

17 July 2017

Senate Economics Reference Committee
Parliament House
Canberra ACT 2600
E: Economics.Sen@aph.gov.au



Australian Institute of Architects

National Office Melbourne
Level 1, 41 Exhibition Street
Melbourne VIC 3000
T +613 8620 3877
F +613 8620 3864
policy@architecture.com.au
architecture.com.au

Introduction

The Australian Institute of Architects (the Institute) welcomes the opportunity to make a submission to the Economics References Committee on non-conforming building products.

The Institute is the peak body for the architectural profession in Australia, representing around 11,000 members. The Institute works to improve our built environment by promoting quality, responsible, sustainable design. Architecture influences all aspects of the built environment and brings together the arts, environmental awareness, sciences and technology. By combining creative design with technical knowledge, architects create the physical environment in which people live, which in turn, influences quality of life. Through its members, the Institute plays a major role in shaping Australia's future.

The increasing presence of non-conforming products and materials is a matter of great concern to members of the Institute. The use of non-conforming building products raises some very complicated issues, and dealing with it requires a multi-faceted approach, with public safety coming first and foremost, even if this comes with increased and more stringent regulation for the building industry. There are short and medium terms solutions that can be implemented, however, there is an immediate need to introduce a rolling nation-wide audit of existing buildings for all non-conforming building products, not just cladding, to ensure there are no immediate risks to public health and safety.

This submission relates to all types of non-conforming building products, which are also immediately applicable to mitigating risk when dangerous products such as non-conforming cladding are used. The submissions covers:

- the role of architects
- importation and sale of materials and products
- certification and testing
- problems with product substitution
- regulating design, documentation and specification
- knowledge of codes and standards by all building practitioners
- regulation of building practitioners

The role of architects

To provide some context for our comments, it is important for the committee to understand the role that an architect plays in the building process, and the skills that are brought to bear, that if utilised properly, can reduce risks to public health and safety.

An architect requires a minimum of five years' study of an accredited university program, mandatory practical experience and a registration exam. An architect offers a level of professional service and expertise that no other building professional can provide.

An architect who is a member of the Institute is professionally qualified, legally registered to practice by State Registration Boards and bound by a code of ethics established by Institute. This code requires that they perform all duties with professional integrity.

Architects are registered professionals trained in the art and science of building design. They develop the concepts for structures and turn those concepts into images and plans. Architects create the overall aesthetic and look of buildings and other structures, but the design of a building involves far more than its appearance. Buildings must be functional, safe, and economical and must suit the needs of the people who use them. The plans also specify the building materials and products.

The architect provides various designs and prepares drawings and a report, presenting ideas to the client based on his needs. Computer-aided design and drafting (CADD) and Building Information Modeling (BIM) technology has replaced traditional paper and pencil as the most common method for creating design and construction drawings. After discussing and agreeing on the initial proposal, architects develop final construction plans that show the building's appearance and details for its construction.

The role of an architect does not end in the design stage. During construction, continual revision of plans on the basis of client needs, budget and other constraints not envisaged during design stage is often necessary. As construction proceeds, the architect will visit building sites to make sure that contractors follow the design, adhere to the schedule, use the specified materials, and meet work quality standards.

Importation and sale of materials and products

The range of available construction materials and products has expanded considerably, with an enormous array of materials coming from international manufacturers. The credentials of these products are sometimes questionable.

Currently, any person can import construction products and materials, and many of these would not understand the Australian Standards relating to the materials they import. Nor would many understand the implications of using the material inappropriately.

There appears to be very limited ways in which non-conforming products could be totally excluded from Australia. One suggestion is to regulate so that construction materials cannot be imported unless they have been tested and certified by a known Australian authority (similar to child restraints or bike helmets). However, the plethora of building materials that are imported would quite possibly make this impossible to implement due to costs.

Ideally, non-conforming building products and materials should be dealt with at the point of sale, with the responsibility for ensuring that a building product is fit-for-purpose as defined under the National Construction Code being placed solely with those who sell the building products. Requiring all in the building chain to confirm that materials to be used on a project are conforming building products will significantly increase the work load of designers, certifiers, builders and installers to obtain and verify the accuracy of product documentation supplied by manufactures and suppliers.

Unfortunately, there appears to be no effective measures to prevent the sale of non-conforming building products, particularly given that a product may be conforming in certain circumstances, but not in others. A product may have relevant certification for compliance with certain provisions of the BCA and be suitable to be used in certain circumstances. But that product or material may not have been tested or assessed for all relevant building standards. For example, some materials may comply for Class 1 but not Class 2 buildings. Establishing a national register of approved products with respect to each building class is one solution.

