

FIRE AND RESCUE SERVICE MATTERS

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GRENFELL TOWER INQUIRY EXPOSES CONSTRUCTION INDUSTRY FIRE SAFETY FLAWS

The Grenfell Tower Inquiry is exposing a disturbing disregard for fire safety in the construction industry that the Fire Brigades Union believes politicians need to act on.

Phase 2 of the Inquiry began in January this year, but was mired with disruptions. Firstly, it was suspended for some weeks while the Attorney General considered a request by some of the corporations involved in the refurbishment – including Kensington and Chelsea Tenant Management Organisation (the ‘TMO’) - for a guarantee that the evidence they would give would not be used to further a criminal prosecution against them. Shortly after an undertaking was granted and the hearings restarted, the Inquiry had to be called off again because of the national Covid-19 lockdown.

This phase of the Inquiry is intended to look at the causes of the devastating fire. It is divided into eight modules, the first of which covered the Primary Refurbishment (Overview and Cladding). Witnesses from the design, construction and management organisations – including RBKC building control - gave their accounts of the decisions made in the over-cladding of the tower. Module 2, which began at the start of November 2020, covers the Cladding Products - Testing/Certification, Marketing/Promotion.

The most striking feature of the evidence given by the key companies involved in the refurbishment - such as Rydon (the project managers) Studio E (the architects), and

Harley (the cladding designers) – is the total absence of any consideration of fire safety in the selection and installation of the materials used to clad the tower. Again and again, when asked about the regulations that govern fire safety in external walls, the witnesses expressed either ignorance, sketchy knowledge, confusion or the assumption that it was the responsibility of another company in the supply chain. The evidence has been clear: instead of being a priority, fire safety was barely an afterthought at Grenfell.

MODULE 1: ARCHITECTS AND FIRE ENGINEERS

Studio E were the architects on the project, despite lack of experience in high-rise over-cladding and refurbishment projects. Instead, they were chosen because of their involvement in the adjacent school and leisure centre development (Kensington Academy Leisure Centre - KALC). Rather than putting the appointment out through a public procurement process, Studio E agreed to set their fee under the £174K European public tendering threshold, deferring its costs until a later stage.

Studio E witnesses revealed a near total lack of knowledge about the fire safety requirements of external walls. This includes ignorance about:

- The basic fire safety standards required of insulation and cladding materials
- The different rules governing materials for use in buildings over 18m

- The need for new builds over 30m to have sprinklers
- A range of industry standards and guidance

The architects' evidence also showed a common thread amongst the private firms working on the refurbishment: that in their view, responsibility for ensuring the work was compliant with building regulations sat with the building control officer, and not with them. Despite a fire engineering company being contracted to provide a fire strategy report for the Grenfell refurbishment, Exova, its services were essentially unused. Fundamentally however, it produced a draft report, that was never finalised, that said of the refurbishment:

"It is considered that the proposed changes will have no adverse effect on the building in relation to external fire spread, but this will be confirmed by an analysis in a future issue of this report."

A final report was never produced by Exova, but this advice was taken as confirmation that the proposed work – including the cladding - presented no concerns.

The fire safety engineering expert to the Inquiry, Dr Barbara Lane, concluded that Exova's existing fire safety strategy was wholly inadequate.

CONTRACTORS

From 2014 onwards, Rydon was the design and build contractor in charge of the Grenfell Tower refurbishment and contractually responsible for ensuring the works complied with building regulations. Yet, they too outsourced fire safety to their subcontractors and ultimately, to building control.

Value Engineering

It was revealed that Rydon stood to gain from switching the original choice of non-combustible but more expensive zinc cladding for cheaper ACM. Through a process of value-engineering - a widespread practice of massaging figures after a price has been agreed - Rydon focused on savings that might be made from using cheaper cladding panels. The fatal switch from zinc to ACM cladding was identified as saving £419,000, but Rydon informed their client, Kensington and Chelsea TMO, that the saving would be £293,000. Project lead Simon Lawrence told the Inquiry, *"I would suggest...that Rydon took some of the savings for themselves"*.

Lack of oversight

Rydon's witnesses also confirmed that they only superficially checked documents or that materials coming on site matched the design, leading another company to describe Rydon as operating with an unparalleled *"level of nonchalance"*.

The Inquiry asked why Rydon did nothing to address what it described as *'shockingly poor workmanship'* that contributed to the rapid spread of the fire. Post-fire inspections showed that cavity barriers – installed to stop fire ripping through the gap between the cladding panels installed on the building and the insulation – were fitted upside down, vertically instead of horizontally, and were cut to the wrong size. Again, the response was to 'pass the buck' down the supply chain and assume that others should have identified the problem.

