



**Draft National Building Product
Assurance Framework-
A response to the Building
Confidence Report
Discussion paper
2021**

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Introduction

In June 2017, Building Ministers commissioned an independent expert examination of systemic problems affecting compliance with the National Construction Code (NCC). The resulting Building Confidence Report¹ (BCR) was published in April 2018 and made 24 recommendations to address identified issues.

BCR recommendation 21 is that Building Ministers agree a position on the establishment of a compulsory product certification system for high-risk products.

Following initial analysis by the BCR Implementation Team, the Australian Building Codes Board (ABCB) advised Building Ministers that a compulsory scheme for high risk building products may not address the compliance issues identified in the BCR. Building Ministers subsequently agreed to consider *“a holistic package of measures to provide a reliable conformity assessment framework, including product conformance information, particularly where those products are used in complex buildings.”*

In response, the BCR Implementation Team has prepared this discussion paper to aid in the development of a National Building Product Assurance Framework to address the problems associated with building product safety.

The paper explores a number of areas for reform and seeks your views on the current problems and proposed solutions.

Comments on this discussion paper should be provided online via the [ABCB's Consultation Hub](#) by **6 June 2021**.

¹ Shergold, P. and Weir, B., *Building Confidence: Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia*, February 2018

Acronyms & Glossary

ABCB	Australian Building Codes Board
ACCC	Australian Consumer and Competition Commission
ACL	Australian Consumer Law
ACP	Aluminium Composite Panel
ACRS	Australasian Certification Authority for Reinforcing and Structural Steels
AGWA	Australian Glass and Window Association
APCC	Australasian Procurement and Construction Council
ATEN	Australian Technical Evaluation Network
BCR	Building Confidence Report
BRAC	Building Regulations Advisory Committee (Victoria)
BRANZ	Building Research Association of New Zealand
BRF	Building Regulators' Forum
CAB	Conformity Assessment Body
CROSS	Confidential Reporting on Structural Safety
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CPD	Continuing Professional Development
FRL	Fire resistance level
ILAC-MRA	International Laboratory Accreditation Cooperation – Mutual Recognition Arrangement
IAF	International Accreditation Forum
JAS-ANZ	Joint Accreditation System of Australia and New Zealand
NATA	National Association of Testing Authorities
NCBP	Non-conforming Building Product
NCC	National Construction Code
PTS	Product Technical Statement
QBCC	Queensland Building and Construction Commission
QR Code	Quick Response Code
SOG	Senior Officers' Group
TAG	Technical Advisory Group
WELS	Water Efficient Labelling Standards

This discussion paper uses the following key terms:

- **Building product** is any material or other thing associated with, or that could be associated with, a building. Building products can take the form of materials, systems and forms of construction. (In this paper 'building product' is taken to mean each of these variants.)
- **Non-conforming building product** is a product or material that claims to be something it is not; does not meet required standards for its intended use; or is marked and supplied with the intent to deceive those who use it.
- **Non-complying building product** is a product that is used in a situation where it does not comply with legislative and regulatory requirements such as the NCC.

Preferred Terms Publication

The BCR noted that each jurisdiction has developed different ways of describing the same or similar terms and processes. This makes it difficult sometimes to compare systems and share results, as well as for businesses, practitioners and consumers operating across jurisdictions or at a national level. To address this, the BCR recommended development of preferred language for jurisdictions to consider adopting as they revise and amend their laws (BCR recommendation 22).

If agreed by the ABCB and Building Ministers the preferred terms will be consolidated into a Preferred Terms Publication. Current legislative terminology used across Australia has been considered when developing the proposed terminology and is relevant to application in this discussion paper. The agreed terminology used in the Preferred Terms Publication will not be considered legal definitions unless adopted by jurisdictions.

Consultation Questions:

1. Do you agree with the definitions for the preferred terms detailed in the Glossary? If not, what preferred term do you disagree with and why? How should they be changed?

Executive Summary

The BCR identified that problems exist with building product safety. Building Ministers agreed that this could be addressed by way of a National Product Assurance Framework. In developing the Framework the work of Professor Russell Kenley, who examined how non-performing building products get installed, was reviewed. He found that there are “*competing and complementary processes and relationships of demand, supply and installation*”.² To address the problem, Kenley proposed a ‘total control system’ with eight elements that reach across product demand, supply and control.³ It is proposed that a Product Assurance Framework can address the current failings in the ‘total control system’ through a number of proposals under each of the following five elements.

Element 1: Strengthened NCC Evidence of Suitability requirements

The NCC’s evidence of suitability provisions provides options for the types of evidence that can support the use of a building product. A concern is that current NCC provisions are not specific to product types or levels of risk. This makes it difficult for building practitioners to know that the evidence provided is appropriate for the product and its intended use. Amendments to the NCC provisions could set out the minimum information necessary to verify evidence of suitability and increase rigour. This work could also be supported by a more detailed and updated ABCB Evidence of suitability handbook.

Element 2: Building product information obligations for manufacturers and suppliers

For a building product to be used in a way that is fit for purpose, building practitioners responsible for their specification, selection, installation and certification need access to appropriate product information. Product information needs to provide evidence that a product is fit for purpose and include the necessary information to ensure its appropriate

² *Reforms to achieve performing building products: guidance for managing compliance and conformance*, June 2019, p.18

³ *ibid*, p. 21

use. Often this is not available. To address this information, obligations in the form of mandatory Product Technical Statements could be introduced. The current extensive range of industry conformance schemes could be encouraged to operate to a minimum standard and provide a multi-faceted service. A requirement could be the assessment of targeted products to a pre-determined standard prior to supplying them to market. This should assist with a single national response when problems are identified.

Element 3: Improved product labelling and traceability

It is often difficult for building products to be identified with complete certainty when delivered to site or installed on or within buildings. This can create a range of issues in determining compliance and for installers who require confidence that the products specified are the ones provided for installation. Improving product traceability will also help address counterfeit products and fraud. It is recommended that labelling requirements be introduced for building products in relevant Australian Standards where they are lacking. Consideration could also be given to the use of QR or bar codes to allow supplemental information to be available and link to the conformance information. Further work could be done to explore digital tracking solutions to further embed compliance information.

Element 4: Increased research, surveillance and information sharing

There is a role for improved research, surveillance and information sharing to ensure the effective and robust operation of a product assurance framework. A centralised, portal could be established to identify and report building product failures. This information would then be communicated with the wider industry and training provided to ensure that everyone understands how to meet their obligations to provide and use conforming and compliant products. Addressing these problems will require information sharing, the provision of technical advice and stronger feedback loops through surveillance and audits to identify problems and formulate recommendations to address issues.

Element 5: Strengthened compliance and enforcement

In cases where problems with a particular product(s) are confirmed, there is a need to ensure that the withdrawal of any conformance documentation occurs quickly and is well

communicated. It will also be necessary to ensure that where any manufacturers' obligations (detailed under Element 2) are introduced that they are enforced. Most building products are generally not for personal, domestic or household use and as such, they are not consumer products under Australian Consumer Law (ACL). This issue may be addressed by ensuring that state and territory regulators responsible for regulating building products have appropriate compliance and enforcement powers.

Implementing all elements of the proposed Product Assurance Framework will give industry more certainty in compliance pathways, reducing both the cost of compliance and the cost to rectify defects. The process will free up regulator resources to target areas of genuine market failure and ensure that emerging problems are identified and addressed expeditiously.

A summary of the proposals under each of the five elements being recommended as part of a National Product Assurance Framework, are in Table 1 below.

Table 1: Summary of proposals

Element 1: Strengthened evidence of suitability requirements in the NCC

- 1.A Set minimum information requirements to demonstrate evidence of suitability
- 1.B Amend the NCC evidence pathways to increase rigour
- 1.C Investigate comprehensive changes to the NCC evidence of suitability provisions
- 1.D Add further guidance in the NCC Evidence of suitability handbook

Element 2 – Building product information obligations for manufacturers and suppliers

- 2.A Introduce information obligations in the form of Product Technical Statements
- 2.B Facilitate the development of industry conformance schemes
- 2.C Require minimum product conformance assessment for select product types

Element 3 – Improved product labelling and traceability

- 3.A Extend requirements for product labelling
- 3.B Further explore digital tracing and information solutions

Element 4 – Increased research, surveillance and information sharing

- 4.A Improve oversight and coordination of the product assurance system
- 4.B Develop a central building product information portal
- 4.C Develop a conformance and specification guide and training

Element 5 – Strengthened compliance and enforcement

- 5.A Strengthen building product auditing and enforcement
- 5.B Introduce and enforce accountability obligations relevant to Element 2.

Background

In June 2017, Building Ministers commissioned an independent expert examination of compliance and enforcement problems affecting the implementation of the National Construction Code (NCC). The resulting Building Confidence Report⁴ (BCR) was published in April 2018 and made 24 recommendations to address identified issues.

Recommendation 21 of the BCR is “that the Building Ministers’ Forum agrees its position on the establishment of a compulsory product certification system for high-risk building products.”

In developing this recommendation, the BCR authors “heard there is a high incidence of building products in the market that are not compliant with the standards set out in the NCC, resulting in inferior and sometimes dangerous products being used in the construction of buildings”⁵. They were also informed of “products being used in a non-compliant manner which can result in unacceptable risks to safety”.⁶

Their recommendation highlighted that there is a need for a product certification system to “include mandatory permanent product labelling and prohibitions against the installation of high-risk building products that are not certified”⁷.

Building Ministers subsequently considered advice from the ABCB that a compulsory scheme for high risk building products may not address the identified issues and agreed to consider “a holistic package of measures to provide a reliable conformity assessment framework, including product conformance information, particularly where those products are used in complex buildings.”

⁴ Shergold, P. and Weir, B., *Building Confidence: Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia*, February 2018

⁵ *ibid*, p. 36

⁶ *ibid*, p.36

⁷ *ibid*, p.36

The Board subsequently agreed to the BCR Implementation Team developing a National Building Product Assurance Framework that includes five specific elements:

Element 1: Strengthened Evidence of Suitability requirements in the NCC

Element 2: Building product information obligations for manufacturers and suppliers

Element 3: Improved product labelling and traceability

Element 4: Increased research, surveillance and information sharing

Element 5: Reinforced compliance and enforcement.

Separate to this the ABCB also agreed to retain the CodeMark certification scheme and sought options for its enhancement. This work is being undertaken separately by the ABCB, but nonetheless has the potential to form an integral part of any framework.

Senior Officers Group Implementation Plan

The Senior Officers Group (SOG), which reported to Building Ministers, developed the *Strategies to Address Risks Related to Non-conforming Building Products* paper, which examined the weaknesses that impact the ability of industry and government to address non-conforming building products⁸. It detailed eight recommendations and was followed in September 2017 by an implementation plan, through which SOG identified that “*the current building regulatory system in Australia does not provide an overarching framework for identifying and addressing NCBP’s*”.⁹ The implementation plan contained a number of actions that were advanced by the SOG.

⁸ Senior Officers Group, *Strategies to Address Risks Related to Non-Conforming Building Products*, 2016

⁹ Senior Officers' Group, *Implementation Plan: Strategies to address risks related to non-conforming building products*, September 2017, p. 3

Senate inquiry

In December 2018, the Senate Economics Reference Committee handed down its report on *Non-conforming building products: the need for coherent and robust regulatory regime*.¹⁰ The Committee produced thirteen recommendations. Amongst these was a need to consider a nationally consistent approach to increase accountability for participants across the supply chain.

The Committee endorsed BCR Recommendation 21 and recommended that Building Minister's expedite its consideration of a mandatory third-party certification scheme for high-risk building products and a national register for these products (Recommendation 5).

The recommendations also included “*further consideration to introduce a nationally consistent approach that increases accountability for participants across the supply chain. Specifically, the committee recommends that other states and territories pass legislation similar to Queensland’s Building and Construction Legislation (Non-conforming Building Products-Chain of Responsibility and Other Matters) Amendment Act 2017.*” (Recommendation 6)¹¹

The Committee also recommended there be a national confidential reporting mechanism to report non-conforming building products (Recommendation 2).

The Australian Government provided its response in April 2020,¹² which either noted or supported each of the Committee’s recommendations. The Government response highlighted that the appropriate use of building products is regulated by the states and territories, including through the NCC.

¹⁰ https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Non-conforming45th

¹¹ *ibid*, p.xi

¹² Australian Government, *Senate Economics References Committee’s Inquiry into Non-Conforming Building Products, Government Response to the Final Report: Non-conforming building products – the need for a coherent and robust regulatory regime*, December 2018

Building Product Control System

SOG commissioned a report by Professor Russell Kenley on *Reforms to achieve performing building products: guidance for managing compliance and conformance*¹³ (Kenley Report). It examined how non-performing products are installed and concluded that *“building products are the result of a complex network structure of production, delivery and installation”*.¹⁴

Kenley found that *“for any control mechanism to work, it should recognise both demand and supply,”* which were defined as:

“Demand: the purchasers’ needs and provision; as determined through client briefing, design, NCC, referenced Australian Standards, specification, procurement, purchasing, fabrication, installation and current practice.

Supply: the suppliers’ capacity to provide; as determined by product design, intended purpose, claimed Australian and International Standards, testing, certification, publication of suitability information, product suitability claims and recommendations for installation”.¹⁵

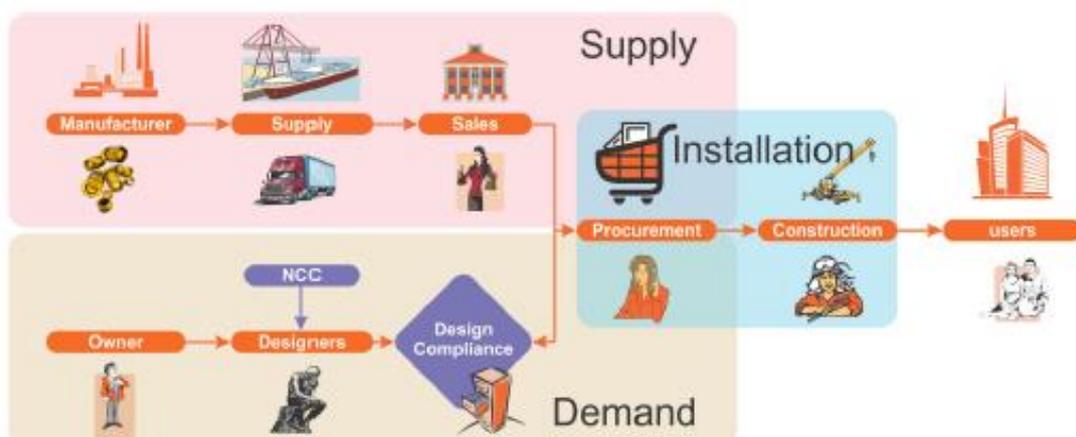
The demand and supply relationship for the building products is illustrated at Figure 1.

¹³ June 2019

¹⁴ *ibid.*, p.18

¹⁵ *ibid.*, p.18

Figure 1: Supply and demand relationships for building products¹⁶



Kenley concluded that “the policy, regulatory, approvals and inspection framework should act on both the supply and demand systems” and that “a total control system should have the following properties:

1. Product demand responsibility to ‘choose’ compliant products or component systems.
2. Product supply responsibility to provide conforming products or component systems.
3. Product supply responsibility to provide appropriate information to inform those choices.
4. Control processes to monitor, approve and record both the choices and the product information.
5. Control process to audit products for conformance.
6. Product demand responsibility to install products and component systems correctly.
7. Product supply responsibly to provide appropriate information for product installation.
8. Control processes to assess, approve, inspect and record installation methods”.¹⁷

¹⁶ Kenley, R., *Reforms to achieve performing building products: guidance for managing compliance and conformance*, June 2019, p.18

¹⁷ *ibid*, p.21

Building product demand

Building products are typically chosen through the process of project design and specification. Incomplete product specification and a lack of product information detail for design compliance (design acceptance) can lead to the gaps being filled during procurement and installation, resulting in inappropriate products being used in some buildings.

