

## ICC Pulse Podcast

### Episode Two

#### Feat. Beth Tubbs: Grenfell Tower fire and its aftermath

*Although the Grenfell Tower fire is almost a year passed, the effects on the global codes and standards community is still ongoing. In this episode, featured guest [Beth Tubbs](#) provides insight on the tragedy and the global response, including the cause of the fire, the United Kingdom's response, the Code Council response, and the future of codes and standards around the world. Beth also shares information for resources and helpful tools provided by the Code Council and industry organizations. Read the interview with Beth below or [click here](#) to listen to the podcast.*

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**Whitney:** Although we're almost a year removed from the tragic Grenfell Tower fire in London last summer, the U.K. and others are still dealing with the aftermath. Many news outlets have reported that the building was full of code violations. Since you're an expert on fire codes, Beth, let's start with a quick overview. What happened?

**Beth:** The Grenfell Tower is located in London, England, and the fire happened on June 14, 2017. Just a couple of pieces of information about the building: it was a high rise building with twenty-four floors, and it stood two-hundred twenty-one feet tall. It was built in 1974 and had some renovations done in 2016 – primarily, the addition of energy saving cladding and some other renovations.

The cladding was the signature issue that came up in the fire. The fire burned for 24 hours and 70 people died. But, it wasn't simply the cladding that was the cause of the problem. Some of the other fire protection aspects to this building added to the problem.

The building did not have sprinklers and it had a single stairway. Compartmentation was a primary strategy. None of these things are really unusual in the U.K. They've had a lot of success in the past with using compartmentation.

There were limited fire alarm systems. I think there were only single-station smoke alarms, potentially in the units. There was not building-wide detection for fire alarm systems to notify occupants.

Other fires have happened internationally with the cladding. This particular one is very much known to the media for the material that was on it, and it was a very tragic fire.

**Whitney:** As we stated before, it's been almost a year since this tragedy in London. Has it had any effect on the global regulatory community, and can you tell us a little bit about what that effect might be?

**Beth:** The world has gotten smaller. In the U.K., they have very mature regulatory systems like the U.S. I think when something like this happens there, it really gets the attention of the rest of the world. Everyone wants to know, "Can this kind of tragedy happen in our country, and what should we review to make sure that these things can't happen?" Places like Australia have experienced similar fires and they are looking at what they have in their existing buildings and what has been added to understand how to avoid these kind of tragedies in the future.

We communicate with other similar countries as an organization, such as the U.K., Norway, Australia, Japan and Singapore when issues like this occur. I think because the world has gotten smaller and Grenfell was such a tragedy in a place where you really don't expect it that this had a profound effect on our industry.

**Whitney: As you mentioned, the U.K. doesn't adopt the I-Codes. Even though that's the case, the Code Council still closely monitored the investigation and the causes of the fire. What did ICC learn from this fire and what was the response?**

**Beth:** First, we had to understand what actually happened there and how it compares to what we require in our codes. In the U.S., the primary building code in 50 states and territories is the International Building Code. Since the late 80s in the U.S., we have required high rise buildings to have sprinkler systems and at least two staircases. So, comparing Grenfell Tower to U.S. buildings is a little bit difficult. However, we did want to learn from this and be proactive. After many events, including ones that happen in the U.S. such as the World Trade Center or The Station nightclub, we review to see what we may need to fix.

There are two aspects to this. There's the code itself: What's in there technically? Is that okay? Do we have the right test? Are we looking at the right things technically? But, then there's also the process. It's not simply what's in the book. It's also about the overall regulatory process - how they are implemented, how they are enforced and how the construction industry interfaces with the code.

We've looked at both pieces in the aftermath of the London fire. For the technical piece, we've been working hard with our Fire Code Action Committee. A work group spent a lot of time looking at what we have and refining it. Thirty years ago, buildings were masonry or glass. Today, primarily because of energy concerns, the exterior of buildings are more complex. What we're finding is that maybe we need to clarify some things, but we really feel like all the pieces are there.

The Fire Code Action Committee has spent time putting together code change proposals. Those proposals are going through our code development process. Every three years, we update our codes, which helps us to react to these losses and tragedies. We continue to make our code better.

