Grenfell Tower inferno: Experts' reports highlight "culture of non-compliance" on fire safety

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Published reports to the Grenfell Tower Inquiry from expert witnesses have further exposed what fire expert Dr. Barbara Lane has called a "culture of non-compliance" on fire safety that contributed to "a disproportionately high loss of life" on June l4 last year.

There was no understanding of how the cladding system would behave in a fire, Lane wrote, and the flat doors replaced in 2011 were not ensured to be compliant with then current fire test evidence.

Lane, a chartered fire engineer and director of the design and engineering company Arup, was "particularly concerned about the maintenance regime of the active and passive fire protection measures … multiple automatic systems such as the control of the fire life and the smoke ventilation system, appear not to have operated as required."

Such factors meant the London Fire Brigade (LFB)'s "stay put" strategy for high-rise buildings—advising residents to remain in their flat in the event of a fire in another flat—was fatally undermined in advance.

Counsel Richard Millet QC said phase one of the inquiry focuses on the events of that night "and the state of the building at the time of the fire ... when and how the fire started, the development of the fire and smoke, how the fire spread to other parts of the building." It will cover the question of why the insulation material used contained combustible material and who was responsible for signing off the building as safe.

Its concerns are the building's design, construction, modification (interior and exterior), as well as fire and safety measures, governance, communication with and advice to residents, response to recommendations, and the response of the emergency services. Millet hoped that "core participants will resist the temptation to indulge in a merry-go-round of buck-passing," but it is already clear that the inquiry is intent in limiting fallout from the fire. Millet acknowledged that some core participants had not "positively engaged" with fire safety issues, although he expressed hopes that they would rectify this "missed opportunity" by greater engagement.

Local residents have been critical of some of the experts invited. In an interview with the WSWS, Joe Delaney drew attention to Professor Luke Bisby's association with the Building Research Establishment, "which came up with the tests that said that the [Grenfell] cladding was safe to use." Delaney said, "We just don't want people who are industry insiders and have links to organisations whose actions or decisions could be considered involved or even responsible for what happened to be on this inquiry."

Shortly before the expert reports were received, Edward Daffarn of the Grenfell Action Group told the *Guardian*, "Every single link in this chain is going to be found to be rotten and cancerous"—from the government's failure to implement the Lakanal House fire inquest recommendations, to the operation of the Tenant Management Organisation (TMO), to the consultation, contracting and the very building materials.

Despite the limitations, the record presented in the expert reports is overwhelming. Professor Niamh Nic Daéid, an expert in fire investigations and forensic science at Dundee University, presented a report on the cause and spread of the fire in Flat 16 on the fourth floor and its spread within and beyond that flat. Lane's report on fire protection measures within the building examined how they failed to control the spread of the fire and smoke, and in fact contributed to the speed of the fire's spread.

Daffarn is correct. They are devastating.

Nic Daéid's report identified the fire as starting in or around the fridge freezer in Flat 16, probably accidentally. It spread out of the kitchen window then back into the flat through a bedroom window. From there it spread through the flat, moving from the bedroom through the hall and back into the kitchen.

Behailu Kebede, who lived in the flat, was awakened by a smoke alarm at around 12:55 a.m. In the kitchen, he saw smoke around the fridge freezer and by the window. He awakened the other residents of the flat and called the fire brigade. He alerted other residents on the fourth floor and switched off the electricity as he left the flat. Kebede was so targeted by the press in a witch-hunt—essentially blaming him for the deaths—that police offered him witness protection.

Three fire engines were sent immediately, with a fourth despatched four minutes later because it was a high-rise. The first engine arrived at 1:07 a.m. Two firefighters described

"black smoke," but fire seemed isolated to the corner of the kitchen. Two fire crews searched the flat thoroughly and put out the fire in the kitchen. From entering the flat to extinguishing the kitchen fire took 11 minutes 35 seconds, but the fire had probably already caught hold of the external cladding, following the evidence of its melting and dripping.