In other instances, building products are not selected by the designers or builder, but by the individual trades and subcontractors. Common practice is that the builder assumes an intermediary role as a 'facilitator' of construction. Under this approach, builders defer key compliance decisions to suppliers and sub-contractors to manage with little or no oversight as to product selection or installation.

The correct installation of products depends on the installer knowing that the specified products are the ones delivered to site and that they are accompanied by the appropriate installation information.

Strengthening the demand for building product information at the design stage will be considered through BCR recommendations 13 to 17, which include a focus on ensuring that building practitioners seek out the necessary information to correctly specify, document and approve building products to achieve design compliance and correct installation.

Building product supply

Building product supply incorporates individual products, systems made up of a combination of products working together and building components. They can be supplied as a:

- discrete individual product,
- number of products working together in a system or as a building component (e.g. modular component), or
- a system that comes together on site and can only be a compliant system when installed correctly (e.g. external wall cladding system).

Products can have single and multiple applications. They can be used solely in the construction of buildings or more broadly. In addition, depending on its application, the same product can potentially be high risk in one situation and low in another.

There are an enormous number of building products. *“There are at least 10,000 categories of products used in building construction and perhaps over 90 per cent of the products have no problem at all.”*¹⁸

Supply chains are global and underpinned by free trade agreements that often operate with little or no understanding of the specific requirements in Australian building regulations.

Building product control

Current building product controls are included in Australia’s product conformance infrastructure, which provides a system for standardisation and conformity assessment. Conformity assessment is against the NCC and its referenced Australian Standards. The infrastructure also provides for auditing which is used to a limited extent.

It then falls to the building surveyor to assess, approve and inspect the use of building products and record the installation to the extent that the products are included in the approval documentation.

Manufacturers and suppliers of building products remain largely outside the legislative controls for buildings. They are generally not compelled to provide the information necessary to help ensure that their products are conforming and installed in a compliant manner, although their products are required to satisfy established standards. Similarly, they largely sit outside of controls for consumer products. *“Extant regulatory frameworks across most, if not all jurisdictions, are dominated by a focus on the demand-side. Thus,*

¹⁸ Gad, E., et al, *Product Performance*, November 2020, p. 4

the building is regulated and constrained without matching control over the supply stakeholders.”¹⁹

Controls to assist in monitoring product demand will also be considered through improvements to design and construction acceptance under BCR recommendations 13 to 19. Improved auditing and compliance by regulators will also play a role, with BCR recommendation 7 seeking to improve auditing communication while BCR recommendation 6 seeks to ensure regulators have the powers to take enforcement action where necessary.

¹⁹ Kenley, R., *Reforms to achieve performing building products: guidance for managing compliance and conformance*, June 2019, p.21

Building Product Assurance Framework

To address the problems identified in the BCR and detailed in the current Building Product Control System shortcomings, a Building Product Assurance Framework is recommended which incorporates the following:

Element 1. Evidence of suitability requirements in the NCC to ensure the pathway chosen is appropriate given the risk and intended use of the product being assessed, and that the assessment delivers sufficiently detailed, rigorous information to allow for a product's appropriate selection and use.

This is can be achieved by the following proposals:

- 1.A Amend the NCC to set minimum and consistent information requirements to demonstrate evidence of suitability.
- 1.B Amend the NCC evidence of suitability pathways to increase the rigour in the evidence provided.
- 1.C Investigate further, comprehensive changes to the NCC evidence of suitability provisions.
- 1.D Add further guidance in the NCC Evidence of suitability handbook to assist users of the NCC to better match the appropriate evidence to the circumstances where compliance is being sought.

Element 2. Building product information obligations for manufacturers and suppliers overcome the lack of clear, accurate and verified information to confirm NCC evidence of suitability for building products and to inform their appropriate use and installation. Consistency and familiarity in the presentation of product information assists industry to choose the right product for the right application.

This is can be achieved by the following proposals:

- 2.A Introduce information obligations for manufacturers and suppliers in the form of mandatory Product Technical Statements.

- 2.B Facilitate development of industry conformance schemes to operate at a minimum standard and provide a multi-faceted service to aid compliance.
- 2.C Require manufacturers who provide identified products for select uses to have them assessed to a pre-determined standard prior to supplying them to market.

Element 3. Product labelling and traceability which helps to address the lack of certainty that specified and ordered products are the ones that are actually delivered to site, and that their origins are traceable when problems arise.

This is can be achieved by the following proposals:

- 3.A Extend labelling requirements to all referenced building product standards.
- 3.B Further explore digital tracing and information solutions.

Element 4. Research, surveillance and information sharing reduce the length of time required to identify problem products, inappropriate use of products, and to make the necessary changes to regulation and practice to ensure that that they are removed from use or used appropriately. Improved understanding as to how to appropriately navigate building product supply and demand.

This can be achieved by the following proposals:

- 4.A Improve oversight and coordination of the product assurance system.
- 4.B Develop a central building product information portal.
- 4.C Develop a conformance and specification guide and training to step manufacturers, suppliers and building practitioners through the requirements to supply and use compliant products.

Element 5. Extend compliance systems to building product supply targeting information omissions, misrepresentation and fraud to strengthen enforcement and increase transparency.

- 5.A Strengthen building product auditing and enforcement powers in all states and territories, including the power to issue safety warning notices, ban products, impose mandatory safety standards and issue compulsory recall notices for construction products.
- 5.B Introduce and enforce accountability obligations relevant to Element 2.

Figure 2 summarises where each of the proposals within the Product Assurance Framework work to improve the Product Control System.

Figure 2: Product Control System and the proposed Product Assurance Framework

Product Control System (Kenley)	Product Assurance Framework
<p>Building Product Demand</p> <p>Choose compliant products</p> <p>Install correctly</p>	<p>Element 1 - Evidence of Suitability</p> <p>Set the minimum detail (1.A)</p> <p>Increase stringency in evidence pathways (1.B & 1.C)</p> <p>Update Evidence of Suitability Handbook (1.D)</p> <p>Design Acceptance and Construction Inspection</p> <p>BCR recommendations 13-17</p>
<p>Building Product Supply</p> <p>Provide conforming products</p> <p>Information to inform choices</p> <p>Information to inform installation</p>	<p>Element 2 - Information Obligations</p> <p>Require Product Technical Statements (2.A)</p> <p>Develop industry conformance schemes (2.B)</p> <p>Require minimum conformance assessment (2.C)</p>
<p>Building Product Control</p> <p>Monitor, approve & record product choice</p> <p>Monitor, approve & record product info</p> <p>Audit</p> <p>Assess, approve, inspect & record installation</p>	<p>Element 3 - Product Traceability</p> <p>Labelling requirements (3.A)</p> <p>Digital traceability (3.B)</p> <p>Element 4 - Surveillance & Information Sharing</p> <p>Oversight and coordination (4.A)</p> <p>Central information portal (4.B)</p> <p>Guidance and training (4.C)</p> <p>Element 5 - Compliance & Enforcement</p> <p>Building product enforcement (5.A)</p> <p>Enforce manufacturer obligations (5.B)</p>

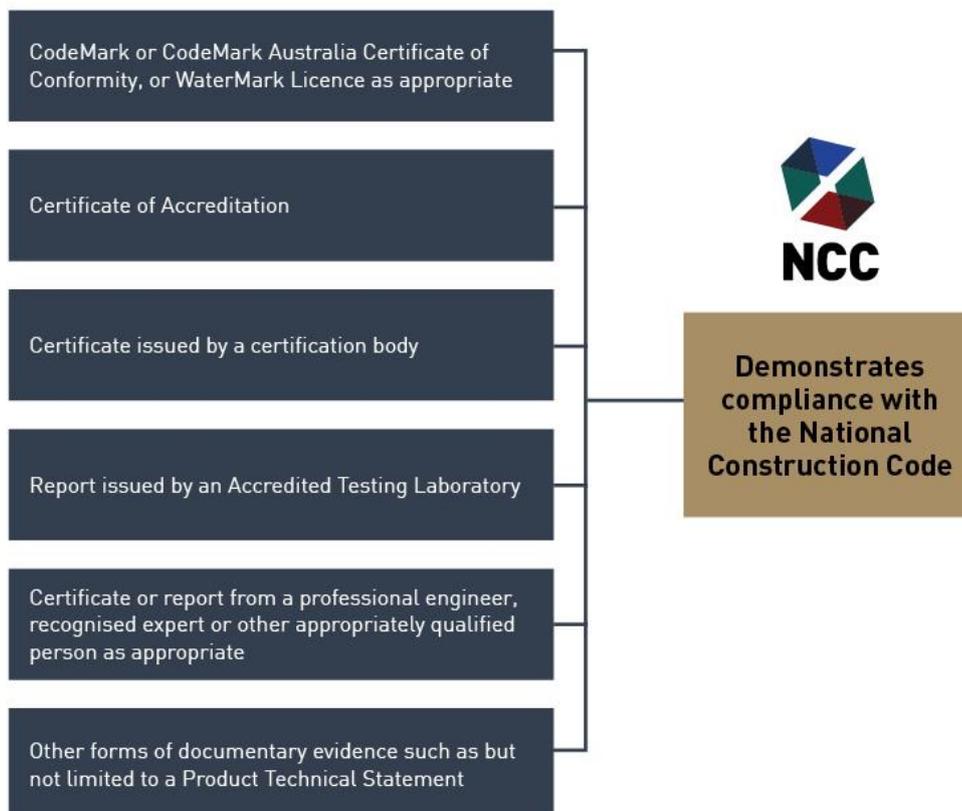
Element 1 – NCC evidence of suitability requirements

A. Current situation

The Governing Requirements of the NCC include evidence of suitability provisions to demonstrate that the NCC’s requirements are met and the solution is ‘fit for purpose’. The need for evidence of suitability is detailed in Part A5 of each NCC volume and the provisions cover the use of materials, products, forms of construction and designs.

A5.1(1) requires that the form of evidence be appropriate to the use to which the product relates. The six general evidence pathways are then detailed at A5.2, and are summarised in Figure 3 below. These are subject to further specific requirements in subsequent provisions of the Code.

Figure 3: Summary of NCC evidence of suitability



Beyond the overarching requirement to select the evidence appropriate to the use (A5.1(1)), each of the six pathways for evidence of suitability are presented within the NCC without explicit reference to the circumstances of their intended use. This is despite each path being significantly different in the nature and level of assessment provided and rigour required. Where A5.1(1) or any of the specific requirements are not addressed, suppliers might select the pathway of least resistance, rather than the pathway most appropriate for the product risk profile or relevant NCC provisions.

Also, the evidence of suitability provisions do not separate designs and products despite their validation process being very different. *“The certification process for mass-produced and off-the-shelf products is very different from performance-based designs and systems.”*²⁰ *“The current structure attempts to adequately address all items and does to a large degree, however, in trying to accommodate all into one structure it is difficult to finesse wording and provide clarity for one aspect, without adversely affecting another aspect.”*²¹

A further concern with the current NCC evidence of suitability provisions is that they do not articulate what would provide the appropriate rigour for evidence or evidence threshold requirements. The effect is that different building surveyors accept various evidence types for the same product.

Together these shortcomings mean it is difficult for building practitioners to know if the evidence that is provided is appropriate to the circumstance of the intended use. For manufacturers’, they lack certainty that when they invest in compliance information it will be accepted as evidence of suitability.

It must be acknowledged that regardless of the evidence of suitability provided, the relevant NCC Performance Requirements must be complied with. It is the responsibility of the building surveyor to determine whether submitted evidence is sufficient and require further evidence where necessary.

²⁰ Building Products Industry Council, *Industry Position Paper – NCC evidence of suitability (A2) Review*, July 2016

²¹ Dundules, B., Fire Protection Association Australia, December 2020

B. Action to date

The evidence of suitability provisions were amended as part of NCC 2019. These amendments included enhanced and clarified provisions, including the introduction of voluntary ‘Product Technical Statement’ (A5.2(1)(f)). The individual evidence pathways were also amended to establish a clear link between demonstrating compliance with the NCC and what was relied upon in making the determination. For example, A5.2(1)(e)(ii) *“sets out the basis on which it is given and the extent to which relevant standards, specification, rules, codes of practice or other publication have been relied upon to demonstrate it fulfils specific requirements of the BCA.”*

Provision A5.1(1) was added to require that the *“form of evidence used must be appropriate to the use of the material, product, plumbing product, form of construction or design to which it relates.”* The decision was also taken to leave further detail in a risk assessment framework to help inform the appropriate evidence pathway as informative content (in the Handbook of Evidence of Suitability) rather than make normative in the NCC. A key reason for this decision was that it is difficult to determine risk at the factory (e.g. will timber weatherboard be installed on a house = low risk, or a high-rise = high risk). Because risk can be assessed through the project documentation and on-site it has been left for the building surveyor to assess whether it has been appropriately addressed. This has meant that in many cases it has not been applied consistently.

At the time of the amendment, consideration was also given to separating the evidence of suitability into two parts, being evidence addressing design, and evidence addressing products and building components. It was determined that the assessment for both were similar, making the proposed change unnecessary. Further, in the case of product installed as part of a system, it was found necessary to consider products and designs together for the purposes of demonstrating compliance with the NCC. For example, fire-rated plasterboard (a product) alone does not comply with the requirements of the NCC. It complies when forming part of system that achieves the appropriate fire-resistance level.

In 2018, the ABCB released a guidance document, the *Evidence of suitability Handbook* (the Handbook). The Handbook includes an *“evidence of suitability framework and*

decision flow chart to assist in the correct use of the evidence of suitability provisions of the NCC.”²² It recommends that, “new or innovative components, as well as components where the consequence of failure have been assessed as high, typically require assessment using more rigorous options to prove compliance.” Conversely, “components that require less extensive form of assessment to prove NCC compliance may include elements of buildings that present little risk, have been used in Australia for many years and have a strong history of successful performance in the built environment.”²³

The Handbook was amended in September 2019 to reflect the evidence of suitability changes in NCC 2019.

C. Proposals

Proposal 1.A

Amend the NCC to set minimum and consistent information requirements to demonstrate evidence of suitability.

Implementing the proposal

All evidence of suitability, regardless of the pathway chosen, must result in consistent information presented in a standardised format that:

- suitably describes the subject of the evidence;
- confirms compliance and the pathway used to achieve compliance;
- sets out any conditions or limitations to the evidence;
- contains reference to construction or installation standards where necessary;
- details the supporting material that was relied upon; and
- details who is providing the evidence and their credentials for doing so.

²² Australian Building Codes Board, *Evidence of Suitability Handbook*, September 2019, p.i

²³ *ibid*, p.4

This information is drawn from the Product Technical Statement (PTS) template currently included in the NCC at A5.2(1)(f) and detailed in the ABCB Evidence of suitability handbook.

This would require amending NCC A5.1 to require that documentary evidence is to include the following:

- (a) **Identifying details:** description (for example in the case of a product the name/brand and model/variant number).
- (b) **Declaration of NCC compliance:** a clear statement of which NCC Performance Requirement/s (in whole or in part) the evidence satisfies or contributes to.
- (c) **Basis of the declaration:** basis on which the declaration is made (e.g. verifiable test results summary, quality assurance measures etc.) including the extent to which other documents are relied upon (e.g. standards, specification, software or other publications or documents). The Deemed-to-Satisfy, evidence of suitability pathway or Verification Method followed where applicable.
- (d) **Description of application:** a statement of the application and intended use of the material, product, form of construction or design.
- (e) **Conditions and limitations:** relevant limitations and conditions of use insofar as they relate to compliance with the NCC.
- (f) **Instructions:** for the installation of the material, product, form of construction or design necessary for compliance.
- (g) **Contact & version details:** including details covering the currency, expiry, version and contacts details for advice and support.

The information to be provided will align with the information required of manufacturers and suppliers under Element 2, detailed below, and the information required in the Project Product Register detailed in Design Acceptance (BCR recommendations 13-16).

