

THE REAL COSTS OF INSTALLING NON-CONFORMING AND NON-COMPLIANT BUILDING PRODUCTS



INTRODUCTION

The rise of non-conforming and non-compliant building products infiltrating Australian building projects is one of the greatest challenges faced by the industry today.

Non-conforming building products are at best illegal and at worst lethal. As some recent events in Australia have shown, the specification and use of non-conforming building products can significantly impact fire behaviour, contribute to building compliance failure, and potentially require replacement well before time which must be funded by the owner.

Just as dangerous as non-conforming building products are non-compliant building products.

Non-compliant building products are conforming products used incorrectly. They can have the same negative outcomes as non-conforming building products but are caused by weaknesses in provisions of the National Construction Code (NCC)¹. A rapidly growing number of suppliers and buyers now seek to use the code and verification weaknesses to substitute or provide substandard products, usually for commercial benefit.

With an increasing number of products being manufactured offshore and increased access to these products through online and direct B2B purchasing, the use of non-conforming products is a growing problem for the industry. Adding to the concern, the National BCA requirements for building products, including the suitability of materials, are inconsistently applied and poorly understood.

There is a lack of knowledge and resources from various industry participants to ensure these imported products used are 'fit-for-purpose', but still they enter the supply chain. Provenance is lost and seeking a remedy when a problem arises becomes very difficult.

There is no question non-conforming and non-compliant building products are, and will continue to be, the cause of serious safety, health, economic, legal and social consequences now and into the future.

This paper aims to provide a clear understanding of non-conforming and non-compliant building products, background to the drivers of the increasing regulatory scrutiny associated with imported products and how the industry can safeguard itself from potential disasters.

“ Over the last decade, there has been a major shift in the building products supply chain ”



DEFINING NON-CONFORMING AND NON-COMPLIANT BUILDING PRODUCTS

Non-conforming building products are products that do not meet Australian regulatory standards, are not fit-for-purpose, are not of acceptable quality, contain false or misleading claims or are counterfeit.²

Non-compliant building products are products that do not meet contractual or regulatory obligation such as the obligations found in the NCC.

A building product can be both non-conforming and non-compliant.

The Australian Building Codes Board (ABCB) illustrated the distinction between non-conforming and non-compliant building products with the following example:

A building product that is labelled or described as being non-combustible but which is combustible is a non-conforming product. A building product that is combustible, and described as such, but is used in a situation where a non-combustible product is required under the NCC is not fit for purpose is a non-complying product.³

Over the last decade, there has been a major shift in the building products supply chain: an increased use of offshore sources coupled with a decreased level of local manufacturing of these products. Further, the ease of purchasing online has brought a plethora of products from both domestic and international sources into the market.



A CATALYST FOR CHANGE

In November 2014 a smouldering cigarette on the eighth floor of the Lacrosse Apartments in Melbourne's Docklands precinct sparked a fire that raced up 16 floors of the building in just 15 minutes⁴, causing more than \$2 million worth of damages. This high profile incident drew attention to non-conforming and non-compliant building products.

The Metropolitan Fire Brigade (MFB) analysis of the incident identified it was the non-compliant use of the building's external cladding material that fuelled the fire, with the analysis also indicating that it was fortuitous the fire did not cause greater damage to property or loss of life.^{5,6}

Following these revelations, the Victorian Building Authority (VBA) initiated the External Wall Cladding Audit, designed to identify the extent of non-compliant use of external wall cladding materials in residential high rise buildings and public buildings, the results of which were published in February 2016.

Disturbingly, of the 170 high rise residential apartments, hotels, hospitals and aged-care homes that were inspected and audited, 51% of them were assessed by the VBA as non-compliant.