Certification and testing

It is difficult for anyone in the building process, including architects who are specifying products, to be absolutely certain that they comply with the various standards. Fraudulent documents abound. Architects have reported that relying on the supplier/agent to supply the appropriate information and documentation can be difficult.

To avoid fraudulent documentation, it appears that the only avenue for a higher degree of certainty is to request third party product certification. However, for the construction industry, the current patchwork system of assessment schemes is unwieldy. There is great disparity amongst the schemes as to the quality of assessment, level of auditing and checking for fraudulent documentation.

Third party certification from a testing laboratory that is properly recognised and accredited by NATA is essential, as is current certification schemes, and product registers coming under the one umbrella to ensure that minimum standards are upheld. The certification and testing regime should not be limited to imported products, but should apply to those manufacturers in Australia to ensure that all products comply with Australian standards.

We recommend common labelling of existing third-party product certification schemes that meet the minimum requirements of accreditation through JAS-ANZ and including product conformity requirements for type or batch (on-going) testing to Australian or International Standards as appropriate. There also needs to be a process for ongoing, periodic auditing.

The development of new schemes within an overall certification system, both by government and industry, should be supported and encouraged until there is a comprehensive system that covers all the key product types. The development of a third-party certification system that sets out the technical information in a standardised format would be welcomed as it would make it easier to establish if a product is a conforming building product.

Problems with product substitution

Product substitution during construction is common practice for a range of reasons, including cost and availability of the specified product, amongst others.

A significant issue is the risk around substitution of materials by the contractor, project manager or subcontractor. Where an architect is involved during the construction process, clauses within building contracts can stipulate that the builder must demonstrate a substitution is equal or superior in quality to the original before be considered as an appropriate substitute.

When an architect is not acting as superintendent, there is a question around who signs off any product or material substitution. If the contractor is able to substitute without a third party to validate the material or product, there is a risk of non-conforming products being used, which can have serious consequences. Visual inspection in many instances is not sufficient to determine whether the product or material is compliant.

Where product substitution has occurred and the materials are non-compliant, fines for non-compliance must be substantial, to provide a strong disincentive. To use an example from the automotive industry, we do not see a high level of non-compliance, and where there are instances, it is dealt with through recall notices. Yet, in the construction industry where there is the risk of significant loss of life with particular building types, the issue of non-compliance does not appear to be taken as seriously as it should.

Regulating of design, documentation and specification

Design and documentation requirements to deliver a successful project on site are vastly different from project to project, builder to builder and client to client.

In the building process, architects are commissioned by owners to provide a service either as:

- full service – design, documentation and contract administration, or
- partial service – design & documentation to development approval only, or design and documentation to building approval stage

An example of full service would be a traditional design-build process where a building owner hires an architect to design a building and provide a complete set of design and construction documents (drawings); a general contractor is selected; the architect's set of stamped, completed and approved plans are handed to the contractor and these form part of the contract that binds the contractor to build the building exactly as shown in the drawings, approved plans and specifications.

Partial service can mean that the architect is only involved in the initial design and provides minimal documentation. Levels of detail differ between stages in the project and it is becoming common practice for developers to employ architects to prepare the initial documentation to development approval stage, and then hand on the task of more detailed documentation and product and material specification to other practitioners, such as building designers, who do not hold the same level of skills as that of an architect, and are not regulated in any way with regard to levels of education, experience or compliance with codes of ethics.

There is also a commonly held misconception that drawings for building approval (BA) are sufficiently detailed to inform construction. The level of documentation for BA is somewhat lower than what an architect would expect a project to need for construction. BA documents are not generally sufficiently detailed to resolve the complex junctions and interactions between parts of even the simplest building which may leak, fail fire separation requirements, and/or look unsightly. These documents will most certainly not provide detailed product and material specification.

Architects routinely separate the documentation tasks into two parts, BA documentation and construction documentation. The majority of details are prepared in the latter phase. Wall junctions, fire-rating details, waterproofing details, box-gutters, balcony details, thresholds, flashings, etc. form part of this work.

Construction detailing is perhaps one of the most crucial skills used in construction documentation. This is because the nature and quality of architectural detailing contributes to how the building is built, what it will look like, what it will cost, how long it may take to build and contribute ultimately to the quality of the building. For these reasons, practitioners involved in the documentation process must have a thorough understanding of the methods and techniques used in building construction. This includes knowing how various materials are connected or attached and how they interact when brought together. An understanding of how air, water, and other elements interact with buildings is also crucial to quality construction documentation.