Proposal 1.B

Amend the NCC evidence of suitability pathways to increase the rigour in the evidence provided.

Implementing the proposal

Amend NCC provisions under A5.2 to increase the rigour wherever practicable.

The changes to be considered are as follows:

a. CodeMark or CodeMark Australia Certificate of Conformity (A5.2(1)(a))

CodeMark Australia is currently the subject of a separate review being undertaken by the ABCB. Changes to increase the rigour of this evidence pathway will be considered as part of that review.

b. Certificate of Accreditation (A5.2(1)(b))

There is no identified problem with this pathway and therefore no identified need for change. Currently the Victorian Building Regulations Advisory Committee (BRAC) in Victoria is the only scheme operating under this pathway.

c. Certificate issued by a certification body (A5.2(1)(c))

Amend to require a certificate from a Certification Body that is accredited by JAS-ANZ to fulfil the requirements of *AS/NZS ISO/IEC 17065:2013 Conformity assessment - Requirements for bodies certifying products, processes and services*. The product certification scheme under which the certificate is to be issued shall be a Type 2 to Type 5 as defined in *AS/NZS ISO/IEC 17067:2015 Conformity assessment - Fundamentals of product certification and guidelines for product certification schemes*.

Currently the NCC defines a certification body as being “*accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ)*.” It does not define the level and nature of that accreditation.

Requiring certification bodies to be accredited to *AS/NZS ISO/IEC 17065:2013* will mean that the rules of the scheme providing the certification will be publicly available on request. They will also have resources allocated to address technical queries and to

investigate identified problems. If they operate a scheme that is Type 2 or above (as per AS/NZS ISO/IEC 17067), they will also have a regular schedule of independent audits (see Appendix B for further details).

A reference list of certification bodies that meet these criteria could be made available via the ABCB or JAS-ANZ website and the information portal (Proposal 4.B).

d. Report issued by an Accredited testing Laboratory (A5.2(1)(d))

Amend to read “A report issued by an Accredited Testing Laboratory within the past 10 years.”

Amend the definition of “Accredited Testing Laboratory” to include Accreditation to *AS ISO/IEC 17025:2018 General requirements for the competence of testing and calibration laboratories*.

Report within the past 10 years

Test reports from an Accredited Testing Laboratory only reflect a single test result at a point in time. They do not account for product changes that might occur over time to the point where the product configuration is different from the specimen tested, impacting performance.

New Zealand has addressed this problem by giving test reports a 10-year life, after which components and systems need to be retested or assessed and reissued by desktop audit (Appendix A).

Before introducing the requirement, it would first need to be tested by way of a regulatory impact assessment. Options that could be considered as part of this assessment include:

- Require that the test has been completed within the last 5 years.
- Test reports expire following any revision of the Standard on which it is based.
- Require a new test each time the product configuration or features change, the materials have been substituted or original material properties have changed.

- Require annual quality assurance checks to determine that material properties and tolerances have not varied materially from the tested product.
- Require a declaration from the manufacturer, dated since the latest version of the NCC, that the product remains the same as the samples tested.

Laboratory accredited to AS ISO/IEC 17025:2018

The current provisions define an accredited testing laboratory as being one that is accredited by the National Association of Testing Authorities (NATA) or if overseas, accredited through a mutual recognition arrangement. It does not specify the standard to which they are to be accredited.

AS ISO/IEC 17025:2018 General requirements for the competence of testing and calibration laboratories has been developed with the objective of promoting confidence in the operation of laboratories and contains requirements for laboratories to enable them to demonstrate they operate competently and are able to generate valid results.

The standard requires the laboratory to plan and implement actions to address risks and opportunities. Addressing both criteria establishes a basis for increasing the effectiveness of the management system, achieving improved results and preventing negative effects. The laboratory is responsible for deciding which risks and opportunities need to be addressed. The acceptance of results amongst countries is facilitated if laboratories conform to this international standard.

The standard does not extend to product selection nor the scope of the test. It must be noted that laboratories will continue to test the product they are supplied to the method requested by the customer. It is critical to be aware that on the whole, laboratories do not ascertain whether that request is appropriate for establishing NCC compliance. Requiring that all evidence of suitability include this information (as addressed in Proposal 1.A) should address this concern in part.

e. A certificate or report from a professional engineer or other appropriately qualified person

Amend to read “A Declaration of Compliance from an independent, appropriately qualified professional (Australian registered) engineer that details the qualifications, areas of specialty and experience in those areas of professional engineering that the person providing the Declaration is qualified in.”

Requiring a ‘Declaration of Compliance’ will align this pathway with the Declarations of Design Compliance proposed under Design Acceptance (BCR recommendations 13 - 16).²⁴

Because there can be a wide variation in the skill and knowledge level of any appropriately qualified professional engineer, the Declaration could include details of their expertise.

The declaration could confirm that the assessment was independent and that there is no conflict of interest.

f. Another form of documentary evidence

Amend to read “Statutory Declaration from an appropriately qualified person / organisation that details the qualifications, areas of specialty and experience in those areas, of the person / organisation providing the documentary evidence.”

²⁴ Under BCR recommendations 13-16 it is proposed that a ‘Declaration of Design Compliance’ is required from practitioners responsible for producing an aspect of the building design that has compliance implications. The Declaration will state that the practitioner confirms compliance of the design aspect with the relevant requirements of the NCC and any additional requirements determined by each jurisdiction. Each practitioner providing a Declaration must be appropriately registered as per the BCR National Registration Framework (BCR recommendations 1 and 2). The Declaration must include details of the practitioner’s relevant qualifications and/or experience specific to the design work. Experience is to take the form of projects that they have worked on and detail the actual involvement.

Requiring a statutory declaration will serve a similar purpose as the ‘Declaration of Design Compliance’²⁵ for those not registered engineers and provide surety that the person or organisation providing the evidence declares it to be true.

This option is included on the basis that the other options are not an exhaustive list and there may be other forms of evidence that are appropriate for some circumstances.

An example of an appropriate use of this pathway would be the case where users employ specialist design software that meets the ABCB Protocol for structural software,²⁶ such as truss manufacturers. It may also be used by specialist consultants who are not engineers including access consultants, building designers and architects, energy assessors, acoustic consultants and general design practitioners putting forward simple Performance Solutions. The provision may also be used for installation certificates such as from a water proofer, glazing, insulation etc.

A summary of how the proposed changes under Proposals 1.A and 1.B are reflected in the evidence of suitability provisions are illustrated in Appendix D.

Proposal 1.C

Investigate further, comprehensive changes to the NCC evidence of suitability provisions.

Implementing the proposal

While the amendments under Proposals 1.A and 1.B will begin to address the current limitations with the evidence of suitability, they may not provide the whole solution. At the same time, it is important that the changes that can be agreed are not held back.

²⁵ Declarations of Design Compliance are a proposal under BCR recommendations 13-16, Design Acceptance and apply to each building practitioners responsible for producing an aspect of the building design. The Declaration will state that the practitioner confirms compliance of the design aspect with the relevant requirements of the NCC, as well as any additional requirements determined by each jurisdiction.

²⁶ Australian Building Codes Board, *Structural software: ABCB Protocol 2011.2*, February 2019

It is therefore proposed to continue to consider changes to the provisions to further support compliance. The following could be explored as a start:

1. Consider introducing a hierarchy into the NCC to instruct which pathway is appropriate in which circumstance; addressing the problem of each pathway being considered equal and better ensuring that evidence pathways are applied appropriately and consistently.

A possible framework could be one that directs stakeholders to systematically consider a hierarchy of options to determine the appropriate pathway. For example:

- i. Products are expected to be CodeMark (a) or have Product Certification to a standard (c).
- ii. Where CodeMark or Product Certification is not appropriate for the product type, a Test Report (d) is acceptable for products where there is a relevant Standard or prescribed requirements.
- iii. Where CodeMark or Product Certification is not appropriate and there is no Standard or prescribed requirements for the product, Declaration of Compliance from engineer (e) may be accepted.
- iv. Another form of documentary evidence (f) can be provided once each of the other pathways are determined to not be appropriate.²⁷

While determining the suitability of the evidence provided would still be at the discretion of the building surveyor, those providing the evidence would include an explanation of why a particular path was selected and why it is more appropriate than pathways higher in the hierarchy.

²⁷ Wright, M., UL LLC, November 2020

The wide application of the evidence of suitability provisions means that introducing a hierarchy has significant potential for unintended consequences that must be carefully assessed.

2. Assess whether amending the provisions to cover design and products separately would improve compliance outcomes.
3. Assess whether amending the provisions to a rigorous framework for products and designs required to meet a life safety performance requirement and a separate less restrictive one for the remaining Performance Requirements.
4. Consider restricting the operation of certification bodies under A5.2(1)(c) ones that operate schemes to a minimum Type 3 under the standard (*AS/NZS ISO/IEC 17067:201*). This will ensure that auditing is required and that a product continues to meet the standard it was tested to.
5. Consider adding a new pathway that is specific to industry conformance schemes that meet a demonstrated minimum standard to be recognised as a pathway in the evidence of suitability (the minimum standard is discussed further under Proposal 2.B). This would involve maintaining a reference list of schemes that meet the standard as opposed to building practitioners needing to assess the schemes as currently required under A5.2(1)(b).
6. Consider adding a new pathway to specifically allow for accredited Appraisal Schemes such as one proposed by the Australian Technical Evaluation Network (ATEN) or BRANZ from New Zealand (Appendix A). While appraisal schemes can currently be used under another form of documentary evidence (A5.2(1)(f)), including appraisal schemes as a specific form of evidence could provide a more direct path and potentially encourage more practitioners to follow this option. It should also encourage others to provide appraisals²⁸. Consideration would need to be given as to what standard an appraisal scheme is held to.

²⁸ Croft, S., Housing Industry Association, January 2021

7. Consider whether to require the use of a technical advisory group (TAG) to determine the correct evidence option for higher risk/risk critical elements, particularly where no test or other standard exists. This would require an identified body having oversight responsibility. Alternatively, this could be required for selected products under Proposal 2.C.

Proposal 1.D

Add further guidance in the NCC Evidence of suitability handbook to assist users of the NCC to better match the appropriate evidence to the circumstances where compliance is being sought.

Implementing the proposal

The Handbook would expand on the evidence of suitability provisions and include building practitioners tools, such as example scenarios, templates and flow-charts, etc. to explain the process of evaluating evidence against relevant criteria.

It would include details of the circumstances where each pathway is appropriate.

The guidance material would be specific to different actors along the supply chain (building practitioners, manufacturers and suppliers).

It could look to incorporate the material developed as part of the ABCB's evidence of suitability CPD training course.

In providing additional information, it will be important to keep it manageable and accessible.

The Handbook should work in concert with the Conformance and Specification Guide proposed under Element 4 (Proposal 4.C).

Consultation Questions:

2. Do you agree with the description of the issues relating to the NCC Evidence of Suitability provisions? Are there other issues to be considered?

3. Do you agree with the proposal to set minimum and consistent information requirements across each evidence of suitability pathway (Proposal 1.A) If not, why?
4. Do you agree with the proposed changes to increase the rigour across each evidence of suitability pathway? (Proposal 1.B) If not, why?
5. If any, what are the issues with requiring a statutory declaration being provided as part of another form of documentary evidence (Proposal 1.B)?
6. Please provide feedback on the further comprehensive changes to the evidence of suitability that are proposed (Proposal 1.C), including other changes that should be considered.
7. Are the proposed changes to the Evidence of suitability handbook appropriate? (Proposal 1.D) Are there other changes that will improve its usefulness?

Element 2 – Information obligations for manufacturers and suppliers

A. Current situation

For a building product to be used in a way that is fit for purpose, building practitioners responsible for specification, selection, installation and certification need access to adequate product information for their decision making. *“In practice, it is unfeasible for a builder to be expert in all aspects of every product used in a building. It is reasonable that they rely on the expertise and information from subcontractors and suppliers for product selection and proper use in each application.”*²⁹ Similarly, the *“...success of the building surveyor is totally dependent on information. If we don’t manage the provenance of the information set around each building product, the surveyor has little information on which to ascertain compliance.”*³⁰

Industry reports that there is concern with a lack of information to inform the appropriate selection and use of products. Many product manufacturers and suppliers do not consistently provide transparent and verifiable product information that confirms how a product can be used in a way that conforms with the requirements of the NCC, its referenced documents and relevant state and territory requirements. Where the information does exist, it comes in many different forms and to different levels of rigour. It can be difficult to source and access detailed test reports as they are often restricted on the grounds that they are regarded as ‘commercial in confidence’.

There is also the problem of growing complexity with materials being supplied. The industry is often no longer dealing with just products but whole building systems or even a whole building in the case of off-site or modular construction. As the complexity of the

²⁹ CSIRO, *Accreditation of Building Supply Chains*, 2020, p. 2

³⁰ Burgess, M., CSIRO, December 2020

product increases so does the complexity of the compliance information. *“Although Australia has a performance-based construction code, demonstrating the conformity of new and innovative building products is complex and can be an expensive hurdle in new product development.”*³¹

Another challenge is that building product compliance requirements often sit in detailed Australian Standards or other documents referenced in the NCC. These requirements may not be readily accessed, well-articulated or can be beyond the expertise of building practitioners to evaluate compliance against. Further compliance requirements may also sit in state and territory legislation and regulation, adding another layer of complexity.

These problems are exacerbated by disconnectedness along global supply chains. *“The construction industry, and individual projects, use open supply networks: the manufacturers supply products from a myriad of destinations to an unknown variety of contractors.”*³² Often this means that there is no ongoing commercial relationship or means of recourse should a product fail to perform as intended. Manufacturers may not even be aware of how their product is being used.

Further, the CSIRO has reported that expertise varies along the supply chain with manufacturers, particularly if they are based overseas and unlikely to have a sufficient understanding of the NCC. Australia’s product system is also characterised by Australia having a *“relatively small share of the global building product market, whereby product design and manufacture are dictated by global demand rather than the specific requirements of Australian building regulations”*.³³

Building products also sit outside the laws relating to consumer products because for the most part they are not subject to the controls under the Australian Consumer Law (see Element 5). This means that building products do not come within the scope of the ACCC mandatory safety, information and reporting standards designed to ensure that

³¹ Burgess, M., CSIRO, December 2020

³² Kenley, R., *Reforms to achieve performing building products: guidance for managing compliance and conformance*, June 2019, p.28

³³ Gad, E., et al, *Product Performance*, November 2020, p. 2

consumers are provided with important information about a product to assist them in making a purchasing decision.

*“Ultimately the most fundamental problem is that the majority of building products do not require any form of approval or have any requirements to attest to their performance and fitness for purpose prior to being offered for sale.”*³⁴ This allows manufacturers to at best *“emphasis the positives and neglect the negatives”*³⁵. There are exceptions with some Australian Standards for products, especially in the fire detection area, that mandate requirements for installation manuals to be included in the product packaging. An example is *AS3786:2014 Smoke Alarms using scattered light, transmitted light or ionization*.

Product conformance infrastructure

The process of confirming that a product conforms to certain set criteria is supported by Australia’s product conformance infrastructure. In Australia, the infrastructure covers measurement, standardisation and conformity assessment. It consists of work of the National Measurement Institute, Standards Australia, NATA and JAS-ANZ, Australia’s accreditation bodies for testing laboratories, inspection bodies and certification bodies.³⁶

As accreditation bodies, NATA and JAS-ANZ formally recognise that a conformity assessment body (CAB) is competent to carry out specific tasks. They assess CABs *“for competence to carry out specified calibrations, tests, inspections and/or certifications of products, systems or personnel, to determine if they meet a (minimum) required standard.”*³⁷

³⁴ Building Products Industry Council, *Industry Position Paper – NCC Evidence of Suitability (A2) Review*, July 2016, p. 3

³⁵ Gad, E., et al. *Product Performance*, November 2020, p. 3

³⁶ Department of Industry, Science, Energy and Resources, *Australia’s Standards and Conformance Infrastructure: An Essential Foundation*, July 2016

³⁷ *ibid*, p. 6

There are three main forms of conformity assessment that can be used individually or more often in combination:

1. Testing – determination of one or more of a product's characteristics and usually performed in a laboratory.
2. Inspection - evaluation of a product or process against defined specifications using experience and professional judgement.
3. Certification – written assurance by an independent body that a product, service or system meets specific requirements.^{38 / 39}

It is the role of NATA to accredit testing (laboratories and technical facilities) and inspection bodies⁴⁰ and the role of JAS-ANZ is to accredit certification and inspection bodies⁴¹.

