The current set of tests is the second conducted on ACM cladding. In the days following the disaster, Conservative Communities and Local Government

Secretary Sajid Javid offered free testing of ACM samples to landlords. Initially as many as 530 buildings were thought to have ACM cladding, but early investigations reduced the number to 259, including 240 public sector residential blocks. Landlords were encouraged to submit two 250 x 250 mm ACM samples for testing by the BRE. Of samples eventually submitted, all failed. The test that generated the extraordinary 100 percent failure rate was authenticated as sound by the Sweden Research Institute.

In July, Javid told Parliament that thus far only the core of the ACM panel was being tested. In response, housing authorities and fire safety commentators demanded supposedly more representative test methods in which a mock-up of a full cladding installation, including the ACM panel, the insulation and fire stopping, should be used. Concerns were raised that potentially safe systems were in danger of being removed from buildings.

Hoping, no doubt, for a meaningful reduction in the number of dangerous buildings, Javid called for the new tests, of which six of seven have now been completed by the BRE. But only 13 of 241 buildings covered by the more realistic test have passed, arguably a more devastating outcome than the initial tests, and exposing a regulatory collapse of unprecedented proportions.

Every single one of the cladding systems now being exposed as deadly had previously been signed off as safe. How can this be?

Responsibility lies with all the major political parties, and successive governments, who over the last three decades have embraced deregulation and privatisation and the subordination of public health and safety to private profit. There are many aspects of this revealed by Grenfell.

In England now, following years of erosion, there is no unified regime of building inspection run by local authorities retaining any degree of independence from the building companies. Nor is there an arm of government tasked with overseeing building standards.

Rather, building contractors themselves can hire an “Approved Inspector,” whose job is not to ensure adherence to a strict set of “prescriptive” standards but to follow looser “functional” guidelines assumed to be needed for building safety. A host of private and semi-private organisations, such as the Building Control Alliance (BCA), have sprung up to exploit the regulatory vagueness and loopholes regarding the materials that can be used in any given set of circumstances.

The BCA advised on three mechanisms whereby a cladding system could be approved, in line with building regulations which stated that external insulation should be of “limited combustibility,” defined as “A2.” Option 1 stipulated that all the component materials could simply be of A2 combustibility resistance or better. Option 2 proposed a fire test be set up, that could include inferior products, but if the fire test was deemed safe all was well. Option 3, clearly the easiest, involved a “desktop” study where cladding materials could be deemed safe without any tests and without any specified combustibility standards merely on the basis of considering similar scenarios. No records of these studies were required to be kept.

Even more reckless were guidelines issued, now withdrawn, by the National House Building Council (NHBC), another private body, closely tied to the building industry, which issues insurance to house builders and offers building inspection advice. According to the BBC, the NHBC simply decided that sub-A2 materials were acceptable based on a review of a “significant quantity of data from a range of tests and desktop assessments.”

Perhaps most seriously, the BRE, the organisation most directly responsible for fire testing and providing fire safety advice, has itself been compromised. The BRE was established in 1921 as an arm of the civil service tasked with improving house quality. Over the years, the organisation established itself as a reputable, state-funded source of building and fire safety advice, with a degree of independence from the building materials and construction companies. Privatised in

1997, the BRE has subsequently sought to establish itself as a global brand for sale of fire safety advice, drawing in revenue from the very organisations whose products and operations it should be policing.

In 2016, the BRE issued a report, “External Fire Spread,” following studies commissioned by Javid’s Department of Communities and Local Government into the dangers of cladding fires.

The report, clearly intended to silence growing alarm, is cynical and complacent. The authors complained that high-rise flat fires are “visually impressive, high-profile and attract media attention.” To avoid the fuss, unsuitable cladding materials should be dealt with “as part of the fire safety risk assessment carried out under the Regulatory Reform (Fire Safety) Order 2005 [12] ...”

This order, passed under the Labour government of Tony Blair, removed fire safety responsibly from the Fire Service and allowed anyone to set themselves up as a fire risk assessor, regardless of skills, experience or qualifications. In 2010, fire assessor Carl Stokes won the Royal Borough of Kensington and Chelsea fire assessment contract, including Grenfell Tower, by undercutting rivals Salvus Consulting. Stokes was praised at the time for his willingness to “challenge the Fire Brigade ... if he considered their requirements to be excessive.”

Part one of the BRE report concludes with the assertion: “With the exception of one or two unfortunate but rare cases, there is currently no evidence from these investigations to suggest that the current recommendations, to limit vertical fire spread up the exterior of high-rise buildings, are failing in their purpose.”



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