SUB-CONTRACTORS

Evidence from the cladding specialist, Harley, has also revealed a shocking lack of knowledge of regulations governing the products they were using, a close relationship with the product manufacturers

and fatal errors in the design of the cladding system.

Harley Facades played a key role in the selection of combustible Celotex RS5000 insulation and deadly Reynobond PE 55 aluminium composite material (ACM) cladding for the walls of Grenfell.

It was revealed that Commercial Manager Mark Harris only presented Reynobond cladding panels made by Arconic to the architect, rather than a range of products as requested. After Reynobond was selected emails were disclosed that showed how Debbie French, UK sales manager at Arconic, thanked Mr Harris for his *“hard work and perseverance in putting Reynobond forward”* and promised *“lunch or dinner at some point”*.

It was also revealed that Harley made fatal mistakes in the design of cavity barriers around the windows at Grenfell, a mistake that allowed the fire to break in and out of the flats, as shown in the GTI’s Phase 1 report. Ray Bailey, the founding and managing director of Harley, had appointed his inexperienced 25 year old son as project manager on the Grenfell project, who ignored warnings from cavity barrier supplier Siderise about there being a *“weak link for fire”* around windows should he fail to install cavity barriers¹.

Harley also stood to gain financially from the installation of the cladding panels in cassette form, rather than riveted form. Cassette form panels hang on hidden rails, whereas face-fixed panels are essentially bolted into place with rivets. It has previously been revealed during the inquiry that ACM panels installed in cassette form had a far worse fire performance than face-fixed panels. Again, the fire impact of the different forms of installation was not considered.

¹ An investigation by Inside Housing earlier this year revealed that 14 other Harley projects have had to be remediated since Grenfell, at a cost to the taxpayer of tens of millions of pounds.

The Inquiry also heard from other companies in the supply chain, such as the firm that installed the cladding (CEP Architectural Facades), who, it was revealed, were also shown to have a close relationship with Arconic.

ROYAL BOROUGH OF KENSINGTON AND CHELSEA (RBKC) AND THE TENANTS’ MANAGEMENT ORGANISATION (TMO)

Evidence from the TMO showed it did not carry out a proper procurement exercise for Studio E appointment – based on assurances from RBKC, TMO relied upon the procurement exercise for Studio E’s involvement in the KALC. Key employees working on the Grenfell refurbishment did not even read Exova’s fire safety report, considering it to be the responsibility of others. Two senior figures at the TMO admitted they had thrown away or only recently disclosed their work diaries covering the project.

Austerity cuts had a direct impact on the ability of the council’s building control inspector, John Hoban, to give the project the attention it deserved. In 2013, the Royal Borough of Kensington and Chelsea underwent ‘restructuring’ that left Mr Hoban covering the work of three members of staff with over 130 projects to oversee. He resigned in 2017, just before the fire and explained: *“I resigned because I had enough. I wasn’t able to do the job how I was taught to do it. It was affecting my health and I just didn’t want to work there anymore.”*

EXPERT FINDINGS

Finally the Inquiry heard from three expert witnesses, who all pointed to ways in which corners had been cut during the project.

Dr Barbara Lane stated that across the project, lack of compliance with

key regulations – the CDM regulations (construction (design and management)), Regulation 38 and the Regulatory Reform Order – meant relevant fire safety information to protect people who live and work in the building and the fire brigade, was ignored. She went on to say that there was a culture in the industry of forgetting the primary responsibility of protecting occupants of a building and firefighters.

MODULE 2: THE MANUFACTURERS

In early November 2020, the GTI began to focus on the manufacturers of the products used in over-cladding Grenfell Tower and the testing and certification methods used. These include Arconic (panels), Celotex and Kingspan (insulation) and the certification and testing bodies the British Research Establishment (BRE) and the British Board of Agrément.

The evidence relating to the manufacturers has already been deeply disturbing. Arconic, the French company that manufactured the ACM PE cladding, knew how flammable it

was and knowingly promoted its sale in the UK – taking advantage of the UK's weaker regulatory regime. Celotex, falsified the fire test results of its RS5000 insulation boards by using fire retardants and obtained approval from building control bodies under false pretences. Britain's biggest building control body, the National House Building Council (NHBC) - that prior to 2016 had rejected Celotex's product for use in buildings over 18m - changed its mind after lobbying from Kingspan who were seeking approval of their K15 insulation. This opened the door for Celotex and Kingspan to brand their products as suitable for use in high rises.

A profit-seeking, 'sinister' and deceitful picture is emerging of the construction, cladding, testing and certification industries that conduct their operations without proper scrutiny.

The FBU will continue to evaluate the Inquiry's findings and draw them to the attention of politicians.



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