In addition to granting accreditation, JAS-ANZ and NATA have the authority to sanction CABs that do not comply with the accreditation criteria, including suspension or withdrawal of a certificate of conformity.

The key elements of infrastructure for the building and construction industry is illustrated at Figure 4.

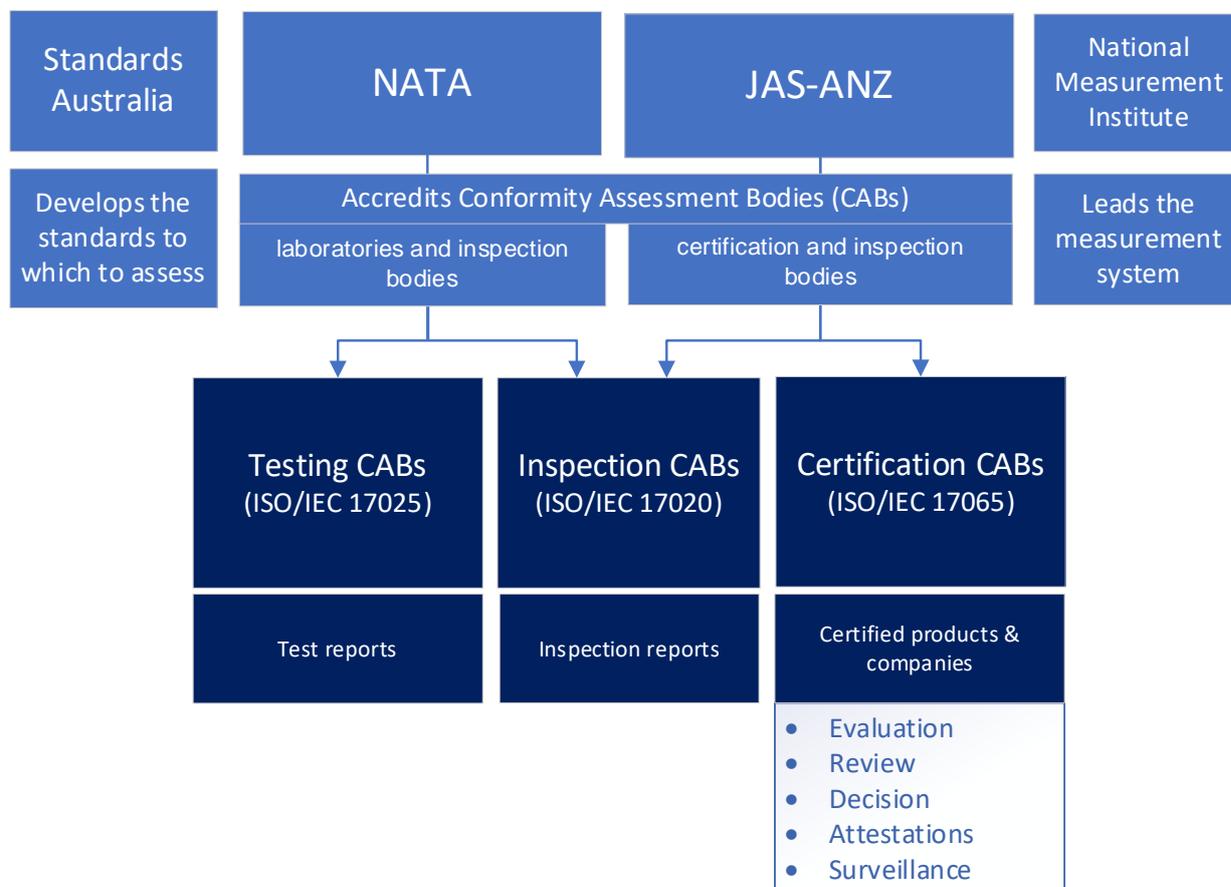
³⁸ NATA, About NATA and accreditation, January 2019, p. 8

³⁹ <https://www.iso.org/conformity-assessment.html>

⁴⁰ <https://www.nata.com.au/>

⁴¹ <https://www.jas-anz.org/accreditation>

Figure 4: Key elements of Australia's Quality Conformance Infrastructure



The product certification the standard (*AS/NZS ISO/IEC 17065:2013 Conformity assessment - Requirements for bodies certifying products, processes and services*) details the assessment functions and activities to be undertaken by a CAB. These include:

- Evaluation
 - Selection (planning and preparation)
 - Determination of characteristics (testing, inspection, assessment)
- Review (examining evidence)
- Decision on certification (granting, maintaining, withdrawing)
- Attestation, licensing (issuing certificates and right to use)
- Surveillance (if applicable).

The certification CABs then determine the type of scheme that they will operate by reference to *AS/NZS ISO/IEC 17067:2015 Conformity assessment - Fundamentals of product certification and guidelines for product certification schemes*. This standard defines a variety of different types of product certification schemes with the key difference being whether the scheme undertakes surveillance and the type of surveillance they undertake. Including surveillance takes certification from a point-in-time assessment to a determination of on-going conformity. The schemes vary from no surveillance to testing or inspection of samples from the open market, testing factory samples, assessing the production process or undertaking a combination of all of these tasks.

While each of the scheme types may be comparable in relation to their assessment functions, there may still be differences in the way different CABs execute these functions. For example, one scheme may set different competency requirements to the other or may have different surveillance frequencies etc.

A summary of the different scheme types are included in the table at Appendix B.

Building Product Conformance Schemes

Operating within this framework is a wide range of schemes offering assurance of product conformity. Some of these are private organisations and industry bodies that operate JAS-ANZ accredited certification schemes each with different conformity assessment functions under the standard. There are others that provide non-accredited product certification and rely on NATA accredited inspection bodies or laboratories. There are also a number that run conformance schemes (but not full product certification) which use NATA accredited inspection bodies or laboratories.

Product assurance under these alternatives is to different rules and therefore not to a consistent standard. It can be difficult for end users to understand the different levels of certainty provided.

In an effort to make the system easier to navigate, the Australian Procurement and Construction Council⁴² created a guide that details the characteristics of twenty-one conformity assessment schemes. The ABCB administered CodeMark Australia and WaterMark product certification schemes are two examples.

An example of an industry conformance scheme is the Australian Glass and Window Association's scheme (AGWA). This NATA accredited inspection agency undertakes annual audits of compliance to independently demonstrate product compliance. Members are required to supply products that are tested in accordance with relevant Australian Standards. Members are also required to verify that products and information/production systems that support their manufacture adhere to the parameters of the tested system. The scheme also includes a training program and technical support to promote compliance. Non-compliance investigation and inspection services occurs via independent third-party accredited auditors or accredited industry experts.

*"The value in industry schemes is that they go beyond mere conformity assessment and bundle this together with a supporting framework of services to actively promote, support and foster improved compliance, education and safety outcomes to the betterment of our industry and consequently the construction sector in general."*⁴³

Another example of a non-commercial certification system is the Australasian Certification Authority for Reinforcing and Structural Steels Ltd (ACRS). ACRS has nineteen peak body members including government, producers, specifiers, engineers, builders and other professional groups. The scheme mandates that products are identified as ACRS certified and traceable to source. In addition, ACRS has a separate Traceability Scheme, where complex procurement chains require greater scrutiny and verification such as structural steels.

⁴² APCC, *Procurement of Construction Products: A guide to achieving compliance*, December 2015

⁴³ Harris, R., Australian Glass and Window Association, December 2020

“The ACRS traceability provisions for product manufacturers and fabricators/processors and the separate ACRS traceability scheme for suppliers and distributors provides a proven effective mechanism for steel and a framework that could be adapted for other products.”⁴⁴

Challenges for product conformance

There are a number of identified challenges in establishing product conformance for products to be used in buildings.

1. There is disparity amongst the conformance schemes as to the quality of assessment, level of auditing and checking for fraudulent documentation. While there are very good schemes, users of the system cannot say with confidence which of the existing schemes undertakes testing to the standard necessary to establish evidence of suitability given the proposed use of the product, and which have strong enough checks to counter misinterpretation and fraud. For manufacturers and suppliers *“a level playing field cannot be achieved where unequal certification systems are accepted as equivalent”⁴⁵*.
2. The product conformance system is a prescriptive assessment system that is not always a good match for a performance based National Construction Code, where a standard will not always exist for a product. It is not always appropriately understood and operated with the need for training, calibration of output, knowledge management, risk assessment and decision rules not always being met.
3. Laboratory tests are generally conducted in highly specialised silos and how these components come together as a system or in a building is often given less attention.
4. Testing, inspection and certification is often driven by the manufacturer/importer focusing on a specific test, rather than an evaluation of broader NCC requirements.

⁴⁴ Sanders, P., Australasian Certification Authority for Reinforcing and Structural Steels Ltd, January 2020

⁴⁵ *ibid*

(e.g. manufacturer of a wall will ask a laboratory to test FRL, but ignores acoustics or R value or water penetration, etc).

5. Product assessment is often limited to a single test that is a point in time assessment. Products can change over time. *“While product evaluation systems establish that a manufacturer is able to produce a conforming product, many don’t necessarily have the level of market surveillance to ensure on-going conformity.”*⁴⁶
6. There is variability in the selection of the appropriate test method for the product relevant to its intended use. Conformity assessment ensures that the certification matches the scope, not that the scope matches all the relevant requirements of the NCC.
7. The complexity in the resulting test reports can make it difficult for building practitioners to know that the test results match their evidence of suitability need.

State regulation

There are also opportunities in state regulation for manufacturers to formally attest to a product’s performance so it can be relied on by building practitioners. There is no prescribed process or rules with respect to independent or accredited assessment to follow where manufacturers adopt this path.

One example in Queensland is the ‘Compliance certificate for building design or specification’ (known as a Form 15), which while primarily for design, is used where a number of products are brought together in a system.

South Australia’s Development Regulations allow for a certificate from an independent technical expert which *“sets out in detail the basis on which the certificate is given and the extent to which the person giving the certificate has relied on relevant tests, specifications, rules, standards, codes of practice or other publications.”*⁴⁷

⁴⁶ CSIRO, *National Product Evaluation System*, March 2020

⁴⁷ *Regulation 88*, 2018

Victoria operates an accreditation scheme through the Victorian Building Regulations Advisory Committee (BRAC).

B. Action to date

Chain of responsibility legislation

In 2017, Queensland passed the *Building Construction (Non-conforming Building Products – Chain of Responsibility and Other Matters) Amendment Act 2017*. The legislation introduced duties for all those in the 'chain of responsibility' who design, manufacture, import, supply or install building products. The duties include a responsibility to ensure that a product conforms for its intended use and that the 'required information' accompanies the product along the supply chain. The 'required information' must detail the suitability of the product, installation instructions and its intended use. The legislation also introduced powers for the regulator to address non-conforming building products wherever they occur in the supply chain. (Appendix D details these legislative principles)

Under the Queensland legislation, action was taken during 2018-19 on fourteen products to remove them from sale or to ensure they were accompanied with the correct information relating to their appropriate use. In 2019-20, five products were determined to be non-conforming of which, regulated action was taken against three and industry education for the remainder.⁴⁸ Industry reports that the legislation has also helped building practitioners in their efforts to have manufacturers provide the information they need to be sure products are fit-for-purpose in their projects.⁴⁹

⁴⁸QBCC, *Annual Report 2019-2020*, https://www.qbcc.qld.gov.au/sites/default/files/QBCC_Annual_Report_2019-2020.pdf, p. 18

⁴⁹ Master Builders Queensland, 2020

In October 2017, the Building Ministers agreed that the powers set out in the Queensland legislation set a model for other jurisdictions to consider.⁵⁰ Government saw the legislation “as a ‘best practice’ approach to impose obligations on participants of the building product supply chain and improve jurisdictional ability to address and detect NCBPs in Australia”.⁵¹ Concerns have also been raised with the all-encompassing nature of the legislation, covering thousands of building products and its overlap with existing safety legislation.

The legislation is in keeping with that recommended by the International Building Quality Centre for product supply chain laws to form part of a good practice building regulatory system (Appendix A).

Australian Technical Evaluation Network (ATEN)

To address some of the challenges in the product conformance infrastructure, a new tool of product appraisals has been documented.

ATEN is a proposed appraisal scheme that would provide “new streamlined compliance pathways to accelerate the safe adoption of future innovative products.”⁵² The scheme aims to help bridge the gap between building products and the requirements of the NCC by outlining a building product conformance system that aligns with the *ISO/IEC 17000:2004 Conformity assessment – Vocabulary and general principles* concepts.

The key differentiator between ATEN and other conformance schemes rests in the use of a broad-based technical panel of industry representatives to add rigour to the process. This panel establishes a link between NCC requirements and the scope of testing and evaluation needed for each product.

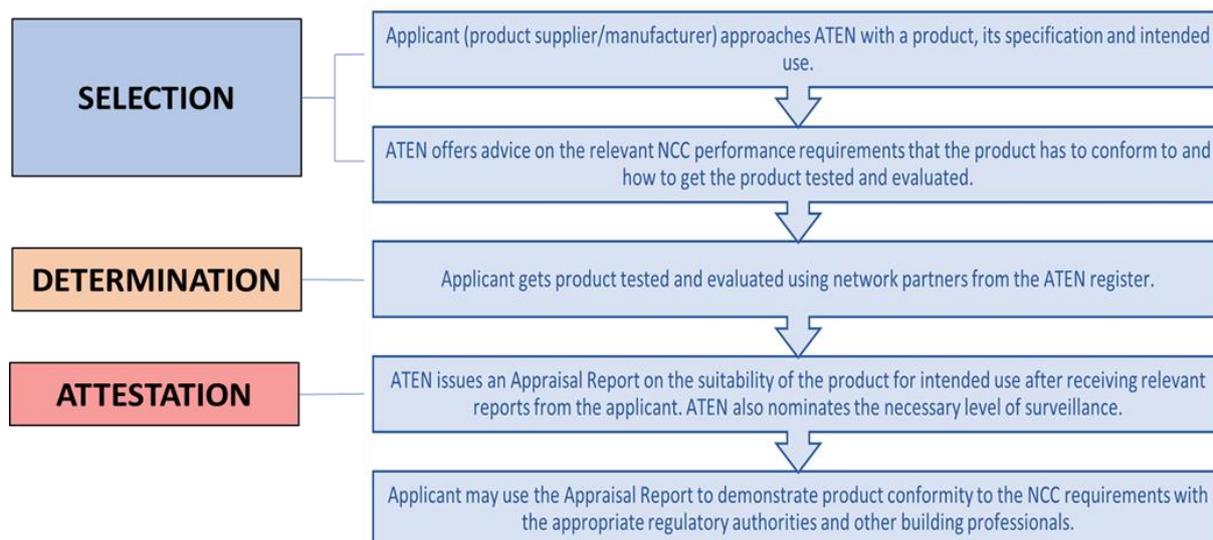
An overview of the proposed ATEN appraisal process is illustrated at Figure 6.

⁵⁰ https://www.industry.gov.au/sites/default/files/2019-03/building_ministers_forum_communique_-_october-2017.pdf

⁵¹ Senior Officers’ Group, *Implementation Plan: Strategies to address risks related to non-conforming building products*, September 2017, p. 4

⁵² Burgess, M., CSIRO, December 2020

Figure 6: Overview of ATEN Appraisal process ⁵³



C. Proposals

Proposal 2.A

Introduce information obligations for manufacturers and suppliers in the form of Product Technical Statements.

