CEMENT INDUSTRY FEDERATION

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RESPONSE TO

Australia's circular economy: Unlocking the opportunities

Interim report

11 April 2025

Adelaide Brighton Ltd

BORAL

CEMENT AUSTRALIA

1. INTRODUCTION

The CIF is the national body representing all Australian integrated cement manufacturers and comprises the three major Australian cement producers - Adelaide Brighton Ltd, Boral Cement Ltd and Cement Australia Pty Ltd.

Together these companies account for 100 per cent of integrated clinker, cement and production in Australia. Cement is the key ingredient in concrete, which is a critical input for Australia's residential and commercial construction industry, as well as for our major infrastructure projects.

This submission provides comment on relevant reform directions as listed in the March 2025 consultation paper and covers issues relevant to the Australian integrated cement manufacturing industry.

Further detail regarding specifics of the Australian cement industry can be found in our initial submission and at www.cement.org.au.

2. REFORM DIRECTION 4.1: Enabling for purpose use of recycled materials in public projects

Prescriptive versus performance-based standards

A shift to performance-based standards has the potential to provide cement manufacturers with an opportunity to fully investigate the potential for emissions reductions through clinker substitution, while demonstrating that the final products are fit for purpose and meet the performance requirements.

The Australian cement industry has worked proactively to reduce its carbon dioxide equivalent emissions by over 25 per cent since 1990. This has been achieved by actively pursuing reduction opportunities associated with thermal and indirect emissions. However, process emissions resulting from the chemical reaction that changes limestone into clinker are currently unavoidable without step-change technologies such as carbon capture, utilisation and or storage (CCUS).

The most used cement type in Australia is General Purpose cement (Type GP) is made up of Portland cement clinker (~90%) mixed with gypsum (~5%) and other allowable mineral additions (max 7.5%). Mineral additions substitute for emissions-intensive clinker and can include naturally occurring limestone or industrial byproducts such as fly ash from coal-fired power generation or ground, granulated blast furnace slag (slag) from the steel industry.

A reduction in clinker content to produce a lower carbon Type GP cement can be obtained by increasing the maximum mineral addition (limestone content) from 7.5 per cent to at least 10 per cent. This is currently being considered as part of a review of the Australian cement standard - AS 3972 – and will require the support of all stakeholders.

Additionally, potential modifications have been proposed for Type GL (General limestone cement) in AS 3972 to change the limestone content from 8 to 20 per cent to 10 to 15 per cent (max) and to change the compressive strength performance of Type GL to be equivalent to Type GP. This would enable GL Cement to be interchangeable with Type GP Cement as it will meet the same performance requirements.

In general, a move away from prescription-based standards towards more performance-based standards would allow cement manufacturers more flexibility in adopting more innovative and lower carbon cement products.

Other Codes and Specifications, such as those used by infrastructure authorities as well as state and local governments, should also be reviewed and updated along the same lines.

3. REFORM DIRECTION 4.2: Coordination mechanisms to enhance the benefits of sustainable procurement policies

Public procurement can play a key leadership role in terms of sustainable procurement policies given public investment provides a major part of infrastructure spending and the fact that State and Territory regulator standards will continue to determine how the majority of cement and concrete is specified.

Introducing or expanding government-led coordination initiatives to support sustainable public procurement policies in different jurisdictions is supported, both in terms of recycled materials as well as low carbon building materials such as cement and concrete.

Simply producing low carbon cement and concretes will not be sufficient if there is little demand for the products. There will need to be a transition from product push to market pull, which would be supported a coordinated approach to sustainable procurement across all Australian jurisdictions.

Efforts in this area would be supported by a move away from prescriptive-based standards as discussed above and the increased use of existing and development of new supplementary cementitious materials.

4. REFORM DIRECTION 10.1: Governance arrangements to harmonise regulations that pose barriers to circularity

Harmonisation of inconsistent regulations, standards and specifications across states and territories is of particular importance to cement manufacturers and the critical material inputs they produce for the built environment – including cement, concrete, and supplementary cementitious materials.

The CIF has been a long-term advocate for policy harmonisation across Australian jurisdictions for a wide range of policies and associated regulations, measures and specifications – many of which include a climate, energy and/or an environmental component.

The idea of improving coordination mechanisms that exist between government environment portfolios is supported, with an oversight/coordination role for the Australian Government seen as a key element. To be effective, a clear mission statement should be developed and agreed to by all jurisdictions from the outset, as well as a commitment to real action over a specified timeframe.

This could, with the right levels of commitment, be achieved through a modification of existing coordination mechanisms or through a new interjurisdictional body. However, a commitment to form a new interjurisdictional body could serve as a model for identifying and addressing other harmonisation opportunities.