Unless qualified design professionals such as architects are engaged for this phase of work (especially on multi-unit residential buildings) this construction information is missing from the process. Without construction detail drawings, including specifications, the quality of the building and the use of properly specified products and materials will depend on the builder, project manager and site trades.

The level of BA documentation does not impact building quality, whereas construction documentation does. To improve outcomes, there needs to be a focus on construction documentation, which is currently not regulated.

Knowledge of building and construction codes and standards by all building practitioners

Of concern to the Institute is the lack of in-depth knowledge of some builders and trades of the National Construction Code and Australian standards. One member reported a conversation with a site foreman about their understanding of AS1428.1. Some builders seem to understand this standard better than others, but essentially the response back to the architect from the company owner was: *'My employees are builders and do not have the expertise to decipher the code, take responsibility and risk getting it wrong.'*

The architect supplied the information and details needed, but it raises a concern when no architect or other specialist is involved to provide the correct information, there are builders putting up buildings that do not understand the Australian Standards. In this situation, how can the general public be assured that builders are complying with the various codes and regulations, and using materials appropriately? A building surveyor or certifier may ensure compliance in some areas, but they are not regularly on site and are only inspecting limited areas of the construction works.

As well, the level of reliance on building certifiers/building surveyors needs to be considered. As stated by the Australian Institute of Building Surveyors in their submission: *"It must be emphasised that whilst Building Surveyors certify/issue building permits, they do not and indeed cannot, certify to the compliance and quality of the thousands of individual products and components that make up the completed building."*

The Institute believes that either architects, or an equivalent knowledgeable person needs to be involved during construction, or the level of knowledge of builders needs to be substantially increased. Modern construction is increasing in its complexity and sophistication, and the attitude of *'what do I know, I am just the dumb builder'* has no place in today's construction industry.

Regulation of building practitioners

Better regulation is needed with regard to multi-unit residential buildings, mixed use buildings and speculative commercial buildings. The Institute believes that only fully qualified and experienced professionals should be responsible for delivery of design services and project management for these types of buildings. Different classes of licence could be issued according to building class and size.

These classifications must be partnered with training requirements and supervised experience to be eligible to obtain a licence for more complicated building types and size. There is a need to upskill the whole industry.

Mandated standards for education or experience for building designers, drafters, project managers and the like is needed.

Licensing or regulation of other design professionals to have an appropriate level of knowledge and experience related to the scale of projects being delivered is fundamental to ensure a level playing field and a balanced, fair and equitable regulatory system.

For instance, building designers are generally educated through accredited TAFE building courses and/or other construction based pathways of 2-3 years duration. The skills gained in these courses are heavily focused on smaller size building, and standard construction techniques.

Typically, building designers find career paths in the largest part of the construction industry, supporting the construction of individual houses and townhouse style medium density developments. Increasingly, however, some developers are approaching building designers to undertake the design and /or documentation of larger multi-unit residential developments.

While this split of service delivery is set by the market, there is no level of consumer protection applied to the services provided by those building professionals who are engaged for projects that may be outside their level of expertise. There are also no ethical/behavioural rules, via a code of conduct or similar long held measure, which apply to building and design professionals other than architects.

The Institute believes that regulation of building professionals, whether designers, draftspersons, certifiers, or project managers is essential to provide the community protection. Regulation is particularly important for project managers as they play a major role in the process.

Regulation would provide that these professionals are educated to accredited standards, hold professional indemnity insurance, abide by a code of conduct, and undertake continuing professional development, thereby increasing quality outcomes and better mechanisms for consumer protection.

Recommendations

- Introduce third party certification regimes from testing laboratories that are properly recognised and accredited by NATA
- Mandate that imported and local manufactured cladding to obtain a third party certification for their cladding products – and other high risk materials and products
- Bring certification schemes under one umbrella (JAS-ANZ) to ensure minimum standards are upheld and are correct
- Regulate so that a third party certification is valid only for a nominated period
- Establish a national register of approved products with respect to each building class
- Introduce substantial fines for substitution of compliant with non-compliant building products
- Mandate the use of appropriate expertise throughout all stages of the design and construction process with special provisions for authorisation of product substitution
- Introduce regulation to require minimum initial and ongoing education about the National Construction Code and Australian standards by all building practitioners
- Introducing nationally consistent licensing for all building practitioners such as drafters, building designers, project managers and the like
- Ensure architects should be involved in and appointed to any inquiry or expert review panel formed in the future.

If you have any questions, please do not hesitate to contact me.

Yours sincerely

A handwritten signature in black ink that reads "Jennifer Cunich". The signature is written in a cursive style with a large initial 'J' and 'C'.

Jennifer Cunich
Chief Executive Officer