Implementing the proposal

Requiring building product information from manufacturers and suppliers can help address the current shortcomings in the information necessary to ensure the appropriate inclusion of building products into projects. It would help ensure that products are appropriately assessed for conformance and the manufacturer's intended use of the product is clear. This will also help flag to building practitioners when they are employing a product in a way that is innovative. It also brings manufacturers and suppliers into the building 'chain of responsibility' by giving them explicit duties that are shared with other

⁵³ Pham, L., et al, *Scoping study for an Australia Technical Evaluation Network*, October 2019, p.25

building practitioners. The information would aid compliance in providing the building surveyor with documentation to check against the approved design and specification.

Building product information obligations would be legislated and require that building products intended to be installed in or on a building are accompanied with key information on the suitability of the product for a specific use, limitations on its use and the evidence supporting these claims.

This requirement is similar to that of Safety Data Sheets that are commonly used to convey key safety information and are required for all hazardous chemicals used in Australia.⁵⁴

At a minimum, the information required would be equivalent to the information required under the amended NCC evidence of suitability provisions (as per Proposal 1.A) and the Project Product Register under BCR recommendation 13.

The information would be drawn from the Product Technical Statement (PTS) template detailed in the ABCB Evidence of suitability handbook⁵⁵ (included at Appendix E) and includes:

- (a) **Identifying details:** description (for example the name/brand and model/variant number).
- (b) **Declaration of compliance:** a clear statement of which NCC Performance Requirement, in whole or in part, and jurisdiction requirements (if applicable) the building component or system satisfies or contributes to.
- (c) **Basis of the declaration:** basis on which the declaration is made (e.g. test results summary, quality assurance measures etc.) including the extent to which other documents are relied upon (e.g. standards, specification, software or other publications or documents). The Deemed-to-Satisfy, evidence of suitability

⁵⁴ <https://www.safeworkaustralia.gov.au/sds#international-safety-data-sheets>

⁵⁵ <https://www.abcb.gov.au/Resources/Publications/Education-Training/Evidence-of-Suitability>

pathway or Verification Method followed where applicable. The core assumptions are documented.

- (d) **Description of application:** a statement of the application and intended use of the building component or system.
- (e) **Limitations:** relevant limitations and conditions of use insofar as they relate to compliance. Highlight ways it could be misused and any relevant NCC Performance Requirements it does not satisfy.
- (f) **Instructions:** for the installation, occupancy and maintenance instructions to ensure product compliance over the life of the building.
- (g) **Contact and version details:** including details covering the currency, expiry, version and contacts details for advice and support.

The PTS format is flexible enough to accommodate a single product, a system of products or an entire building element. Where the PTS is provided for a system it would confirm the compliance and appropriate installation for a system as a whole, and not each ancillary element.

The information would be provided in an agreed form for consistency and transparency. This will both make both finding the necessary information easier and flag to the end user when there are shortcomings in the information, further facilitating compliance.

The information provided would be detailed but concise, plain English. It is recommended that a Flesch-Kincaid grade level score is nominated, commensurate with a maximum of an Australian Qualification Framework level 4 education standard that trades will obtain as a minimum (about 12 years of education).

Scope

Given the complexity and interconnectedness of construction, it is appropriate to apply the requirement to all building products intended to be associated with a building.

While the building practitioners will not always need the underlying PTS for each individual product that goes into a system or building element, the supplier would need to have these available to inform designers, specifiers and engineers about the

performance of their products and suitability for inclusion in the system or building element.

Consideration could be given to having the requirement rolled out in stages, with initial focus on fire and structural related items.

Limitations

Building practitioners would still have responsibility to evaluate the information in the context of its intended use and the extent to which they will rely on it.

It is not always possible for product suppliers and manufacturers to identify and thoroughly document all applications for which their products might be suitable. For example, window manufacturers commonly include recommended installation details for brick veneer, double brick and lightweight clad constructions. The unlimited number of variations to these basic construction techniques would be impossible to quantify and support with non-exclusive design details.

A second consideration is that product conformance and fitness for purpose are often viewed in isolation of the materials abutting or surrounding the product itself. For example, a window manufacturer might not supply the flashing surrounding the window and may not be the appropriate or best authority on how the flashing for a given installation would need to be installed. *“Consideration needs to be given to applications where one product interfaces or adjoins another, as the integrity of the fabrication as a whole is the sum of its components. This is and always will be the domain of the builder and building designer.”*⁵⁶

Costs

If implemented, there will be costs of compliance for manufacturers and suppliers.

⁵⁶ Harris, R., Australian Glass and Window Association, December 2020

“There are substantial costs associated with education and change management which need to be considered. The training cost alone, not just for manufacturers, but also upstream and down-stream supply partners, would be considerable, but not insurmountable.”⁵⁷

When incorporating a building product or material into a building, building practitioners are already required to have some form of evidence of suitability documentation. Manufacturers and suppliers, to meet the needs of their customers, will therefore often have documentation prepared and available. Reformatting this into a product technical statement should not therefore be too onerous an obligation.

An area where costs could increase is in circumstances where a supplier has insufficient or incomplete existing documentation, or where they have used a compliance pathway that has a lower level of rigour expected under the amended evidence of suitability provision detailed in Element 1.

The upfront compliance cost will also be offset by the costs saved by product failures resulting from poor compliance and technical documentation. *“Any cost borne by a manufacturer to improve the compliance information associated with their product would be dwarfed by the rectification and legal costs associated with fixing products that were incorrectly used because of poor documentation.”⁵⁸*

Compliance

If introduced there would need to be corresponding enforcement powers to take compliance action in cases where products are supplied without this information or are found to be not fit for the intended purpose as claimed. This will be addressed under Element 5.

⁵⁷ Harris, R., Australian Glass and Window Association, December 2020

⁵⁸ Hills, R., Building Product Industry Council, October 2020

Proposal 2.B

Facilitate development of industry conformance schemes to operate at a minimum standard and provide a multi-faceted service to aid compliance.

Implementing the Proposal

Incentivise industry to maintain or develop product or industry specific programs that provide accredited conformance assessment.

Formally recognise industry schemes that meet an appropriate minimum standard in conformity assessment that includes surveillance and enforcement.

Improve transparency and consistency across conformance schemes to more readily assess the validity of compliance being offered.

Encourage schemes to provide multi-faceted response with services that reach beyond conformity assessment. These could include:

- drive continuous improvement within industries to progressively raise the bar regarding compliance and certification;
- creation of expert panels with specific knowledge to guide the rules of certification relevant to that industry;
- endorse a high level of professionalism within industry to foster innovation and encourage maturity and capacity for conformance; and
- deliver industry education.

Proposal 2.C

Require manufacturers who provide identified products for select uses to have them assessed to a pre-determined standard prior to supplying them to market.

Implementing the proposal

This would provide the mechanism for a single national response when problems are identified. In doing so, it should negate the need for states and territories to implement

their own individually tailored response when a problem product is identified as was the case with combustible cladding (Appendix F).

The trigger for minimum assessment could be flexible and be by a number of different options, including:

- no deemed-to-satisfy standard against which they can be readily assessed;
- are intended for use in high-risk applications such as structure or fire;
- have a high likelihood of incorrect application or a history of misapplication; and/or
- are intended to be used in a building of high consequence (Importance Level or Complex buildings).

The assessment could also be flexible and could be by way of a number of different pre-determined paths using the conformance infrastructure, for example:

1. Accredited certification scheme operating to a Type 2 level or above (detailed in Appendix B).
2. Referral to an appraisal scheme that uses technical advisory group (TAG) such as the Australian Technical Evaluation Network (ATEN) to determine the appropriate testing scope.
3. Approved industry conformance scheme using accredited testing and/or inspection CABs.

How the mechanism would be managed and enforced would need to be determined.

Consultation Questions:

8. Are the identified challenges with establishing product conformity accurately detailed and are there other challenges that should be considered?
9. If any, what are the issues with respect to the availability of building product information that should be addressed?
10. Do you agree with the proposal to require all products intended to be associated with a building be accompanied by a mandatory minimum level of information (Proposal 2.A)? Should the requirement be broadened to “*could reasonably be used in a building*”? Alternatively, should the requirement be limited to products intended to be used in higher risk applications, such as structural and fire related applications?
11. Do you agree that the required information should be based on the example provided by Product Technical Statements? If no, what would be the right information?
12. Have all the costs to manufacturers and suppliers from requiring Product Technical Statements been considered.
13. Is there value in facilitating the development of industry conformance schemes (Proposal 2.B)? Are there additional services these schemes could offer that would support compliance?
14. Do you agree with the proposal for minimum product conformance assessment for certain manufactured building products (Proposal 2.C)? Are there additional triggers that should be considered? Are there additional assessment paths to determine conformance?

Element 3 – Product labelling and traceability

A. Current situation

The majority of building products are marked or labelled to some extent and the infrastructure to do so forms an intrinsic part of the manufacturing process. Without this, it would be impossible for a supplier's own warehouse staff to pick, pack and despatch the correct product to site. Similarly, building products that are available via large retail suppliers are tracked much like other consumer products as protection in case of recalls. These labels, however, will often not include further information as to a product's appropriate use and installation, nor will they necessarily be a permanent marking.

Products certified under an accredited certification scheme (*ISO/IEC 17065*) will also be able to provide a certificate of conformity and schemes of Type 1b and above will have the right to use a mark of conformance. An example is the Australasian Certification Authority for Reinforcing and Structural Steels (ACRS), which is a third-party certification scheme that includes a traceability scheme.

Many NCC referenced Australian Standards do not contain labelling requirements or the requirements are vague about both the type of information to be displayed and precisely how that information is to be presented. Where the requirements do exist they often do not extend beyond the final approval of the building. For example, the *AS1288 Glass in Buildings* and *AS2208 Safety glazing materials in buildings* call for only non-permanent marking of safety glazing. The labelling is used as a means of identification during construction and such labels can and are removed at the time of building handover. In contrast, in New Zealand, *NZS4223 Glazing in Buildings* prohibits the use of any removable labels for the identification of any safety glass making permanent marking mandatory.

It may prove challenging for conformance bodies and manufacturers to change their existing labelling to more comprehensive and permanent. For example, bricks, blocks and bulk insulation can be readily labelled on the packaging but difficult to label the

product directly. Etching or stamping of an architectural product created to be a building feature is problematic where permanent labelling impinges on product aesthetics.

Some products have uses other than in buildings and labelling specifically for building use could potentially impose an extra cost on these manufacturers.

It is also unclear whether a label could be relied on. For example, in the case of cladding it is not clear if regulators would rely upon the labelling without core testing.

It is important to avoid the unintended consequence of building practitioners simply looking for a label as a 'tick' rather than making an informed assessment of the suitability of a product for its intended purpose.

Labelling options

A number of technologies are readily available including QR codes, RFID tags, nanoparticles or bar codes. *“Digital markings opens up a whole world of compliance checking possibilities.”*⁵⁹

The choice of technology needs to be carefully considered as there are distinct advantages and disadvantages. *“Some technologies are used extensively to track the supply and delivery of products but require ongoing licensing costs for manufacturers as well as the use of proprietary and scanning processes by everyone in the supply chain (e.g. barcoding via the GS1 Australia ecosystem). Others are less costly to use but do not integrate well into digital engineering or digital repository systems (e.g. QR codes).”*⁶⁰

The growing acceptance of QR codes make them one option to explore further. QR codes could be applied to existing printed labels to provide supplemental information such as compliance and installation information in the product technical statement. The challenge is not only the infrastructure that is needed behind this (requiring a

⁵⁹ Hills, R., Building Products Industry Council, July 2020

⁶⁰ *ibid*

sophisticated database of building products or protocols to enable a standardised approach, but the maintenance of that dataset over time.

Product labelling will always have the problem that it can be easily and fraudulently copied. Focusing on traceability could work as an alternative to ensure that systems are in place for manufacturers to be able to trace the products themselves. It could take the form of an online database. Therefore, should a product be confirmed as a compliance problem its location may be able to be identified and more readily rectified.

B. Action to date

Standards Australia has developed a technical specification on the permanent labelling of cladding materials. The specification (*SA TS 5344:2019, Permanent labelling for Aluminium Composite Panel (ACP) products*) provides minimum requirements for the marking of ACPs to enable their identification throughout the life of the product. From July 2020, it has been included as a referenced document in the NCC. All Aluminium Composite Panels (ACP) used in building work must now be labelled in accordance with the specification. It is regarded as “*a significant step forward in product traceability labelling.*”⁶¹

Standards Australia is currently leading development of international standards and specifications for technologies that can potentially enable the traceability of building products. Technical committee, IT-041 Blockchain and Distributed Ledger Technologies, is working on developing fundamental principles, vocabulary, governance and frameworks for implementing blockchain technology.

CSIRO’s Data61 (data and digital sciences) are also exploring opportunities to use digital solutions to improve compliance in the building and construction sector. While there is

⁶¹ Hills, R., Building Products Industry Council, October 2020

value in Data61's work in being able to track and trace products, it does not extend to providing information to determine compliance.

A new cooperative research centre (Building 4.0 CRC) has been established and will have, within its remit smart supply chain management⁶². An early project is currently being scoped to "*demonstrate how sensor networks can be used to provide live streamed data to improve project management and validate building compliance through measures used to guarantee provenance of the supply chain*".

C. Proposals

Proposal 3.A

Extend labelling requirements to all referenced building product standards.

Implementing the proposal

Use the SA TS 5344:2019 *Permanent labelling for Aluminium Composite Panel (ACP) products* as a template for other product standards to address essential considerations for labelling on all products. This would mean giving consideration to all product standards requiring that products are labelled with:

- (a) Name or trademark of the manufacturer
- (b) Model number, name or designation
- (c) Date of manufacture (month and year at a minimum)
- (d) Batch identifier or other traceability information.

Where practical, the information would be legible for visual inspection for the life of the product, including post installation, and is human readable. It will be necessary to consider this in the context of packaged materials versus those products to which a label can be directly applied.

⁶² <https://www.building4pointzero.org/>

The information would be standardised to enable cross checking against project documentation.

Further supplemental information would be available to link through the Product Technical Statement informing its appropriate use and installation. This can have the key basic information such as product markings (e.g. this side up) and more detailed compliance information in a machine-readable format linking through to the Product Technical Statement.

Options for implementing the proposal include:

- global revision across all product standards;
- when a product standard is amended or introduced;
- targeting specific products known to present a problem or a high risk such as fire and/or structural safety or have a history of being misrepresented; or
- Standards that include 'critical' test methods.

It would be important to be mindful of the global market place and action should not be taken at the expense of established marking and labelling schemes already successfully employed for some products.

Consideration should also be given to the potential for fraudulent labelling which is likely to emerge as an issue in an environment where labelling is mandated.

Proposal 3.B

Further explore digital tracing and information solutions.

Implementing the proposal

Further investigate the work on digital solutions currently being undertaken by a range of organisations, including CSIRO's Data 61, Building 4.0 CRC, the ATEN proposal and private sector actors (e.g. UL-AU Smart mark). This could start exploring the opportunities to embed compliance and installation information into track and trace offerings and Distributed Ledger Technology (block chain).

Explore how data structure, record management and expert systems in appraisal schemes, as proposed by ATEN, can contribute. A key part of the ATEN proposal was

using DATA61's work in product provenance to link a product with its information set (such as the product technical specification, manuals, certificates etc) as it moves along the supply chain.

Further investigate the opportunity within *ISO 23354:2020 Business requirements for end-to-end visibility of logistics flow*; GS1 and digital passports.

Consultation Questions:

15. Do you agree that there is a need for improved product labelling and/or traceability?
16. What are the gaps/shortcomings in the existing labelling requirements? Are there particular products, classes of products that need priority attention?
17. Do you support mandating labelling requirements in accordance with SA TS 5344:2019 across building product standards (Proposal 3.A)?
18. What opportunities are available with digital technologies to enhance building product traceability (Proposal 3.B)?
19. What else can be done to improve product labelling and traceability? Are there examples where it is being done well?
20. The options under consideration in this part would require regulatory impact assessment and that costs would be offset against current costs to rectify problems with some products. With that in mind, do you have information that might help point to the types of costs or benefits involved?