The audit found that it was decisions made by different practitioners at different stages of a project – during design, material specification, design approval and construction – that contributed to cladding being used as a component of external walls in ways that do not comply with the BCA.⁷

Around the same time, a briefing from the NSW Department of Planning and Environment revealed that preliminary data estimated that around 1800, and as high as 2500 buildings in metropolitan Sydney could contain similar non-compliant cladding materials as the Lacrosse Tower.⁸

Beyond the threat to human safety, the financial repercussions of replacing non-compliant cladding are extreme. The replacement cost of non-compliant materials at the Lacrosse Towers has been estimated at \$40 million⁹. More concerning than that, Strata Community Australia has warned the cost of replacing non-compliant building materials throughout the state of Victoria could top \$40 billion.¹⁰

THE PUSH FOR TIGHTER REGULATION - NON-CONFORMING BUILDING PRODUCTS

In late 2015 the Australian Senate commenced an Inquiry into Non-Conforming Building Products. While the inquiry was put on hold due to the double dissolution election of 2016, an interim report was published with 'Concerns Raised by Submissions'.

The committee formed a view that there has been a serious breakdown in the regulation and oversight of non-conforming building products that required actions. It saw the disjointed regulation of the use of building products, both those manufactured overseas and in Australia, as something to be addressed. It is hoped that the inquiry will be reconvened in some manner.^{11,12}

The Building Products Innovation Council (BPIC), the national peak body representing Australia's leading building products industries, followed this by submitting to the Senate the Non-Conforming Building Products Inquiry supporting the Senate Inquiry, identifying five main issues contributing to the flood of non-conforming products being used:

- A regulatory system that allows for easy passing off of fraudulent materials
- Ineffective surveillance
- A lack of, or lack of use of, existing third party certification systems
- A lack of effective reporting and enforcement of existing standards requirements
- An uneven playing field for importers compared with local producers on non-compliant product requirements that substantially disadvantage local supply¹³

In addition to its focus on the procurement and use of non-conforming products, the BPIC has also called for a crackdown on the use of 'conforming' building products in inappropriate designs and forms of construction (non-compliant applications).

THE DEADLY SUBSTANCE SEEING A RESURGENCE THROUGH NON-CONFORMING BUILDING PRODUCTS

Concern surrounding the importation and use of non-compliant products was magnified even further when, in July of 2016, controlled tests found fragments of asbestos in roof panels at the new Perth Children's Hospital, with the CFMEU warning hundreds of workers on the project may have been exposed to the white asbestos.¹⁴

In the same month asbestos was also found in the metal skirting of the Queensland Government's new Executive Building. Both projects had sourced materials from the same Chinese manufacturer, and with the manufacturer having supplied building materials for nearly 70 major buildings and constructions across the country there are fears the incidence of asbestos in Australian building projects will be far-reaching.¹⁵

While the use and importation of asbestos and products containing asbestos have been banned in Australia since the end of 2003, the Asbestos Safety and Eradication Agency believes the substance has been entering the country from places like China, in products often certified as "asbestos free". Important to note: in China a product can be 'asbestos-free' even if it contains 5% asbestos material.¹⁶

These revelations have led to calls for a new inquiry to find out how asbestos is reaching our shores, and what are the tactics used by the Australian Border Force in assessing the risk of shipments which could potentially contain asbestos. The unfortunate reality is the Border Force has limited ability to check products at the point of arrival into the country, and therefore they, along with other parties in the supply chain, continue to rely on testing and certification provided by the manufacturer.¹⁷

While the Federal Government announced a review of Australia's asbestos border control management in February 2016, the findings of the review have so far remained suppressed.¹⁸

Until more is done to tighten regulation, it makes it extremely difficult when dealing with an overseas manufacturer to trust the product you are purchasing, especially from China where asbestos use has not yet been banned and products containing asbestos can be classified as 'asbestos-free'



BEING INFORMED IS AN OBLIGATION, NOT AN OPTION

While it is clear the specification of non-conforming and non-compliant building products will reduce the performance of a building on nearly all measures including safety, longevity and sustainability, their specification in projects remains inevitable in the current system.

