

Fire in Australia's tallest building endangers lives, confirming warnings made 17 years ago

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A fire in a garbage compactor early this month at the base of the Q1 apartment tower, Australia's tallest building, created an emergency that risked major loss of life as smoke filled corridors and an exit stair. The building is in the heart of the Surfers Paradise tourist precinct in Queensland.

While Q1 developers and builders were alerted to fire-safety design flaws soon after the building was completed in 2005, their failure to act on these warnings jeopardised hundreds of lives two weeks ago.

Around 7a.m. on 3 July, as residents of 527 apartments in the Q1 complex were just waking, a fire started in a large bin sitting at the base of the garbage chute that extends the full height of the 80-storey building. The fire triggered alarms and firefighters were called. A carelessly disposed cigarette butt or lithium battery can ignite accumulated garbage.

Seventeen residents aged between five months and their late 80s had to be treated for smoke inhalation. Nine people were taken to hospital. Some residents were injured when they fell down the exit stairs, including a young boy with a reported fractured wrist and an elderly man with a suspected broken leg.

Q1 was fuller than usual because schools in the eastern Australian states were on holiday, with at least 1,000 people staying in the building. Rather than containing the smoke from the bin fire in the garbage room, it spread up the chute and through garbage hatches then into corridors and the adjoining escape stairwell. This is not meant to happen. Fire escape stairs in high rise buildings are the only way out for residents during fires as lifts are disabled. They are also the only way up the building for fire fighters as their equipment cannot reach the upper levels of such skyscrapers.

Initial reports have stated that a fire safety feature failed to operate. By regulation, a smoke and fireproof damper should automatically close at the base of the garbage chute to prevent smoke rising up the chute. This mechanism failed. Regular maintenance and checking of such devices are necessary.

The Q1 apartment tower stands at 322 metres. Built in 2005, until 2011 it was the tallest residential building in the

world.

In 2012, the Australian Broadcasting Corporation (ABC) Radio National "Background Briefing" program publicised fire safety problems with Q1. The *World Socialist Web Site* reported on these revelations and interviewed mechanical engineer Laddie Assey, an expert in fire safety systems who happened to own an apartment in the Q1 complex. Assey explained the problems in detail and how he had spent seven years trying to get the fire safety issues fixed.

The Q1 bin fire last week has entirely vindicated Assey's safety concerns. The problems have not been rectified, even despite the experience of the 2017 Grenfell Tower fire in London where 72 residents lost their lives.

The failure to provide safe buildings for people to live in, despite full technical knowhow, is a product of the highly-profitable property development industry. Successive governments at every level have deregulated and privatised regulation to maximise profitability in an industry that makes up 30 percent of the Australian economy.

Building industry union bureaucrats are likewise beholden to the property development industry through CBUS Property, the investment and development business they control. Experienced building workers, who once acted to enforce safety standards through the unions, have been muzzled.

On July 3, the ABC quoted Queensland Fire and Emergency Services (QFES) acting inspector Glenn McKissack who said, "Some floors were a little bit worse than others but mainly it was light smoke... It was enough for our crews to wear breathing apparatuses, however it wasn't black or thick or anything like that.... Some of those people [elderly residents] found themselves stuck in the stairwell and not able to go further and our firefighters assisted them to go down... We did try to use the PA system to ask people to stay in their units with closed doors, however some of those people had already started to evacuate."

Understandably, residents evacuated when confronted with smoke in corridors that seeped under their apartment doors. The "stay in place" advice given to residents at Grenfell

Tower in London was a contributing factor in their deaths.

One resident explained that the fire alarm had not sounded on her level despite smoke filling corridors. The ABC interviewed two young women who were holidaying on level 74 and were only woken up with a knock at their door. Matisse Liu and Olivia Chapman explained, "It was kind of hard to breathe at the top but, as we got down, it was fine. As we were just going down there were more people, a bit chaotic on the stairs, and there were some kids crying ... people carrying dogs and pets out."

An evacuating resident stated that one of the fire escapes was fully blocked with smoke and they had to use the second stairwell. At Q1, the fire escape stairs are configured in a scissor style with two stairwells intertwined. Another resident reported that on level 48 the smoke was thick enough to prevent visibility, apparently contradicting what the QFES official claimed.

A resident told Nine News, "We woke up and there was terrible smoke in the corridor... We passed a couple of people on the stairs and they were in a really bad way, as far as they weren't able to move. So, when we got down to the bottom we went over to the fires and let them know there's a couple of people stuck upstairs."

The fundamental design flaw pointed to by Assey is the location of the garbage chute in a lobby between the corridor and the stairwell. Residents need to pass through the garbage chute lobby to access the stairwell on the north side. This planning avoids a separate room and doorway for the garbage chute which would have cost more and cut the floor area available for apartments thus reducing developer profit.

Fire safety in apartment buildings relies on fire proof doors, walls and floors encapsulating each compartment to contain the fire and smoke within the apartment where it breaks out. Sprinklers are installed in Q1 to extinguish a fire contained in any apartment before it spreads. Unlike Grenfell Tower, Q1 is not clad in combustible material that would allow flames to spread up the outside of the building. However, like Grenfell, the infiltration of smoke into the stairwell meant that a safe egress route was compromised.

The corridor outside the apartment door is meant to provide a smoke buffer to contain any smoke that escapes a burning apartment. Another door separates the corridor from the stairwell. Additionally, the stairwell is meant to be air pressurised so that when the access door is opened from a smoke affected corridor, the air pressure pushes the smoke out of the stairwell allowing residents to evacuate without being overcome by smoke inhalation. These mechanisms clearly failed.

This was the fault that Laddie Assey identified and publicised in 2012. After years of attempting to get the problem addressed by the builder and the owners'

corporation, Assey eventually made an official complaint to the Queensland Building Services Authority (QBSA). He explained in an email "smoke will enter into the stair at the rate of 1.7 metres per second, killing anyone on the way down from any floor by asphyxiation in the time taken to walk down the 76 levels to the ground floor."

Subsequent reports commissioned by the QBSA and the building developer essentially admitted there was a problem but asserted that it was not serious enough to necessitate rectification.

On 3 July, however, the problems that Assey identified resulted in smoke rising through the garbage chute and infiltrating out the garbage chute doors located at each level, filling the lobby immediately next to the stairwell with smoke. The faulty stair pressurisation system obviously did not cope with the smoke. While the failure of the damper at the base of the chute may be the primary cause, the event has proven that the stair pressurisation system failed.

As Laddie Assey told the WWS in 2013, "The Q1 situation was a real eye opener for me. To put it simply, I discovered that pressurisation in the north fire stairs did not comply. Anyone attempting to use those stairs in the event of a serious fire would be asphyxiated."

"After spotting this problem, I thought that it would be rapidly rectified. The fact that it took years to get the QBSA to even recognise the problem is not very impressive. Australia is not supposed to be a third world country. I was absolutely shocked by this."

The *Gold Coast Bulletin* reported on 10 July that a Queensland Building and Construction Commission spokesperson said they were not aware of any issues regarding Q1. A QFES spokesperson said the building was found to be compliant with owner-occupier requirements when it was inspected last year.

The newspaper stated that in 2008 "Builder Sunland was ... issued with a 'request to rectify' the defect within 28 days. It was still unresolved in 2011. The *Gold Coast Bulletin's* questions to Sunland on July 11 about whether the defect had ever been fixed went unanswered despite multiple calls and emails made to the group." Q1 management have refused to comment.

The unanswered inquiries raise serious questions about the assertions of the various government agencies that all is well.



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