Element 4 – Research, surveillance and information sharing

A. Current situation

The complexity of existing information makes it very difficult for building practitioners to navigate with confidence. The current patchwork system of assessment schemes is unwieldy making it difficult to assess the validity of compliance being offered.

When problems arise, the system is slow to respond as the learnings from the combustible cladding problem show (Appendix F) adding another layer of complexity to building product supply in a global marketplace. *“Whatever action to be taken, it needs to be on a nation-wide basis because of the free movement of goods between the States, import and export issues, free trade agreements, etc.”*⁶³

The Senate inquiry into non-conforming product in its recommendations highlighted the need for national confidential reporting mechanism (Recommendation 2) and establishment of a national database of conforming and non-conforming products (Recommendation 9).⁶⁴

The importance of a ‘Building Product Safety Authority’ is promoted by the International Building Quality Centre as one of the principles of a good practice building regulatory system and a similar role for the United Kingdom is being implemented as part of the reform process that has followed the Grenfell tragedy (Appendix A).

⁶³ Gad, E. et al., *Product Performance*, November 2020

⁶⁴ Australian Government, *Senate Economics Reference Committee’s Inquiry into Non-conforming building products: the need for a coherent and robust regulatory regime*, December 2018, p. xii

B. Action to date

Identifying and reporting failures

The Queensland government chain of responsibility legislation includes a requirement to report any instance of non-conforming products to the regulator within 48 hours of becoming aware⁶⁵. In practice, this requirement is rarely complied with due to concern regarding damaging on-going commercial relationships.

The non-government international Confidential Reporting on Structural Safety (CROSS) scheme is now operating in Australia. The international scheme collects, analyses and publishes reports about failures and the safety of structures so that engineers can learn from the experiences of others. Names of authors are confidential and data is de-identified. When a trend is detected, action is taken to influence changes in culture and when possible in standards or legislation.

The Australian government operates a confidential reporting scheme for the aviation industry. REPCON is the Aviation Confidential Reporting Scheme run by the Australian Transport Safety Bureau and could serve as an example for a similar scheme covering construction product failures.

Australia's Water Efficient Labelling Standards (WELS) scheme has a regulator responsible for product registration, communication, standards development, and compliance and enforcement. It recognises that industry participation and compliance is essential to the integrity of the scheme and aims to achieve it through education and engagement with suppliers in Australia and overseas. This includes helping businesses to register products, inspections of businesses that supply regulated products and providing advice on scheme requirements. WELS is regarded as an effective, efficient scheme that achieves its objectives and avoids unnecessary costs to industry.⁶⁶

⁶⁵ Queensland' *Building and Construction Legislation (Non-conforming Building Products-Chain of Responsibility and Other Matters) Amendment Act 2017*

⁶⁶ Harris, R., Australian Glass and Window Association, December 2020

Information sharing

In response to recommendation 9 of the Senate inquiry into non-conforming building products the beginnings of a one-stop-shop NCBP webpage is now hosted on the ABCB website. Information reported to the ABCB about a suspected non-conforming building product is forwarded to the relevant jurisdiction. This page does not provide information about the reported products or the action taken.

On behalf of the Senior Officers' Group (comprised of representatives from the Commonwealth, states and territories) the NSW Government produced *A Guide to Australian Building Product Conformity*. The guide helps business and building professionals ensure that the products and materials they procure and use in buildings are 'fit for purpose' in that they both conform and comply with Australian building laws, referenced standards and local requirements.⁶⁷

In 2015, the Australasian Procurement and Construction Council (APCC) published *Procurement of Construction Products: A guide to achieving compliance* as an overview of conformity schemes and aid for industry stakeholders. Currently in its second iteration, the document is a principles based guide to product referencing in building plans and specifications.

Information sharing amongst jurisdictions and agencies

The Building Regulator's Forum (BRF) was established by Building Ministers to enable building regulators to:

- share information on best practice regulation and enforcement activities;
- collaborate to deliver timely and coordinated responses to issues of national significance related to NCBPs and other matters as directed by the Building Ministers; and

⁶⁷ April 2018

- consider and triage issues for escalation to relevant Commonwealth entities for response or the Building Ministers for consideration.

The information sharing arrangements are also being further advanced by jurisdictions under BCR recommendations 5 and 12.

C. Proposals

Proposal 4.A

Improve oversight and coordination of the product assurance system.

Implementing the proposal

Provide stronger feedback loops to better identify problems and recommend how they could be addressed. Include system wide surveillance to complement surveillance at the individual product level already built into the system through the conformance infrastructure and called up through the NCC evidence of suitability (Element 1) and manufacturers' obligations (Element 2).

Specific tasks could include:

- A. Maintain an information portal to ensure an easily accessible single source for product information resources. Detailed under Proposal 4.B below.
- B. Monitor building products and components that may present potential compliance problem areas. This should be informed in part by the data from BCR recommendation 12 – Building Information Database and the outcomes from auditing programs.
- C. Monitor international best practice.
- D. Produce best practice information to be made available to state and territory jurisdictions and industry.
- E. Provide technical advice on solutions to identified problems and definitive NCC interpretations.
- F. Clarify appropriate compliance pathways for specific construction products for specific uses.

- G. Undertake targeted surveillance and audits across the product assurance system to identify areas where it may not be operating as intended.
- H. Identify measures that could address identified concerns.
- I. Facilitate education, training, and the development of tools and resources to overcome common areas of knowledge gaps and misunderstanding.
- J. Convene and be guided by a stakeholder forum that includes technical experts from the building industry, manufacturers, suppliers and conformance bodies. The forum will provide advice and recommendations on the effectiveness of the product assurance system, helping to identify weaknesses and opportunities for improvement.

Proposal 4.B

Develop a central building product information portal.

Implementing the proposal

Add to the Non-conforming Building Product portal hosted by the ABCB⁶⁸ to provide a centralised source of information for product assurance. Include a reporting system to identify and report failures of all structural and safety critical construction products in Australia, and communicate learnings with the wider industry.

The portal would not provide details on the conformance or certification of each individual product because establishing a register and ensuring its ongoing accuracy would be an unmanageable task. Instead, the portal could provide links to sources of conformance information, providing a pathway to compliant products.

The portal could also include a register of product testing obligations under relevant standards.

⁶⁸ <https://www.abcb.gov.au/NCBP/Non-conforming-building-products>

Ongoing maintenance, administration and funding of the portal would need to be provided.

Proposal 4.C

Develop a conformance and specification guide and training to step manufacturers, suppliers and building practitioners through the requirements to supply and use compliant products.

Implementing the proposal

The guide would provide users of the system with the necessary knowledge to understand how the system of conformity assessment works, how to supply compliant products and how best to secure appropriate information under the system.

The guide would extend the information provided in any redrafted Evidence of suitability handbook (Proposal 1.D). It would cover the manufacturer requirements proposed under Element 2 and the Design Acceptance obligations proposed under BCR recommendations 13-16. It could also provide example templates of appropriate product specification for designers to follow as part of the specification. This could start with the Product Technical Statement format.

The guide should draw from the APCC's Procurement of Construction Products: A guide to achieving compliance and the NSW Government's *A Guide to Australian Building Product Conformity*.

The guide could be adopted as an ABCB guide or handbook to increase industry uptake.

The guidance material should be supported by education to ensure industry practitioners are properly informed. This could take the form of interactive media and formalised training under the NCC CPD framework.

In developing the guidance and training, it will be necessary to collaborate with industry professional bodies.

Consultation Questions:

21. Is there is a need to improve research, surveillance and information sharing across the product assurance system?
22. Will the tasks listed at Proposal 4.A will help achieve improved oversight and coordination of the product assurance system? Are there additional tasks that should be considered?
23. Is there value in having a central information portal and, if so, what information should it contain (Proposal 4.B)?
24. What additional guidance and training would assist with ensuring that products are appropriately supplied and specified (Proposal 4.C)?

Element 5 - Compliance and enforcement

A. Current situation

Compliance and enforcement is critical to any regulatory system and forms a bookend to the system of product assurance. However, the sheer volume and sourcing options of building products makes this a significant task for regulators.

Australian Consumer Law and the ACCC

The Australian Consumer Law (ACL) is applied nationally and, in all states and territories, under a 'single law, multiple regulator model' administered by the ACCC and respective state and territory consumer protection agencies.

The ACCC is an independent Commonwealth statutory authority whose role is to enforce the *Competition and Consumer Act 2010* and a range of additional legislation, promoting competition, fair trading and regulating national infrastructure for the benefit of all Australians.

The ACL provides general provisions for consumer protection such as consumer guarantees, prohibiting misleading or deceptive conduct and false or misleading representations. The ACL also includes general product safety provisions. Under the ACL, Australian ministers can issue safety warning notices, ban products, impose mandatory safety standards and issue compulsory recall notices.

The generic consumer protections and prohibitions under the ACL may apply to the supply of building products where they are consumer goods (that is, goods intended to be used, or of a kind likely to be used, for personal, domestic or household use) in trade or commerce. For example, the ACL provides that a person must not, in trade or commerce, engage in conduct that is misleading or deceptive, or is likely to mislead or deceive.

While there may be some limited circumstances where building products are also consumer goods, in most cases they are not covered by the general consumer or product safety provisions under the ACL.

Under the ACL, consumers are required to enforce their rights individually against a manufacturer in a court or tribunal. The onus is on the consumer to seek compensation and the ACCC does not have a role in seeking compensation for consumers.

Product conformance infrastructure

Under Australia's product conformance infrastructure (detailed under Element 2), if a product has been certified by a CAB that is operating a Type 2 or above scheme (Appendix A), it will be subject to a surveillance regime, but this is the exception rather than the rule.

JAS-ANZ and NATA have the warrant to act where any CAB it accredits is not fulfilling their testing, inspection or certification obligations. They each conduct an ongoing assessment and surveillance program to ensure that CABs are fulfilling their obligations. This can include expert review of certificates and reports and may lead to directions for them to be reissued or withdrawn and for public notification to be made. Ultimately, a CAB can have its accreditation withdrawn for non-performance. The complaints process helps to target the surveillance.

There have been recent cases where there have been issues with certificates issued by some CABs that have been relied upon by the community and industry. Advice about a change in status of a conformance certificate is not required to be given to industry or the community. Some have been withdrawn without any prior warning or notification to any impacted party. In other cases, the impacted product has been installed into buildings and is required to be removed.⁶⁹

A change in status impacts anyone needing to demonstrate compliance. Legislation in all jurisdictions does not provide certainty about the implications of a change in status of a conformance certificate, particularly for existing buildings.

⁶⁹ Victorian Building Authority, *Industry guidance on the withdrawal of CertMark International Certificates of Conformity*, <https://www.vba.vic.gov.au/news/news/2019/industry-guidance-on-the-withdrawal-of-certmark-international-certificates-of-conformity>, March 2019

It is currently difficult to access information about certificates, particularly with a status other than 'Active'. CABs will generally provide limited information and only to building surveyors.

Auditing

Currently there is no national coverage for auditing products. State regulators address building product auditing on an ad hoc basis and usually in response to a reported failing. A recent example being the case of combustible cladding where comprehensive auditing was undertaken in each state and territory on the use of combustible cladding on buildings (Appendix F).

Building Compliance and Enforcement

To date manufacturers and suppliers of building products and components have sat largely outside the legislative chain of responsibility for the construction of buildings.

“Building regulator powers are focused primarily on active building sites and practitioners. While some regulators, such as electrical safety regulators, have power to compel documents, undertake inspections or instigate recalls in response to identified issues, building regulators generally do not have these powers.”⁷⁰

The current system relies on designers, builders and building surveyors to determine and source the appropriate level of product information required to demonstrate suitability and compliance. Other than a few situations, there is no obligation on manufacturers and suppliers to provide this information.

Building Surveyor Enforcement

Mandatory reporting obligations for building surveyors are being considered as part of the BCR Implementation Team's response to BCR recommendation 11. Mandatory reporting would require building surveyors to notify government of serious issues such as fraudulent practices or serious non-compliant building work. This should create a level

⁷⁰ Senior Officers' Group, *Implementation Plan: Strategies to address risks related to non-conforming building products*, September 2017, p. 3

playing field and signal to industry that they will be reported regardless of which building surveyor they deal with.

Mandatory reporting is a way for regulators to gain improved intelligence about poor practices in the industry, such as in relation to non-conforming building products and help reinforce to building surveyors their public interest responsibility.

B. Action to date

Queensland has introduced building products chain of responsibility legislation (detailed under Element 2). The key feature of this type of legislation is to broaden accountability to all those involved in the supply and installation of products.

The intention at the time was that it become a national model to enhance current practice. *“These laws are based on principles agreed by the Building Ministers and can be used by jurisdictions as model laws to be adopted or revised as appropriate to accommodate their existing regulatory structure.”*⁷¹

Minimum building regulatory powers are also addressed under BCR recommendation 6 - Effective regulatory powers. In November 2020, Building Ministers agreed a list of minimum model building regulatory powers. Although agreed by Building Ministers, adoption of these powers remain the responsibility of the state and territory governments noting that most powers already exist in most jurisdictions.

NSW introduced the *Building Products (Safety) Act 2017* to prevent the use of unsafe building products in building and construction, by identifying, restricting and rectifying building products that pose a safety risk in buildings. The NSW government now has the power to ban any or all uses of a building product, levy large fines for non-compliance (up to \$1.1 million) and investigate which building products might be unsafe.

⁷¹ Senior Officers' Group, *Implementation Plan: Strategies to address risks related to non-conforming building products*, September 2017, p. 4

Where buildings contain banned products, NSW Fair Trading will notify the local council or relevant authority. If appropriate, the council or relevant authority will issue a rectification order and report back to Fair Trading. Owners and tenants will be notified of the possible safety risk and Fair Trading will closely monitor the progress of all buildings that have been referred.⁷²

C. Proposals

Implementing the recommendations under the first four elements of the Product Assurance Framework will serve to make the requirements for compliance clearer and more robust. In turn, this will lessen the degree of non-compliance reducing the scale of the regulatory enforcement required.

The other BCR recommendations also have the potential to enhance compliance and enforcement. For example, the enhanced supervisory powers and mandatory reporting obligations for building surveyors to be addressed under BCR recommendation 11. The role of the building surveyor in enforcement and compliance may also be supported by a strengthened process for design acceptance and inspections detailed under BCR recommendations 13-18.

⁷² <https://www.fairtrading.nsw.gov.au/about-fair-trading/legislation-and-publications/changes-to-legislation/building-product-safety-laws#:~:text=The%20NSW%20Government%20have%20the,uses%20of%20a%20building%20product>

Proposal 5.A

Strengthen building product audit and enforcement powers for all states and territories, including the power to issue safety warning notices, ban products, impose mandatory safety standard and issue compulsory recall notices for construction products.

Implementing the proposal

This would include extending audit powers where necessary to enable building regulators and/or building surveyors to visit construction sites and suppliers of products to randomly sample examples of materials being used.

It could be achieved by introducing similar enforcement powers for building products that operate under the ACL, and the Queensland and NSW legislation in the other states and territories.

It would also be necessary to ensure that in cases where a problem is confirmed with a particular product that the withdrawal of certificate, report or other form of evidence of suitability occurs quickly and is well communicated.

Proposal 5.B

Introduce and enforce accountability obligations relevant to Element 2.

Implementing the proposal

Establish enforcement powers over the manufacturer and supplier obligations that are detailed under Element 2. This includes the ability to take compliance action in cases where products are supplied without the appropriate information, were not certified under the appropriate conformance pathway or are found to not be fit for the purpose that is claimed.

As with safety and consumer product legislation, this needs to be underpinned by a schedule of penalties, personal fines and criminal convictions where appropriate.