As the BPIC states in its inquiry:

“Relying on companies, especially overseas manufacturers and importers to supply data that backs their claims, and relying on the threat of vague penalties if they are misleading, is not an effective system”.¹⁹

The wheels are certainly in motion for tighter regulation across the industry to provide better protection against the use of non-compliant and non-conforming building products. This includes the recent formation of a Senior Officers' Group to investigate strategies to minimise the risks associated with the failure of building products. There is no quick fix and with the Government of the day lacking courage to swiftly address the issue, the flood of non-conforming and non-compliant products entering the Australian market looks set to continue for the foreseeable future.

For the time being, a great deal of the responsibility for ensuring compliant and conforming products falls to the architects, designers, specifiers, project managers and builders entrusted with producing safe and sustainable projects. However, the ultimate cost may fall to the property owners.

Being well informed on both a product's background as well as its intended applications is crucial to making the right decision. Dealing with trusted manufacturers and suppliers who have a systematic, in-country testing process and effective record management that can advise on their products compliance helps ensure a successful project and allay concerns for all parties involved.

CEMINTEL®

Cemintel is an Australian owned company, supplying cement panels and building systems used for external facades, internal linings, ceilings and flooring in commercial and residential applications.

With a strong focus on design, Cemintel's product range looks beyond now. Taking a holistic view of global and local issues that influence our lives, Cemintel interpret these factors to produce products that inspire architects, designers and specifiers to use when designing beautiful buildings, and that builders use because they are known, tested and trusted.

“ For the time being, a great deal of the responsibility for ensuring compliant and conforming products falls to the architects, designers, specifiers, project managers and builders ”



REFERENCES

- ¹ <http://www.architectureanddesign.com.au/news/bpic-recommends-changes-to-the-ncc-a2-provisions-t>
- ² <https://www.masterbuilders.asn.au/building-and-planning/industry-information/non-conforming-building-products>
- ³ Australian Building Codes Board, Submission 49 pg.4
- ⁴ Non-Conforming Building Products Inquiry, Building Products Innovation Council, Sept 30 2015
- ⁵ http://www.vba.vic.gov.au/__data/assets/pdf_file/0016/39103/VBA-External-Wall-Cladding-Report.pdf
- ⁶ <http://www.nickxenophon.com.au/media/nicks-must-reads/show/safety-first-as-fireys-boycott-dangerous-buildings/>
- ⁷ http://www.vba.vic.gov.au/__data/assets/pdf_file/0016/39103/VBA-External-Wall-Cladding-Report.pdf
- ⁸ <http://www.theaustralian.com.au/national-affairs/state-politics/deadly-cladding-on-2500-sydney-buildings/news-story/23efd1460094f59187d0f29f4f0f7d91>
- ⁹ <http://www.thefifthestate.com.au/innovation/building-construction/the-real-cost-and-real-story-behind-the-docklands-lacrosse-fire/80364>
- ¹⁰ <http://www.theaustralian.com.au/national-affairs/state-politics/deadly-cladding-on-2500-sydney-buildings/news-story/23efd1460094f59187d0f29f4f0f7d91>
- ¹¹ <http://www.bpic.asn.au/news/govtprogressonnbcbps>
- ¹² Non-conforming building products Interim report: Safety 'not a matter of good luck', Economic References Committee, Commonwealth of Australia, May 2016
- ¹³ Strategies to Address Risks Related to Non-Conforming Building Products, Building Products Innovation Council, April 13 2016
- ¹⁴ <http://www.abc.net.au/news/2016-07-14/asbestos-found-in-perth-childrens-hospital-roof-panels/7628108>
- ¹⁵ <http://www.architectureanddesign.com.au/news/asbestos-discoveries-spark-call-for-national-inves>
- ¹⁶ <http://www.architectureanddesign.com.au/news/asbestos-discoveries-spark-call-for-national-inves>
- ¹⁷ Non-conforming building products update – Housing Industry Association, August 2016
- ¹⁸ <http://statements.qld.gov.au/Statement/2016/7/15/dutton-must-come-clean-on-asbestos-border-control>
- ¹⁹ Non-Conforming Building Products Inquiry, Building Products Innovation Council, Sept 30 2015