The other piece has been understanding process issues. It's clear that it's not just about what we publish in a book, but also what tools we are providing to jurisdictions and how they are dealing with it. We wrote an article titled, "[Combustible exterior wall 'cladding' systems: An ICC perspective.](#)" The article walks through the plan review process to clarify the portions of the code related to exterior cladding systems and what the requirements are through the product accreditation process, the manufacturing process, the labeling process, and then what happens when it gets delivered to the job site and who's inspecting the installation.

In addition, we've been communicating with our members regularly. For instance, we've been communicating specifically with the Major Jurisdictions Committee which represents jurisdictions that have a lot of high rise buildings to spark communication and sharing of best practices amongst those larger jurisdictions. We've been communicating specifically with New York City because this is a big concern to them. They are a very densely populated city, and they want to understand as they adopt codes and enforce codes what they can learn from this as well.

Also, we've been communicating with the Society of Fire Protection Engineers. They had a recent annual meeting, and we participated in forums and discussions.

Communication is a process. The U.S. is a bit complex because every state regulates itself – it's almost as if each state is their own country. The states do communicate, and they do use the same codes. We help facilitate the interaction and help develop the technical piece that states and local jurisdictions can use when implementing building codes.

**Whitney: Clearly ICC had a very comprehensive response. What have you seen from other organizations, and what have they done in response to the tragedy?**

**Beth:** There are a couple tools that NFPA has been working on. They have one tool for existing buildings that they've been working on and one for new construction and how to understand the requirements.

The one for existing buildings is the [Exterior Façade Fire Evaluation Comparison Tool](#) (EFFECT). It's a risk management tool for jurisdictions to understand what their risk might be if they determine that they have the type of cladding product that can cause a problem, suggestions for looking at whether they have sprinklers and other factors. The tool helps them decide whether they need to do something and what kinds of options they have.

After Grenfell, the U.K. found that they had about 200 buildings with cladding of concern. Tools like the one from NFPA are critical for helping jurisdictions resolve issues. With new buildings, we have a wonderful opportunity to use the NFPA tool to see what's required.

I think mostly we'll see discussions on the testing – it's the technical side. We need to comply with the test, but how is that test? And, should we take a look at it and make any changes? NFPA 285 is a test that we reference and we're looking at some of the standards from Factory Mutual including FM 4880. We're looking at what they can learn from this as well, from the technical side. There is a lot of activity going on, and we'll continue to follow it.

**Whitney: How do you think Grenfell is going to affect codes and standards in the future?**

**Beth:** The world has gotten a lot smaller. We learn and hear about these fires from the media. I hope that we continue to grow our relationships with our international counterparts so that when these things happen we can actually understand the problem. We can learn from it, and we can share what we do with other countries.

Through our code development process, we have a chance every three years to discuss. It's not just in that third year – we discuss all these topics through those years for the next round of proposals. We'll continue to keep an eye on it, and, if nothing else, it's an opportunity for us to make a positive out of something that wasn't positive.

**Whitney: Thanks, Beth. Shifting gears a little bit, from your responses, it's obvious that you spend a lot of time reading about fire safety and the codes. Are there any books or resources you would recommend for those looking to learn more about the building industry or the codes in particular related to fire safety?**

**Beth:** I've been very immersed in the details. There's one document that we actually published jointly with SFPE, which is "[Engineering Guide: Fire Safety for Very Tall Buildings](#)." Of course, the commentaries

to a lot of these sections are helpful, especially the IBC commentary. [Our article](#) that I reference before is definitely worth reading. Potentially listeners would want to look at some of the test standards like NFPA 285 to see what it does. Also, as a side note, in the SFPE handbook, volume three, chapter 86, there is this whole chapter about the Building Envelope Fire Spread: Construction Feature and Losses.

**Whitney: I have one more question for you. We ask all of our guest this one. If you could choose a favorite building either due to the style, architecture, the type of material, fun story or connection you had to the building, what would it be, and why?**

**Beth:** I love historic buildings, I grew up in the Boston area and the building that pops into my mind is Faneuil Hall in Quincy Market. It's only a couple hundred feet from where the Boston Massacre occurred, it was a shipping trading spot and it just represents a rich history. It's a neat old building.