CEMENT CONCRETE & AGGREGATES AUSTRALIA

CCAA Submission to the Australian Building Codes Board **Proposed risk-based Building Product Registration Scheme**

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Executive Summary

CCAA welcomes the opportunity to make early comment on the ABCB discussion paper titled *Principles and scope of a Building Product Registration Scheme.*

As outlined below, CCAA makes the following comments:

- The manufacture and production of premixed concrete has been subject to compliance with independently developed codes and standards over the past century and is the leading building product in this area.
- The performance and conformity of the premixed concrete product to these codes and standards is embedded into the manufacture and production process.
- Details regarding the proposed Building Product Registration Scheme, including around the determination of risk and application of the scheme, are insufficient for CCAA to determine the benefit, value, and projected implementation & running costs of the scheme.
- CCAA contends that the supply and manufacture of premixed concrete already meets the intended objectives of the proposed scheme. Any further conformity requirements imposed by the scheme remain unclear. It is contested that the scheme adds no further assurance for premixed concrete products, and is only likely to add additional cost, complexity and potentially be anticompetitive in nature.
- It is CCAA's clear position that the industry has a conformity scheme built into the manufacture and supply of its products that is well established and a leader in the industry.

CCAA looks forward to engaging further with the ABCB in the development of the proposed scheme to ensure existing manufacturing requirements and transparency of information already meet the scheme requirements.

Introduction

Cement Concrete & Aggregates Australia (CCAA), the voice of the heavy construction materials industry, welcomes the opportunity to make a submission to the ABCB on the Proposed risk-based Building Product Registration Scheme.

CCAA members produce the majority of Australia's cement, concrete, and aggregates, which are crucial to Australia's building and construction sectors. These materials support the development of our nation's transport, energy, water, housing, defence, and social infrastructure.

The industry generates approximately $15 Billion in annual revenues and employs approximately 30,000 Australians directly and a further 80,000 indirectly

Building Ministers have asked the Australian Building Codes Board (ABCB) to design a new risk-based Building Product Registration Scheme (Scheme) for all building products.

In September 2024, the Australian Building Codes Board (ABCB) released the discussion paper titled **Principles and scope of a Building Product Registration Scheme (Scheme)**[1] and the supporting documents *Building Products Assurance Framework – Regulatory Options*[2], *Proposed changes to building product regulation - cost benefit analysis*[3], and *Preview of consultation survey*[4]

These documents have been prepared in response to the direction by the national Building Ministers Meeting for a greater focus on product conformity and performance in the wake of several notable instances of product failure, notably with building cladding systems.

The proposed Scheme outlined in these documents will provide a mechanism for the establishment of a national register for the collation of data demonstrating compliance with the requirements of the National Construction Code (NCC)[5] with compulsory product registration. It will also introduce product labelling and traceability aimed at increasing the use of high-quality building products in the Australian construction industry, delivering more confidence in the performance and application of these products and greater safety in the built environment.

Further benefits are seen in informed product selection by designers and constructors, and long-term savings in construction costs by reducing delays in construction and efficiencies gained in the operation life of buildings.

[1] https://consultation.abcb.gov.au/engagement/proposed-building-product-registration-scheme/

[2] https://consultation.abcb.gov.au/engagement/proposed-building-product-registration-scheme/supporting_documents/Building%20Products%20Assurance%20Framework%20%20Regulatory%20options.pdf accessed 17 September 2024

[3] https://consultation.abcb.gov.au/engagement/proposed-building-product-registration-scheme/supporting_documents/Proposed%20changes%20to%20building%20product%20regulation%20%20cost%20benefit%20analysis.pdf accessed 17 September 2024

[4] https://consultation.abcb.gov.au/engagement/proposed-building-product-registration-scheme/supporting_documents/Preview%20of%20consultation%20survey.pdf accessed 17 September 2024

[5] https://ncc.abcb.gov.au/ accessed 17 September 2024

Summary

The Australian heavy construction materials industry has a long history of the supply and use of high-quality materials for the Australian construction industry. The industry remains an active participant in the work of Standards Australia and other regulatory bodies seeking to ensure the quality of concrete.

Existing Standards relevant to the supply and utilisation of concrete provide a superior level of performance information sufficient to show compliance with the relevant provisions of prevailing Standards. These Standards, through a series of derivative references in product-specific Standards, demonstrate conformance to the NCC.

The heavy construction materials industry supports the majority of the principles outlined in the discussion paper *Principles and scope of a Building Product Registration Scheme* as they are congruent with the tenets of manufacture and supply of quality materials to the Australian construction industry.