Firefighter John O'Hanlon said that as they extinguished the kitchen fire they "noticed the window had completely gone. Even the frame wasn't there … the window surround was on fire." Attempts to extinguish the window frame had no effect.

Lane's report was utterly damning of the cladding system in the building, which gave a "disproportionately high probability of fire spread." She concluded that "the entire system could not adequately resist the spread of fire over the walls having regard to height, use and position of the building.

"Specifically, the assembly failed adequately to resist the spread of fire to an extent that supported the required 'stay put' strategy for this high-rise residential building."

Such was the speed of spread that the strategy had "effectively failed" barely half an hour after the fire started, by which time the fire had already climbed the full height of the building. The fire climbed 19 storeys in 12 minutes. Half an hour later it was spreading laterally around the building. This was when the LFB called for 40 fire engines, "a very rare occurrence," and declared a major incident. Fire finally encircled the whole building three hours later.

Lane wrote that the Reynobond 55PE rainscreen cladding "contributed to the most rapid of the external fire spread." The windows were not fitted with fire-resisting cavity barriers, and the unprotected openings were surrounded by combustible material. Inside the flats, the ceiling materials above the window were also combustible, so that "in the event of any fire starting near a window, there was a disproportionately high probability of fire spread" into the cladding.

This stemmed from the 2016 refurbishment, when the aluminium composite panels were fitted. New windows, which had been fitted on every floor over the previous four years, were moved outwards to sit flush with the new cladding. Gaps were covered with combustible material, and kitchen vent panels were also combustible.

Manufacturer Arconic, which discontinued the Reynobond PE panels after the fire, accepted that the cladding "was not of limited combustibility" and that this "should have been obvious to any construction professional." Arconic have since rejected claims for the centrality of the cladding to the fire and its spread.

Other companies are following suit, but the early evidence is compelling. Bisby's report, for example, noted an acknowledgement in February by Celotex, manufacturer of the insulation material, that "there were differences between the system as tested and that as described in the related BRE [Building Research Establishment] report dated 1 August 2014," although further information is not yet available.

Lane pointed to the fire's spread as having very quickly compromised the "stay put" strategy. It was clear from LFB testimonies that the spread of the fire was unusual. LFB Commissioner Dany Cotton said in a statement "I have never seen a building where the whole of it was on fire. Nobody has ever seen that. It was incredible. It was alien to anything I had ever seen."

Lane noted that the poor performance of the fire doors "contributed significantly to the spread of smoke and fire to the lobbies," preventing residents from escaping this way. In 2011, the TMO replaced 106 of the flat doors. Neither these, nor the 14 that were not replaced, were compliant with requirements in place at the time of installation.

An "unknown number" of the doors failed to close after residents had escaped, further allowing the spread of fire and smoke through the building. This prevented the LFB using the lobbies as a "safe air environment," thus reducing the time available using breathing apparatus and therefore the time available for reaching upper floors. This was compounded by a failure of the firefighting lift, which meant firefighters' only access up and down the building was by the stairs. Firefighters also had to pull hoses through lobby doors.

Grenfell's Fire Risk Assessor, Carl Stokes, wrote to the TMO after a 2015 site visit to discuss new loft ceilings and cupboards for the heating system. Lane reported that his correspondence clearly shows "he believed that the ceiling and new cupboards were of fire resisting construction. There is no evidence in the refurbishment design information reviewed to date to support this."

Firefighters were able to get no higher than the 20th floor, while some residents were still heading upstairs in the hope of rescue. A police inquiry is ongoing into the use of police helicopters that night, which—as testimony from family members last week confirms—gave the impression that an aerial rescue was being mounted.

The Grenfell Fire Forum, initiated by the Socialist Equality Party, will be holding the next of its regular meetings on Sunday, June 17, at 2 p.m. at the Maxilla Social Club in North Kensington, London. All are welcome to attend.

Grenfell Fire Forum meeting
Sunday, June 17, 2 p.m.
Maxilla Social Club, 2 Maxilla Walk
London, W10 6SW
(nearest tube: Latimer Road)
For further details visit: https://www.facebook.com/GrenfellForum