Such a model could involve targeting a defined set of regulations in the first instance where the issues are relatively well known and include opportunities for input from all stakeholders to ensure a robust determination can be made.

Of key importance will be the inclusion of a protocol early in the process to determine the level of harmonisation that can be achieved and whether there are specific reasons as to why differences exist in between jurisdictions (e.g. differences in climatic conditions).

Specific areas that could benefit from harmonisation include, *inter alia*, climate policy (targets, measures, reporting), standards, codes and specifications (supply of and demand for lower carbon products aka clinker substitution), waste classifications/definitions, waste management hierarchy, environmental licensing and approval processes (more aligned and consistent, remove duplication).

Many if not all of the above-mentioned areas interact/overlap with circularity to some extent. Not only does this highlight the scale of the problem to be solved, but it also shows the scale of the potential benefits if this is implemented effectively.

5. REFORM DIRECTION 10.3: Supporting greater adoption and diffusion of circular innovations

The availability and access to targeted government programs and grants to-date in the climate policy (emissions reduction) space has been welcomed by our sector given that cement manufacturing is one of the hardest to abate sectors. A similar approach would be supported from a circularity perspective to encourage innovation within the sector and across supply chains.

Grants, then dollar matching are the preferred funding models in the first instance based on industry experience. Accelerated depreciation measures that reduce the payback period could also be investigated.

The CIF and our members have had experience in dealing with consultants and researchers in a direct capacity, as well as through the Cooperative Research Centre model (e.g. the Heavy Industry Low carbon Transition CRC, SmartCrete CRC).

Direct engagement with consultants and researchers by individual companies to address specific facility/company level issues is a common approach typically supported by strong company engagement with appropriate research institutes.

Direct engagement coordinated, for example, through an industry association such as the CIF works well for specific, well-defined issues that are common across the membership.

Engagement through innovation centres such as the CRC model, which typically prefer individual companies to sign on and commit funds and in-kind support, offers the potential to leverage significant funding and access to dedicated researchers. Results are typically positive but can vary depending on the remit, management, operation and commitment of all interested parties involved in the CRC.

<u>Improving investor confidence in circular opportunities (Information Request 10.4)</u>

Will the proposed Australian sustainable finance taxonomy and enhanced ESG reporting provide sufficient information for investors to make informed decisions about circular economy projects? Or are further initiatives, required to improve investor confidence in the circular economy?

The CIF supports the introduction of standardised, internationally aligned reporting requirements for climate-related financial disclosures – as represented by current legislation to enact Australia's mandatory climate-related financial disclosure regime – subject to recognition of the increasingly burdensome reporting and regulatory regime and commitments to streamline wherever possible.

It is also recommended that any proposed consideration of extending reporting requirements to other areas, such as circularity, allows enough time for the existing arrangements (including costs and benefits) to be assessed, and that extensive consultation is conducted to inform any such considerations.

This would also be informed by similar programs and experiences in similar jurisdictions around the world.

In terms of the existing requirements, it is clear that there will be initial adjustment and learning period as the reporting requirements are phased in across the economy, with an initial focus on larger organisations and those that are already reporting via the National Greenhouse and Energy Reporting (NGER) scheme.

The initial consultation estimated that initial transition costs could be in the order of $1.3m per year per entity with ongoing costs of around $700,000 per entity. These costs are not insignificant and must be considered in any proposed extension of the reporting requirements to inform other potential metrics such as circularity.

6. REFORM DIRECTION 10.4; Government support for placed-based circular initiatives

The Australian cement value chain is uniquely placed in terms of leveraging circularity opportunities given the nature of the operations ranging from mining, manufacturing, energy, materials and minerals, supplying the built environment and associated by-product and waste streams.

Many of these areas provide opportunities for the consideration of place-based circular initiatives, such as through the use of **alternative raw materials** (e.g. industrial waste rejections, granulated blast furnace

slag, steel slag, cement fibre board, fly ash, as well as fine aggregate from recycled concrete) to reduce the total volume of mined material (limestone) as a raw input into the process.

Another example is the increased use of **alternative fuels** to replace fossil fuels such as coal and gas that currently generate the very high temperatures (~1,450^{o}C) required for cement manufacture, which include *inter alia* demolition wood waste, used solvents and oils, spend pot liner (from aluminium production), end of life tyres and refuse derived fuels.

Consideration of placed-based circular initiatives should also consider related issues and potential barriers such as:

- waste definitions
- the waste hierarchy
- availability
- regulatory limitations
- community engagement and awareness
- investment requirements for on-site storage and handling systems
- transport.

Regulatory processes, both at federal and state level, often add to the complexity and timeliness of projects. As such, governments should consider reforms to ensure regulatory processes are streamlined (including timeliness) more aligned and more consistent – both in terms of circularity and other related policies areas.