

# TIKILEAKS... LEARNING FROM OUR KIWI NEIGHBOURS

**Darryl O'Brien** offers some thoughts on the similarities between the New Zealand 'leaky building' issue and combustible cladding, and looks back to look ahead.

**T**here's a lot of truth in the saying that those who do not learn the lessons of the past are doomed to repeat them.

This truism has been prominent when thinking about the combustible cladding issue in Australia and the New Zealand leaky building syndrome of the mid-1990s.

By learning the lessons of the past we can understand why these events happened, how they might be similar to the current situation and what we can do to prevent a recurrence.

However, given the benefit of hindsight, the current situation may not be as bad as we think.

The damage mechanisms are different for leaky buildings [damp and mould] and combustible cladding, but the initiating events seem remarkably similar.

In the early 1990s, amendments to the New Zealand Building Act introduced the concept of outcomes-based compliance to replace the fully prescriptive model.

This mirrored the 1996 Building Code of Australia performance-based approach to building regulations.

In both cases a principal goal was to reduce compliance costs and stimulate innovation. One result was the introduction of exotic building materials.

The leaky building syndrome had multiple causes; however, the problem was generally sheeted home to changes in the timber Standards coupled with new materials and forms of construction without adequate industry training.

This resulted in the use of poorly seasoned structural timber plus exotic cladding materials whose performance characteristics were unfamiliar to the installation trades.

It created a situation whereby water entering the building [leaking through poorly detailed junctions, incorrect window flashings, etc] could not filter or evaporate out. Timber frames absorbed the moisture, leading to rot and mould growth.

The causes and consequences of the NZ problem were similar to the mid-1980s 'leaky condo' crisis in British Columbia, Canada. Yet the lessons from the leaky condos were unknown or not recognised.

Another similarity with the current Australian system is the prevalence of private building surveyors.

At the time of the NZ problem, consumers could seek a building consent [approval] from a private building certifier or a territorial authority [council].

Concerns have been raised that a causal link exists between private certification and the combustible cladding issue. However, as in the NZ problem, it may not be valid to say that the failures resulted from the user-pays private certification system.

Indeed, one local authority issued about 20,000 building approvals during the lead-up to the leaky building problem, so any systemic failures could



not be attributed solely to private certification.

As with all construction and procurement processes it was others who designed, specified, purchased and installed the cladding materials. Building surveyors cannot be a party to these actions; they just assess the specified cladding for compliance with the code. None the less, it was mainly these actions that brought about the cladding problem.

It is worth quoting one of the findings of the NZ BIA *Weather-tightness* report in full [2002, p.41]<sup>1</sup> with respect to the respective roles and responsibilities. The report noted:

*“The single thread that runs through the multi-faceted building sector we have portrayed is the seeming lack of accountability. The practical effect of the current system when it comes to the crunch of litigation [and, as we have said, that is where the battle over weather-tightness tends to be fought] is to dump most of the responsibility on the building inspector.*

*“It should be apparent from what we have said that this is not a true reflection of the building process. While we have found that this part of the process requires significant improvement, the number of parties required to arrive at the end product should be mirrored in the system of ‘responsibility, accountability and public liability.’”*

So what can we learn from the NZ leaky building?

We need to recognise that new and exotic construction materials and systems require trades to develop new skills and expertise.

For example, the window flashing detail on direct fixed panel cladding will necessarily be quite different to brick veneer, as will the tolerances and margins for error. These details need to be clearly identified on the plans and specifications.

Although we are in a performance-based regulatory environment, in many respects the plans and specifications should:

- be prescriptive;
- identify the brand; and,
- include precise construction details.



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This critical information needs to be the golden thread that runs through design, procurement, construction and certification. If such details are not provided, the plans should not be approved.

Such attention to detail may marginally increase costs, but we are seeing the negative consequences of a laissez-faire approach to design and specification that was meant to streamline processes.

On the matter of minor cost increases we should heed former Harvard University president Derek Bok, who said: “If you think education is expensive, try ignorance.”

To finish on a positive note – notwithstanding the fire risks associated with combustible cladding – it is possible that the extent of the risk has been overstated.

With respect to the NZ leaky building problem, Manukau council stated that in the five years from 1997 it had issued 20,000 building approvals. There had been only 14 claims for weather-tightness issues, and eight were settled out of court.

Apart from the Docklands Lacrosse fire, to my knowledge there have not

been any other significant fires related to Aluminium Composite Panel (ACP) cladding in Australia.

Following the identification of at-risk buildings, effective management measures could help to reduce the hazard of combustible cladding, such as:

- ensuring that occupant densities reflect the original design intent;
- minimising combustible materials on open balconies; and,
- communicating effective evacuation strategies.

We have had substantial failures in the past, but the construction sector is adaptable and resilient. To maintain community confidence in the built environment we must learn from mistakes and improve our processes. ■

<sup>1</sup> D. Hunn, I. Bond, and D. Kernohan, *Report of the Overview Group on the Weather-tightness of Buildings to the Building Industry Authority, Building Industry Authority, Wellington, August 2002.*

Dr Darryl O’Brien is Head of Course, Undergraduate Built Environment, at CQ University. He is a member of the Australian Institute of Building Surveyors.