In this submission, CCAA identifies our existing quality control and governance in place in the Concrete Industry, and is also calling for more specific detail in the Scheme design and coverage before it can make a fully informed decision on the proposed model.

CCAA looks forward to working with the ABCB, the Building Ministers and other stakeholders, to develop a practical position to achieve the outcomes sought in a building product registration scheme.

Background

- Cement and aggregates are key ingredients in concrete – the most used construction material in the world today.
- Concrete underpins Australia's $150 billion building and construction industry and contributes to Australia's economic and social well-being through employment, taxation and investment activities.
- Over 30 million cubic metres of concrete is produced in Australia per annum supplied by around 1,300 concrete batching plants. A cubic meter of concrete contains approximately 250kg of cement/cementitious material, 700kg of sand, 1,200kg of aggregates.
- In Australia, a large proportion of concrete is produced in premixed concrete batching plants and delivered in a plastic state to construction sites. A 'just-in time' product, premixed concrete is mixed and delivered locally to order, using locally sourced materials, labour and other resources.
- The resulting social and economic impacts are felt in large cities and industrial hubs, as well as in small rural communities.
- Concrete can be moulded into any shape and, due to its strength and durability, will continue to be the base for housing and infrastructure and subsequently for economic growth, societal wellbeing and prosperity. It will also be the foundation of future low carbon infrastructure.
- Premixed concrete is manufactured at batching plants that are typically located strategically within a radius of 45-minute travelling time from major development areas.
- Conformity with codes and standards is fundamentally embedded into the manufacturing process for premixed concrete up to the point of delivery to a site. This ensures a leading level of quality control, traceability and verification that has been integrated into the premixed concrete manufacturing process. This is detailed further in the next section.

Present Heavy Construction Materials Industry Practice

The Australian heavy construction materials industry has remained an active participant and contributor to the national system of codes and standards pertaining to its materials and products.

Operating initially in accordance with the relevant British and American standards, the industry moved to establishing set of indigenous Standards early in the last century. In 1926, one of the earliest Australian Standards No. A2[6] was published with the support of the industry. A short time later, in 1934, Australian Standard Code No. CA.2 for Concrete in Building[7] was published by the, then, Standards Association of Australia.

From that time, a series of reviews and amendments have been undertaken to ensure the Standard was supporting contemporary industry practice, and adoption of international practice where applicable. These periodic updates have also informed the determination of and communication of product performance enabling the use of concrete with confidence.

References to concrete are found in all relevant sections of the National Construction Code (NCC). These defer to the current suite of relevant Australian standards to define and determine compliance. In terms of concrete, the NCC refers to the provisions of Australian Standard AS 3600 Concrete Structures[8]. AS 3600 pioneered the concept whereby quality control was incorporated in building standards[9]. This has been further refined in the revised editions of this Standard published since this time.

AS 3600 further refers to AS 1379 Specification and manufacture of concrete[10] for material requirements for concrete (and grout). Section 17 Materials and Construction Requirements of AS 3600 outlines project assessment, sampling and testing requirements, and rejection criteria.

Arguably, conformity is built into the manufacture and supply of premixed concrete to meet design standards fit for purpose in the built environment.

AS 1379 is the cornerstone guide to the application of concrete. This document outlines the minimum requirements for materials and equipment used in the manufacture and delivery of concrete. Of relevance to this discussion, it sets out the minimum requirements for:

(c) specifying, sampling, testing and compliance with specified properties of plastic and hardened concrete;[11]

It should be noted that the industry operates an extensive series of laboratories used to demonstrate conformity with the various provisions of the above Standard. These laboratories are registered in the laboratory accreditation Scheme operated by NATA – the National Association of Testing Authorities. These laboratories receive a “globally recognised, peer-reviewed and government endorsed accreditation”[12] providing assurance to clients that the results determined are congruent with local and international analytical Standards and specifications.

It is CCAA’s clear position that the industry has a conformity scheme built into the manufacture and supply of its products that is well established and a leader in the industry.

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[6] AUSTRALIAN STANDARD SPECIFICATION AND TESTS FOR PORTLAND CEMENT, No. A2, 1926

[7] Australian Standard Code No. CA.2 for Concrete in Building, Standard Association of Australia, Sydney, 1934

[8] AS 3600-2018, Standards Australia, Sydney, 2018

[9] Ryan and Samarin, *Australian Concrete Technology* , Longman Cheshire Pty. Limited, Melbourne 1992.

[10] AS 1379 – 2007, Standards Australia, Sydney, 2018

[11] AS 1379, *ibid.*

[12] https://nata.com.au/accreditation/benefits/, accessed 21 September, 2024

Proposed Model and Issues

The Australia Building Codes Board, in response to a reference from the Building Ministers Meeting, is proposing the establishment of a Scheme to address two aspects of building products quality:

a. a national building product register that requires mandatory information and registration of building products; and
b. a mandatory product labelling and traceability scheme, to be incorporated into the ABCB's existing certification schemes, and evidence of suitability framework.