Consultation Questions

25. Do you agree with the description of the current compliance and enforcement regime?

26. Do you support additional enforcement on the supply of building products (Proposals 5.A & 5.B)? Do you see any barriers to their implementation?

27. Are there any other measures that would improve enforcement and compliance of building products?

28. Are there any final comments that you have on the scope and implementation of a National Building Product Assurance Framework?

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APPENDICES



Appendix A - Experience from overseas

International Building Quality Centre

The International Building Quality Centre has detailed the elements of a good practice building regulatory system⁷³. One of the ten principles includes provisions for building product safety (Principle Four) as including:

1. *Building Product Safety Authority responsible for:*
 - A. *oversight and enforcement of building product safety requirements;*
 - B. *oversight and enforcement of a compulsory product certification scheme for defined building products or categories of such products under which scheme Accredited Conformity Assessment Bodies issue certification;*
 - C. *the accreditation and oversight of Accredited Conformity Assessment Bodies to ensure complete impartiality and accuracy of testing/certification; and*
 - D. *ensuring publication of all certificates issued by Accredited Conformity Assessment Bodies and of all test results, including failed tests.*

There should be appropriately weighted civil or criminal sanctions for any governance failures by the Accredited Conformity Assessment Bodies.

2. *Accredited Conformity Assessment Bodies that:*
 - A. *are accredited under internationally recognised competence, calibration and governance standards such as ISO/IEC 17065 (or national implementation of such standards);*
 - B. *issue certificates:*
 - i. *based on product testing by laboratories accredited to testing and calibration standards such as ISO/IEC 17025 or national implementations of such standard;*
 - ii. *that provide proof of compliance to approved standards or normative documents;*
 - iii. *that contain prescribed product safety information; and*
 - C. *undertake mandatory batch and type testing of certified products post certification to ensure on-going quality control and consistency with the certified product.*

⁷³ Principles for Good Practice Building Regulation, September 2020

3. *Product supply chain laws administered and enforced by the Building Product Safety Authority which place express obligations on those in the building product supply chain (including, but not limited to, the manufacturer) to:*
 - A. *Supply safe and compliant building products;*
 - B. *Provide product safety information in the form of:*
 - i. *statements/declarations of performance that are subject to independent scrutiny/peer review, not merely those stated by the manufacturer; or*
 - ii. *where required under the compulsory product certification scheme, certificates issued by an Accredited Conformity Assessment Body.*

There should be appropriately weighted civil or criminal sanctions for misstatements or misinformation by those in the building product supply chain that should apply to individuals, corporations and directors and executives of corporations.

The extent to which a country may have the capacity to regulate building product safety will vary. An alternative approach may be to recognize building products that have been the subject of building product safety controls in other countries in so far as they meet the above principles.

New Zealand

New Zealand has a long standing and well communicated Product Assurance Framework in place that includes five generic assurance options for building product manufacturers and suppliers to demonstrate a product's compliance with the Building Code.⁷⁴

New Zealand is also currently going through a major building law reform process that includes the issue of building product safety.

New Zealand's regulatory review found that there is a role for government to monitor the sector and provide sector leadership. *"This would mean getting involved where it becomes aware of a compliance issue or where an issue is specifically brought to its attention; provide a number of options including reviewing and assessing the evidence*

⁷⁴ Department of Building and Housing, *Using the Product Assurance Framework to Support Building Code Compliance: A Guide for Manufacturers and Suppliers of Building Products*, April 2010

provided; conducting investigations; acting as mediator amongst the parties; and issuing guidance information or determinations. Where none of these options results in a satisfactory outcome, and where the government is satisfied, on reasonable ground, that the component has or is likely to fail to comply with the Building Code, it may issue a warning or declare a ban.”⁷⁵

Under the proposed changes Product Technical Statements will be mandated, requiring manufacturers and suppliers to make a minimum level of information publicly available about the building products they sell. This will include a plain English description and information about how the product is intended by the manufacturer to be installed and maintained. Manufacturers and suppliers will also be required to provide evidence for claims they make about their products' performance.⁷⁶

It is felt that the new requirements will help designers and builders choose the right products and will speed up consenting by reducing the need for Building Consent Authorities to request further product information. Making product information publicly available will also improve the quality of building work by helping builders install products in the way intended. This should reduce the number of failures from inspection, saving up to \$1.5 million a year.

The New Zealand government will also have the power to require any person to provide information when needed to determine whether a building product or method should be subject to a ban or warning. This is intended to ensure risky products and methods are kept off the market.

BRANZ

BRANZ is an independent research organisation funded by the Building Research Levy that uses an impartial evidence-based approach to improve the performance of the New

⁷⁵ <https://www.building.govt.nz/getting-started/building-law-reforms>

⁷⁶ <https://www.building.govt.nz/assets/Uploads/getting-started/building-law-reforms-factsheet-2-product-information.pdf>

Zealand building system. Its role is to lift the performance of the building system. It does this by supporting sector wide initiatives to improve the performance of the building industry wherever needed across the system. They conduct research that can be translated in into “*trusted, accessible, and actionable knowledge*”⁷⁷. The research program includes a materials team who investigates the durability of building materials within the New Zealand environment.

United Kingdom

Dame Judith Hackett, in her May 2018 independent review of building and fire safety regulations in England; *Building a Safer Future*⁷⁸, identified that the “*product testing, labelling and marketing regime is opaque and insufficient*”. She recommended that there be a more effective testing regime, clearer labelling and product traceability to drive improvements that encourage innovative product and system design under better quality control. She envisaged a more effective market surveillance system operating at a national level.

The government responded with a plan to strengthen the oversight of the construction products regulatory regime⁷⁹. This included a new national Construction Products regulatory role with responsibility for:

- Market surveillance and oversight of local enforcement action, including a national complaints system and supporting local Trading Standards with complex cases;
- Enforcement action with manufacturers, where issues are judged to be national and/or significant; and

⁷⁷ <https://www.branz.co.nz/about/>

⁷⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/707785/Building_a_Safer_Future_-_web.pdf

⁷⁹ Ministry of Housing, Communities & Local Government, *A reformed building safety regulatory system: Government response to the 'Building a Safer Future' consultation*, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/877628/A_reformed_building_safety_regulatory_system_-_gvt_response_to_the_Building_a_Safer_Future_consultation.pdf, April 2020

- Providing advice and support to industry to improve compliance and technical advice to the government.

£10m has since been allocated for start-up funding for a new construction products regulator. It will work with the Building Safety Regulator and Trading Standards to encourage and enforce compliance.⁸⁰

The government has also commissioned an independent review to examine weaknesses in previous testing regimes for construction products, and to recommend how abuse of the testing system can be prevented.⁸¹

There will be a new Construction Products Standards Committee comprised of technical experts and academics, to advise the government on whether voluntary industry standards for construction products should also become UK regulatory standards. The Committee will also provide advice and recommendations on the conformity assessment process and product test standards, including:

- the assumptions and weaknesses within the current testing regime, including the effectiveness and accuracy of current tests;
- ways to improve the testing regime and new tests to address the weaknesses; and
- innovation in how construction products are tested.

European Union

The European Construction Products Regulation (No. 305/2011) represents harmonised rules for the marketing of construction products. “*The Regulation provides a common technical language to assess the performance of construction products. It ensures that reliable information is available to professionals, public authorities, and consumers, so*

⁸⁰ <https://www.gov.uk/government/news/new-regulator-established-to-ensure-construction-materials-are-safe>

⁸¹ <https://www.gov.uk/government/news/new-regulator-established-to-ensure-construction-materials-are-safe>

they can compare the performance of products from different manufacturers in different countries.”⁸²

The European system includes:

- A requirement for CE marking when specified for nominated products which requires a manufacturer to draw up a Declaration of Performance that contains:
 - product reference;
 - systems of assessment and verification of consistency of performance of the product;
 - reference of the applicable standard;
 - intended use or uses for the product;
 - declared performance based on the assessment according to the applicable standard.⁸³
- A rapid alert system for dangerous non-food products and allows the Commission and national authorities to promptly share information on dangerous non-food products found on the market. (Safety Gate)
- Market surveillance to monitor product safety.
- Product safety rules.
- Standards and risks for specific products - actions to ensure the safety of specific categories of products.
- International cooperation on product safety - share information on unsafe products, coordinate standardisation efforts and promote awareness of product safety.

There is also the European Organisation for Technical Assessment with responsibility for providing independent information on products and guidance for their use. Specifically they:

⁸² Construction Product Regulation, https://ec.europa.eu/info/business-economy-euro/product-safety-and-requirements/product-safety_en

⁸³ European Commission, [https://ec.europa.eu/growth/sectors/construction/product-regulation/european-assessment_en#:~:text=Technical%20assessment%20bodies%20\(TABs\)%20assess,countries%20according%20to%20national%20procedures.](https://ec.europa.eu/growth/sectors/construction/product-regulation/european-assessment_en#:~:text=Technical%20assessment%20bodies%20(TABs)%20assess,countries%20according%20to%20national%20procedures.)

- coordinate technical assessments and the procedure for adopting assessment documents
- ensure adopted assessment documents and technical assessments are publicly available
- coordinate all the technical assessment bodies
- advise government on the preparation of assessment documents and suggests improvements to the regulation
- share examples of best practice amongst members and
- address other matters in the use of construction products and facilitate innovation.⁸⁴

Japan

The Japanese approach which is held up as a model for building regulation by the World Bank⁸⁵ includes:

- A legislated product standardisation process under the Japanese Industrial Standardisation Law.
- Accredited manufacturers need to demonstrate inspectorial and manufacturing processes that accord to the JIS (industrial standard) or JAS (agricultural standard) standards. This requires manufacturers to pass an exam to demonstrate that manufacturing and inspection is carried out according to JIS and JAS standards. The quality of product is also examined by accredited test laboratories and through random sampling tests.
- Accreditation also involves tests conducted throughout manufacturing and during construction phases.
- The manufacturer issues the material certificate to the purchaser at the time of product delivery. This certificate is one way for the construction manager to check the conformity of the building materials to the standard and to demonstrate at the interim and final inspections that the standard has been met.
- Materials that do not meet the specifications of JIS or JAS must be certified by the Japanese government (Ministry of Land, Infrastructure, Transport and Tourism) to be used as building materials.

⁸⁴ European Organisation for Technical Assessment, <https://www.eota.eu/en-GB/content/who-we-are/33/>

⁸⁵ World Bank, Building Regulation for Resilience: Converting Disaster Experience into a Safer Built Environment: The Case of Japan, 2018, p. 70

Appendix B - Certification scheme types

The following details the features of the main scheme types that can be operated by a certification scheme. Schemes can in fact undertake any combination of activities under 1, 2, 3, 4 and 5.

Conformity assessment functions ⁸⁶	Scheme Type Examples						
	1a	1b	2	3	4	5	6
1. Selection <ul style="list-style-type: none"> ○ specification of requirements 	✓	✓	✓	✓	✓	✓	✓
2. Determination <ul style="list-style-type: none"> ○ testing ○ inspection ○ appraisal ○ assessment ○ other e.g. verification 	✓	✓	✓	✓	✓	✓	✓
3. Review <ul style="list-style-type: none"> ○ check the evidence from the determination stage against the requirements from the selection stage 	✓	✓	✓	✓	✓	✓	✓
4. Decision <ul style="list-style-type: none"> ○ granting, suspending, withdrawing certification 	✓	✓	✓	✓	✓	✓	✓
5. Attestation <ul style="list-style-type: none"> ○ issue certificate of conformity & right to use ○ certificate of conformity for a batch ○ right to use mark based on surveillance (6) or certification to batch. 	✓	✓ ✓	✓	✓	✓	✓	✓
6. Surveillance <ul style="list-style-type: none"> ○ test samples on open market ○ test samples from factory ○ assess production, service, process ○ management system audits 			✓		✓	✓	

⁸⁶ Derived from Table 1 – Building a product certification scheme, AS/NZS ISO/IEC 17067:2015 Conformity assessment - Fundamentals of product certification and guidelines for product certification schemes

Appendix C - Proposed revised NCC evidence of suitability provisions

A5.1 Evidence of suitability—Volumes One, Two and Three

- (1) The form of evidence used must be appropriate to the use of the material, product, *plumbing product*, form of construction or design to which it relates.
- (2) Any copy of documentary evidence submitted must be a complete copy of the original certificate, report or document.
- (3) The documentary evidence for a material, product, system or form of construction is to include the following:
 - i. Identifying details.
 - ii. Declaration of NCC compliance.
 - iii. Basis of the declaration.
 - iv. Description of application.
 - v. Relevant limitations.
 - vi. Installation/maintenance instructions.
 - vii. Contact details.

A5.2 Evidence of suitability—Volumes One and Two

- (1) Subject to A5.4, A5.5 and A5.6, evidence to support that the use of a material, product, system, form of construction or design meets a Performance Requirement or Deemed-to-Satisfy Provision may be in the form of any one, or any combination of the following:
 - (a) A current CodeMark Australia, CodeMark *Certificate of Conformity*,
 - (b) A current Certificate of Accreditation.
 - (c) A current certificate, other than a certificate described in (a) and (b), issued by a *certification body or appraisal scheme stating that the properties and performance of a material, product, form of construction or design fulfil specific requirements of the BCA.*
 - (d) A current report issued by an *Accredited Testing Laboratory within the past 10 years*
 - ~~(i) demonstrates that a material, product or form of construction fulfils specific requirements of the BCA; and~~
 - ~~(ii) sets out the tests the material, product or form of construction has been subjected to and the results of those tests and any other relevant information that has been relied upon to demonstrate it fulfils specific requirements of the BCA.~~

- (e) A Declaration of Compliance ~~or report~~ from an independent, appropriately qualified *professional (registered) engineer* ~~or other appropriately qualified person~~ that details the qualifications, areas of specialty and experience in those areas, of the engineer providing the Declaration.
 - ~~(i) certifies that a material, product, form of construction or design fulfils specific requirements of the BCA; and~~
 - ~~(ii) sets out the basis on which it is given and the extent to which relevant standards, specifications, rules, codes of practice or other publications have been relied upon to demonstrate it fulfils specific requirements of the BCA.~~
 - (f) A Statutory Declaration from an appropriately qualified person or another form of documentary evidence ~~such as but not limited to a Product Technical Statement,~~ that details the qualifications, areas of specialty and experience in those areas, of the person / organisation providing the documentary evidence.
 - (i) demonstrates that a material, product, form of construction or design fulfils specific requirements of the BCA; and
 - (ii) sets out the basis on which it is given and the extent to which relevant standards, specifications, rules, codes of practice or other publications have been relied upon to demonstrate it fulfils specific requirements of the BCA;
- (2) Evidence to support that a calculation method complies with an ABCB protocol may be in the form of any one, or any combination of the following:
- (a) A certificate from a professional engineer or other appropriately qualified person that—
 - (i) certifies that the calculation method complies with a relevant ABCB protocol; and
 - (ii) sets out the basis on which it is given and the extent to which relevant standards, specifications, rules, codes of practice and other publications have been relied upon.
 - (b) Another form of documentary evidence that correctly describes how the calculation method complies with a relevant ABCB protocol.

Accredited Testing Laboratory means—

- (a) an organisation accredited by the National Association of Testing Authorities (NATA) *to AS ISO/IEC 17025:2018 General requirements for the competence of testing and calibration laboratories* to undertake the relevant tests; or
- (b) an organisation outside Australia accredited to undertake the relevant tests by an authority recognised by NATA through a mutual recognition arrangement (ILAC-MRA); or
- (c) an organisation recognised as being an *Accredited Testing Laboratory* under legislation at the time the test was undertaken.

Certification body means a person or organisation operating in the field of material, product, system, form of construction or design certification that has been accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ) to *AS/NZS ISO/IEC 17065:2013 Conformity assessment - Requirements for bodies certifying products, processes and services* and is accredited for a purpose other than as part of the CodeMark Australia Certification Scheme or *WaterMark Certification Scheme*.

Appendix D - Agreed legislative principles

In October 2017, the Building Ministers agreed the powers set out in Queensland's *Building Construction (Non-conforming Building Products – Chain of Responsibility and Other Matters) Amendment Act 2017* set a model for jurisdictions to consider.⁸⁷

The legislative principles are:

COMPONENTS OF REGULATORY FRAMEWORK		OBJECTIVES
Preliminary		
1	<p>Expand responsibility</p> <p>Identify non-conforming building products, associated non-compliance and potentially dangerous buildings</p> <p>Authority to proactively investigate issues</p> <p>Authority to investigate complaints</p>	<p>Broaden the functions, powers and objectives of building regulators so they may respond to the issue of non-conforming building products.</p> <p>Ensure regulators are empowered to investigate suspected contraventions of the legislation based on information received from various sources including:</p> <ol style="list-style-type: none"> 1. other jurisdictions; 2. the jurisdiction's product committee; 3. industry organisations; 4. the Department of Immigration and Border Protection; and 5. previous complaints.
2	<p>Establish key concepts</p>	<p>Including:</p> <ul style="list-style-type: none"> • non-conforming building product (a modified version of the nationally agreed definition) • building products and materials • any supplementary definitions to support the operation of additional provisions and powers (e.g. "unsafe" to support the ban provisions).
3	<p>Establish Building Product Committee</p>	<p>Assist regulators in discharging their functions by providing timely, independent and expert</p>

⁸⁷ https://www.industry.gov.au/sites/default/files/2019-03/building_ministers_forum_communique_-_october-2017.pdf

COMPONENTS OF REGULATORY FRAMEWORK		OBJECTIVES
		<p>advice to regulators/Ministers regarding building products and their safety or suitability.</p> <p>Facilitate information sharing and collaboration across government (for each jurisdiction) regarding:</p> <ol style="list-style-type: none"> 1. suspected and confirmed non-conforming building products; and 2. potential coordinated responses.
Obligations		
4	<p>Facilitate enforcement</p> <p>Allow action to be taken earlier in the supply chain.</p> <p>Issue disciplinary orders and commence prosecutions</p>	<p>To ensure regulators can pursue a broader range of offenders, rather than those at the end of the supply chain (i.e. licensees).</p> <p>Establish and impose duties on supply chain participants to ensure that persons other than licensees can commit offences.</p>
5	Mandatory Reporting	<p>Impose a duty on supply chain participants and building licensees/ to notify a {regulator} if they become aware of a death or serious injury or illness that has been caused by a building product.</p>
Facilitate investigations through regulator powers		
6	<p>Power of entry</p> <p>Audit and investigate buildings that are not active building sites</p>	<p>Ensure the {regulator} is empowered to enter all premises necessary to discharge their functions in relation to building products.</p> <p>This includes premises that are not building sites such as a supplier warehouses and manufacturing plants.</p> <p>To limit the power of Regulators to enter residences, supporting provisions regarding search warrants will limit the issue of warrants to when there is a reasonable suspicion of building product issues.</p> <p>Supporting provisions will also outline notice requirements prior to entry and other matters.</p>
7	Search Warrants	<p>Provide for when and how a search warrant may be issued.</p> <p>This will limit the powers of inspectors to search non-workplaces (i.e. residences) to</p>

COMPONENTS OF REGULATORY FRAMEWORK		OBJECTIVES
	Audit and investigate buildings that are not active building sites	when a magistrate has been satisfied that sufficient grounds exist to search. Place requirements on the execution of search warrants by inspectors.
8	Powers after entry	Ensure that inspectors have adequate powers following entry to a premises For example: <ul style="list-style-type: none"> • powers to inspect, examine, search and make inquiries • bring any equipment and materials necessary to perform an investigation on the premises • conduct tests or take samples for testing • Require reasonable help\ • bring additional persons such as interpreters, subject matter experts etc. to assist with investigation.
9	Power to require production and copies of documents Power to require answers to questions	Ensure that inspectors have the power to: <ol style="list-style-type: none"> 1. obtain relevant documents both following entry and generally 2. copy and retain such documents as necessary; and 3. obtain answer to questions from relevant persons. Supporting provisions will provide for reasonable access to a document by its owner and deal with freedom to refuse to answer questions.
10	Power to seize evidence Power to take samples	Will provide sufficient powers for inspectors to seize evidence. Evidence will include documents and any substance or thing that may be evidence of an offence. Supporting provisions will allow for the movement of seized things, and dealing with seized things (e.g. receipt, access return, forfeiture to the state etc.).

COMPONENTS OF REGULATORY FRAMEWORK		OBJECTIVES
11	<p>Power to have building products tested and analysed</p> <p>Power to recover costs for testing</p>	<p>Will provide sufficient powers for the regulator to have samples and things tested and analysed and to recover reasonable costs related to testing where wrongdoing is discovered.</p> <p>Will also provide an offence of tampering with evidence if necessary.</p> <p>Supporting provisions will allow appropriate/prescribed testing methods and evidence required to be provided by testers/analysts.</p>
12	<p>Power to require compliance generally</p>	<p>Empower inspectors to issue notices and require persons to:</p> <ol style="list-style-type: none"> 1. remedy a contravention; 2. prevent a likely contravention from occurring; or 3. remedy the things or operations causing the contravention or likely contravention. <p>It will be an offence not to comply with such a notice.</p>
<p>Improve the ability of regulators to respond to/remedy non-conforming building products and safety concerns through: Inspector powers – responding to safety concerns</p>		
13	<p>Notice relating to unsafe building products</p>	<p>This notice will provide a means of directing persons to render products safe or cease using products, in cases where the {regulator} reasonably believes a building product is or is being used in a way that is hazardous.</p> <p>Supporting provisions will be included to outline the content and timeframes associated with the notice.</p> <p>It will be an offence not to comply with such a notice.</p>
14	<p>Power to seize unsafe building products</p> <p>Power to declare a building or building site unsafe</p>	<p>As an alternative to the above “unsafe building product notice” (i.e. in hazardous circumstances), this provision provides inspectors with the ability to seize unsafe building products.</p>

COMPONENTS OF REGULATORY FRAMEWORK		OBJECTIVES
	Require work or occupancy to cease if there are safety concerns	It will also provide inspectors with powers to restrict access to dangerous “places”, in response to safety concerns. Supporting provisions will be provided to impose time limits, notification requirements etc.
15	Notice in emergency situations	This notice will provide Building inspectors with tools to require compliance in response to urgent safety concerns (i.e. an immediate risk of serious injury or illness stemming from a building product, for example). The {regulator} will be able to direct any person at a place to take remedial action to make the place safe. Supporting provisions will be included to outline the content and timeframes associated with the notice.
16	Ability to take immediate action to make buildings safe	As an alternative to the above “emergency situation notice”, this will allow the {regulator} to take direct remedial action to make a place or situation safe. This action may be taken in response to: <ul style="list-style-type: none"> • failure to comply with earlier directions/notices; or • in situations where it is not appropriate to issue a notice (e.g. if a person who may be issued a notice cannot be found in an emergency). Will require additional supporting provisions.
Ministerial/Regulator powers to remedy NCBPs/repeated contraventions		
17	Intelligence gathering	To formalise a process whereby pertinent information (i.e. information that would assist an interstate regulator in carrying out its functions) that is received by a regulator in one jurisdiction is shared nationally.
18	Power to declare a product non-conforming or unsafe	To empower the Minister/Regulator to make a decision to confirm that a product is a NCBP or an unsafe building product.

COMPONENTS OF REGULATORY FRAMEWORK		OBJECTIVES
		A Regulator/Minister can then take proportionate enforcement action to remedy the situation.
19	Notification of an identified NCBP	<p>It is also proposed to impose obligations on the Regulator to share particular information with the Minister, building licensees and the public.</p> <p>To accommodate this obligation, it is proposed to provide the Regulator with the power to notify the public in certain circumstances (e.g. when building products are identified as non-conforming building products, the issue of bans or recall orders and other actions undertaken.</p> <p>Supporting provisions will protect the State from liability.</p>
20	Power to seek injunctions	Allow regulators to seek injunctions against those who do not comply with above notices. These injunctions can compel persons to comply with notices, restrain them from contravening a notice or a provision of the laws.
21	Power to enter into enforceable undertakings (Standard)	Provide regulators with an additional enforcement tool to resolve issues prior to further enforcement action.
22	Power to recall an unsafe or non-conforming product	<p>Allow the Regulator to recall a product in response to:</p> <ol style="list-style-type: none"> 1. safety concerns; or 2. if a duty holder has been convicted of a breach of duty. <p>Designers, manufacturers and importers named in the recall will be required to comply with the recall and will be liable for any costs incurred in complying with the recall.</p>
23	Voluntary recalls	To facilitate a process of notification to the regulator after a voluntary recall of a building product has been undertaken by a designer, manufacturer or importer, so appropriate action may be taken.

COMPONENTS OF REGULATORY FRAMEWORK		OBJECTIVES
24	Power to ban unsafe product	<p>A ban imposed by a state or territory minister/regulator applies in the state or territory. As such, this provision should be reciprocated in all jurisdictions to be maximally effective.</p> <p>Supporting provisions will establish time periods for interim bans and revocations etc.</p>
25	Information standards	Provide for the ability for Ministers/regulators to require certain information to be provided or prohibit certain information being provided when handling building products.
Procedural provisions		
26	Appeals	Ensure that any decision made by the Minister or Regulator (e.g. that a product is non-conforming or unsafe) and inspectors (e.g. the decision to issue a notice) in relation to product conformity and enforcement action are subject to appropriate review, including internal review.

Appendix E - Product Technical Statement template

Suggested layout for a Product Technical Statement provided in the ABCB's Handbook of Evidence of Suitability.

<p>PRODUCT TECHNICAL STATEMENT</p> <p>for</p> <p>NAME OF MATERIAL, PRODUCT OR FORM OF CONSTRUCTION</p>
<p>PRODUCT DESCRIPTION:</p> <p>A brief description of the material, product or form of construction.</p>
<p>APPLICATION AND INTENDED USE:</p> <p>A statement of how and where the material, product or form of construction can be used within a building.</p>
<p>COMPLIANCE WITH THE NATIONAL CONSTRUCTION CODE:</p> <p>A statement of the Performance Requirements and/or Deemed-to-Satisfy Provisions (including the NCC edition) which the Product Technical statements asserts compliance with.</p> <p>A summary of how the use of the material, product or form of construction complies with the Performance Requirements and/or Deemed-to-Satisfy Provisions listed above.</p> <p>Details of evidence to support the compliance claims, such as test reports, technical opinions or other supporting information.</p>
<p>LIMITATIONS OF USE:</p> <p>Details of any limitations on the use of the material, product or form of construction relevant to its compliance claims, which may include the following:</p> <ul style="list-style-type: none"> • Building classification • Building height or size • Type of construction • Environmental limitations, such as permissible wind regions • Maximum structural loads
<p>CONDITION OF USE:</p> <p>Details of any conditions on the use of the material, product or form of construction relevant to its compliance claims.</p> <p>Details of any conditions on the use of the Product Technical Statement, such as expiry provisions.</p>
<p>INSTRUCTIONS FOR DESIGN, CONSTRUCTION OR INSTALLATION:</p> <p>Details of any instructions for design, construction or installation of the material, product or form of construction.</p>
<p>MAINTENANCE INSTRUCTIONS:</p> <p>Where applicable, instructions for maintenance</p>
<p>SUPPORT:</p> <p>Full contact details, including website links, for the manufacturer, supplier and technical support service.</p>

Appendix F - Combustible Cladding Case Study

Aluminium composite cladding (ACP) has been on the market in Australia since the late 1970's and has been a popular and widely used product to clad unit towers and commercial buildings for the last 30 years. It is estimated that there are millions of square metres on Australian buildings.

For much of this time the NCC required that external walls be non-combustible but with exceptions for attachments (Specification C1.1) and for bonded laminated materials where each laminate was non-combustible (Specification C1.12).

Test certificates relied on by the industry confirmed that the ACP panels in use had a spread of flame index of zero and an ignitability index of zero. This was interpreted by many in the industry to be 'non-combustible'.

The first known recorded case of a fire which involved ACP as part of an external cladding system dates back to 1991 in Liverpool, England. By the end of the 1990s, combustible ACP panels had been implicated in a number of fires around the world that led to serious injuries and death.⁸⁸ In 2000 one manufacturer, Mitsubishi, stopped selling ACP with a high proportion of polyethylene (PE) in the core and moved to a new fire resistant (FR) panel with a small percentage of PE. Other manufacturers stopped supplying other markets in Europe and the United States but continued to supply Australia.⁸⁹

⁸⁸ Hanmer, G., *Cladding fire risks have been known for years. Lives depend on acting now, with no more delays*, [Cladding fire risks have been known for years. Lives depend on acting now, with no more delays \(theconversation.com\)](#), 2019

⁸⁹ Four Corners, 2017

A catastrophic fire occurred in 2010 on a building in Shanghai, China, causing 58 deaths and 71 injuries⁹⁰. The ACT Fire Brigade and the ABCB had now started to investigate whether ACP with a PE core complied with the NCC but no conclusion was reached.

In November 2014 the Lacrosse building in Melbourne caught fire and the flames quickly spread up the building because of the ACP panel.⁹¹ The subsequent investigation led to the CSIRO releasing its *Fire safety guideline for external walls: A guide for high-rise construction in Australia*.⁹²

NCC 2016 included amendments to Specification C1.10 Clause 4, which referenced AS 5637.1 making it a requirement that the correct test be selected. Prior to this, the NCC was less prescriptive about test selection. Some manufacturers and laboratories have been using this omission to select a less rigorous test, namely AS 1530 Part 1.

It took the Grenfell Tower fire in London for there to be a real change in practice across Australia. In June 2017, the residential tower caught fire and again the flames rapidly spread up the outside of the building. The cladding, amongst other things was held to blame. Seventy-two people lost their lives.

In March 2018, the NCC 2016 was amended (Amendment 1) to remove the remaining ambiguity as to the appropriate use of combustible materials on external walls. These changes included changing the word “laminated” to “lamina” to be clear that each layer of a composite material must be non-combustible and introducing a new testing method requiring the whole wall testing (AS 5113) addressing inappropriate testing protocols.

NCC 2019 included a technical specification for the permanent labelling of cladding (*SA TS 5344:2019*).

Over the same time period cladding taskforces were put in place in nearly every state and territory to conduct audits to investigate the scale of the problem. Rectification measures differ. Action has also been taken at a state and territory level to ban different

⁹⁰ Bo Yuan Chen, T. et al, *Fire Risk Assessment of Combustible Exterior Cladding Using a Collective Numerical Database*, 2019, p. 3

⁹¹ <https://www.ourstorymfb.org.au/cladding>

⁹² Webb, A. & White, N., April 2016

types of cladding with PE cores. Examples of some of the action that have been taken include:

- Queensland banned ACP cladding with more than 30% PE core.
- NSW banned ACP cladding with more than 30% PE unless it passes either component test (AS 1530) or full wall test (AS 5113).
- Victoria required the use of ACP cladding with more than 30% PE or expanded polystyrene (EPS) to be assessed by Building Appeals Board. This has since been extended to a total ban on ACPs and EPS cladding with a core less than 93% inert material on commercial projects (Type A and Type B construction).
- Western Australia tightened the verification rules when performance solutions are used for cladding and a full wall test (AS 5113) is required.
- Tasmania requires accreditation of high risk products via Director's Determination – Building Product Accreditation – High Risk Building Products.

In January 2019, a number of CodeMark certificates related to cladding were withdrawn.

In February 2021, flammable ACPs and rendered expanded polystyrene cladding on commercial projects were banned in Victoria.

In combustible cladding we have a multi-faceted problem that reaches across the whole system – product testing, NCC, project documentation and compliance. We have also learned that we have a system that was too slow to react. It took, nearly thirty years, many fires and many lives lost before decisive action and industry practice changed.