This proposal will be returned to the BMM for their consideration.

The model presented in the discussion paper has four main attributes:

1. Building product information would be available in a standardised format. This information will demonstrate the compliance with the relevant provisions of the NCC. Traceability of products would be through labelling, digital identifiers and the building product register.
2. The establishment of a new "risk-based" category of 'designated' products within the NCC. The ABCB would determine the inclusion of products in the category, through assessment of the use, safety and risk of defects of those products.
3. A national register would require mandatory registration of 'designated' products, and voluntary registration would be available to other products on a self-assessed basis, and,
4. Avoiding duplication with existing Schemes and processes which demonstrate compliance with the relevant provisions of the NCC and avoid increased costs to provide this assurance.

In terms of the model outlined in the discussion paper, it is difficult to examine how the proposal will be implemented due to the lack of detail in the discussion paper. As detailed in the section above, the Australian concrete industry already collates and communicates compliance information determined according to testing required in Australian standards and, hence, the NCC. This information is determined in accredited laboratories and is made publicly available to clients. Traceability is achieved through a time-based identification system.

Another issue that is unclear in the discussion paper is the mechanism for a building product to be determined as "designated". Subject matter experts, well-practised in the construction industry, would have to be recruited and consulted as part of the process. It would require a set of clear criteria to be formulated and agreed by all stakeholders to preclude any bias, perceived or otherwise, manifesting in the considerations. The opportunity to favour one building product over another in a particular application is of significant concern given it is likely to interfere with market competition by potentially establishing the preference of one product over another.

The model proposed includes a standardised method of reporting compliance. This is indicated to be with a requirement for "minimum information" to show compliance. Again, there are a myriad of product options for many applications in the construction industry.

Each of these building products may be composed of different materials, deliver the required performance in a different form and have diverse range of performance testing to demonstrate "fit-for-purpose". It is difficult to resolve how a "minimum" of information will be sufficient to determine compliance without the use of skilled subject matter experts, accessed with an appropriate volume of compliance data, which is usually already prescribed in the relevant Australian standards.

Finally, the model is proposed on a sustainable cost basis – that is, the operational costs will be recovered through registration costs, with those products 'designated' by the ABCB, incurring a greater cost. Given the model description outlined in the discussion paper, it is difficult to see how costs may be contained to maintain a minimum cost imposition flowing through to the Australian building industry. In a similar Scheme operating in the NZ concrete industry, the operation costs are $150,000 for a scheme covering 200 individual concrete manufacturing plants. In Australia, there are 1300 concrete plants, meaning a benchmarked operational cost of over $1,000,000, along with difficulties in recruiting a large number of subject matter experts able to offer an overview of compliance.

Significant additional resources dedicated to the product scheme would certainly be required.

CCAA contends that the supply and manufacture of premixed concrete already meets the intended objectives of the proposed scheme. Any further conformity requirements imposed by the scheme remain unclear and are only likely to add additional cost, complexity and possibly be anti-competitive in nature.

CCAA will continue to engage in the development process in an effort to have these issues clarified and to contribute the Australian concrete industry experience and expertise over a long history of product compliance.

Responses to Questions

Throughout the discussion paper are a number of questions posed by the ABCB in determining commentary and support for various aspects of the model.

1. What is the level of your support for the proposed Scheme?

CCAA, and the Australian concrete industry, has a long history of support for quality assurance and compliance with Australian standards and, by inference, with the National Construction Code. It has encouraged methods by which product performance is communicated, giving surety in the compliance of its members' products with relevant Codes and Standards.

While this discussion paper proposes an outline model, CCAA would like to see more detail before a full determination of the proposal can be made. CCAA remains willing to engage with the ABCB, and others, in developing a suitable mechanism to fulfil the requirements outlined in the direction from the Building Ministers Meeting. However, we believe the current rigour embedded in the manufacture and supply of premixed concrete well exceeds the minimum suggested requirements of the proposed scheme.

2. What other options or changes do you propose on the intent of the Scheme and why?

The Discussion paper shows the intent to adopt a risk-based approach to NCC conformance, but with little detail on the mechanics of how this will be reflected in the operation of the proposed Scheme. CCAA is very familiar with the operation of product auditing and compliance through the operation of certified laboratories over a number of years, and the required overview and third-party inspection of both the product and the testing regimes. The proposal does not detail how this similar level of compliance (and confidence) will be achieved. Similarly, it does not explain the apportionment of liability if a product registered under the Scheme does, indeed, fail. CCAA submits that the overview and operation of a risk-based system is equally important as the understanding of the manufacture, testing and in-situ performance of these products.

3. Do you agree with all the principles for the intent of the Scheme?

CCAA agrees with the principles for the intent of Scheme.

However, CCAA remains willing to discuss how these principles may be fully realised, without the construction of an excessive bureaucracy to establish and maintain the operation of the Scheme, leading to large increases in costs for building products.

4. What other options or changes do you propose for the intent of the Scheme and why?

None are proposed at this stage.

5. Do you agree with the minimum information principle for better building information?

CCAA supports the communication of product building information according to the principle described in Section 2.1.1.

6. What other options or changes do you propose to the minimum information and why?

None are proposed at this stage.

7. Should full test results be accessible and if not, why?

Certification of compliance to relevant Australian Standards should be the minimum requirement. These results should be publicly available and accessible, with historical results held in a similar form.

CCAA contests that this information is already available, transparent and verifiable to meet existing code and standards requirements for the supply of pre-mixed concrete.

8. Do you agree with all the principles for a risk-based approach to demonstrating NCC conformance?

CCAA agrees with the principles as described in Section 3.1.1. of the discussion paper. However, it requires more detail on the implementation of a risk-based approach to demonstrating NCC conformance before it can make a full determination on the proposed model.

With specific reference to non-combustibility treatment within the NCC, CCAA advises that through its long history of service and testing. concrete has been found to be non-combustible, In order to prevent confusion and the inadvertent requirement for costly project testing, CCAA would recommend that the non-combustibility of the product be explicitly outlined in the Standards and Codes conformance section.

9. What other options or changes do you propose to a risk-based approach to demonstrating NCC conformance and why?

No other options or changes are proposed at this time due to the lack of detail given in the discussion paper. CCAA remains willing to engage with the ABCB, and others, in demonstrating that the existing manufacturing requirements satisfy a suitable risk-based approach to demonstrating conformance to the NCC.

10. Do you view modern methods of construction and complex offsite/modular products as being designated products and if so why/why not'?

In terms of the premixed concrete industry, the construction of offsite/modular products have been in accordance with relevant Australian standards for the precast industry specifically AS 3600-2018 Concrete Structures and AS 3850-2003 Tilt-up concrete construction. Both these documents outline the reporting requirements for materials utilised in projects utilising these products, as well as means of demonstrating compliance. If these products are viewed as 'designated' by the ABCB, then the existing processes for assessing compliance should be examined and accepted as part of the proposed Scheme.

11. Would you prefer:

a. a stringent test for registration (e.g. lab tests) accompanied with mandatory acceptance at building certification stage, or
b. a medium assessment standard accompanied by a 'preferred' status at building certification stage,
c. and why?

CCAA supports option (a) *a stringent test for registration (e.g. lab tests) accompanied with mandatory acceptance at building certification* stage as has been the long-term practice in the concrete industry. Informed decisions can be made on the application of products at the building certification stage, with the subsequent auditing and inspection used as a confirmatory step in maintaining compliance.

12. Would you prefer:

a. a robust, and potentially more expensive, evidentiary stage at registration, followed by less frequent and lower cost audits, or
b. a lower cost registration, followed by a more robust, and a potentially more costly, cost-recovered audit program (meaning the cost of the audit is paid for by the product sponsor),
c. and why?

CCAA supports option (a) *a robust, and potentially more expensive, evidentiary stage at registration, followed by less frequent and lower cost audits*, as a full exposition of compliance should be undertaken prior to acceptance of any building product into the Scheme. Any subsequent audits will then be to ensure that the requirements are still being met, which could be achieved by lower cost audits.

13. Do you agree with all the principles for transparency and information sharing?

CCAA agrees with the principles for transparency and information sharing, as Australian premixed concrete industry has been a leader in the transparent communication of product performance and compliance information.

14. What other options or changes do you propose to transparency and information sharing and why?

None are proposed.

15. Do you agree with all the principles for scheme operation and sustainability?

CCAA agrees with the principles for Scheme operation and sustainability but would require further detail to better understand what is proposed to ensure existing manufacture and supply requirements meet this.

16. What options or changes do you propose for scheme operation and sustainability and why?

None are proposed at this stage.

17. Any other comments?

CCAA is seeking further consultation to elicit more detail of the proposed model for the Scheme.

For example, the determination of a 'designated product' is a core pillar of the proposed scheme and an area which warrants further consultation and discussion. There is insufficient detail in the Discussion paper to know what the explicit provisions of the definition and governance would be, hence, the need for on-going dialogue, as expressed across this submission.