

10 November 2022

Mr Tony Chappel
CEO
NSW Environment Protection Authority
Locked Bag 5022
PARRAMATTA NSW 2124

Email: climatechange.review@epa.nsw.gov.au

Dear Mr Chappel

Draft Climate Change Policy and Action Plan

Thank you for the opportunity to comment upon the NSW Environmental Protection Authority's (EPA) Draft Climate Change Policy and Action Plan.

Cement Concrete & Aggregates Australia (CCAA) is the peak industry body for the cement, pre-mixed concrete and quarrying industry in Australia. Our members are engaged in the quarrying of sand, stone and gravel, the manufacture and distribution of cement and the supply of pre-mixed concrete to meet New South Wales's building and construction needs. These businesses range from large global companies to SMEs and family operated businesses.

Cement, concrete, stone and sand are the critical materials that enables the \$56 Billion New South Wales construction industry, employing 370,000 workers and contributing 45% of the New South Wales taxation revenue base. CCAA notes that the COVID-19 pandemic has had a significant impact upon the state economy and we believe that the construction sector, supported by an efficient heavy construction materials supply chain is playing a pivotal role to deliver an economic rebound.

Our industry is committed to the protection and improvement of environment and minimising the impacts of our operations and products. You may be aware that last year, the Cement & Concrete industry publicly declared its [ambition to deliver net zero carbon cement and concrete](#)¹ to Australian society by 2050.

Our sector's Climate Ambition Statement makes the following key points:

- **Australia's Cement and Concrete Industries recognise the challenges of climate change and adaptation;**
- **Our industries hold an ambition to reduce their CO₂ footprint and deliver society with Net Zero Carbon Concrete by 2050; and**
- **We are committed to work across the value chain to deliver this in a circular economy, whole-of-life context to support a sustainable built environment.**

¹ [Cement and Concrete Industry Ambition for Net Zero by 2050](#)

In support of this ambition, our sector has identified and embraced [the key pathways to achieving this ambition by 2050](#).

An independent report developed by respected international research institution, VDZ, entitled– *Decarbonisation Pathways for the Australian Cement and Concrete Sector*¹ details the opportunity and pathways to decarbonisation of cement and concrete by 2050. Achieving these significant objectives will require changes to policy settings, material technology and design practices which can only be achieved through government and industry collaboration across the construction supply chain. CCAA notes that **New Action 2(a)** (of the EPA Climate Change Action Plan 2022-25), calls for the focus of regulatory efforts by first seeking to understand the climate change actions that are already being taken and we believe that this report clearly sets out these actions and objectives.

We understand the critical role that the EPA plays in NSW to protect the environment from the threat of climate change, its response to the severe weather impacts and its actions to support industry and the community to meet the NSW Government’s Net Zero commitments. CCAA further notes the EPA’s intention to implement a “staged approach” that ensures that climate change actions will be progressive and iterative, therefore enabling license holders to adjust and adapt their operations and practices in time through informed decision making and actions based upon relative and factual data points.

Feasible, evidence-based emission reduction targets with subsequent guidance on how these targets can be achieved, as highlighted in **New Action 7**, must become standard regulatory practice as part of the collaboration process with our sector and we encourage the EPA to consult with our industry and draw upon the research undertaken and contained within the VDZ report.

Consistent Approach Across Government to achieving Net Zero

Decarbonisation of an industry that is emissions intensive and trade exposed and has a significant national footprint requires a high degree of coordination and cooperation between all levels of government and industry.

The overlap of carbon reduction targets imposed by Federal Governments, State Governments and State Government Agencies can present a confusing and potentially conflicting regulatory landscape that can be difficult and costly for industry to navigate. It is vital that a coordinated national approach to decarbonisation is adopted to provide certainty for investment and which maintains the competitiveness of Australian manufacturing and jobs during the transition.

We strongly recommend that the EPA ensures that its approach to regulating emissions aligns with the Commonwealth Government Climate Policy to avoid any unnecessary duplication or regulatory burdens across our sector.

We note that **New Action 9** seeks to ensure that any emission limits or license requirements complement the NSW Government’s NSW Net Zero Plan and any actions taken by the

¹ [VDZ – Decarbonisation Pathways for the Australian Cement and Concrete Sector](#)

Commonwealth (such as the SafeGuard Mechanism) as well as adopting a future-proof approach to cater for new policies and initiatives.

Consistency in reporting of mitigation actions and adaptation plans for licensees is also an important step for the EPA and our members. As per **New Action 2(b)**, we do not need any duplication or overlap with the Commonwealth or differences in approach from state to state. To achieve Net Zero by 2050, there must be alignment and agreement with industry, rather than a cumbersome and time-consuming regulatory approach.

Support for the NSW Circular Economy

This year, CCAA has already put forward a number of submissions to the NSW Government on environmental, climate change and circular economy matters such as the Resource Recovery Framework, the NSW Clean Air Strategy, Draft POEO (Clean Air) Regulation 2022, Draft POEO (General) Regulation 2022, the Biodiversity Conservation Fund and the Transport for NSW (TfNSW) Sustainable Procurement initiative. On the latter, we continue to work quite closely with TfNSW on a range of initiatives to identify and manage potential roadblocks, such as prescriptive specifications.

The Australian cement and concrete sector have a long history of reducing its CO₂ emissions having delivered a 25 per cent reduction since 2000. Our sector understands the challenge of decarbonising by 2050 which requires cement and concrete customers, developers, designers, building material procurers, architects, standards authorities, government and non-government agencies, and concrete and cement manufacturers to work together more closely than ever before.

Importantly, the heavy construction material industry will continue to be a key link in the circular economy given its ongoing role in applying circular economy and industrial ecology principals across the sector for decades and we maintain six priorities to improve our sector contribution:

- 1. Maximise use of waste materials** to replace fossil fuels
- 2. Transition to renewable energy sources** such as hydrogen
- 3. Develop lower carbon cement and concrete** and work to develop new product standards
- 4. Embrace new technologies and innovations** such as new types of cements and concretes
- 5. Advocate for supportive government legislation and policy** to support sustainable materials
- 6. Understand the whole of life benefits of concrete** and ensuring a just economic transition

Like all products, concrete has environmental impacts arising from the acquisition of raw materials, processing, transport and recycling at the end of its life. However, these are significantly outweighed by the environmental, social and economic benefits that concrete delivers, such as:

- a high quality and affordable product that delivers high-quality low-cost structures;
- buildings which are long lasting, have very low maintenance requirements and can be life extended;
- being 100 per cent recyclable, and at the end of its service life, it can be reprocessed and reused in roads and other private and public infrastructure;
- low environmental impacts which reduce the overall environmental impact of a structure;

- concrete buildings provide improved indoor air quality as they do not require the use of finishes such as carpets on floors or paints/sealants on walls;
- thermal mass which increases the energy efficiency of buildings;
- not giving off harmful fumes or gases; and
- being non-combustible and having excellent fire resistance.

Here in New South Wales, our sector supports the resource recovery framework utilising the by-products of other industries through various secondary materials and waste products which include:

- **Alternative Fuels:** Alternative fuels are sourced from the by-products of other manufacturing processes, or from end-of-life products with Australian cement manufacturing plants using an average of 15% alternative refuse derived fuels in clinker manufacture; including the use of waste tyres, oils, wood waste, as well as spent cell liners from aluminium production;
- **Supplementary Cementitious Materials (SCMs):** A significant proportion of concrete produced today contains SCMs which allow for the reduction of Portland cement in concrete, with the three main types used in Australia being blast-furnace slag (slag), fly ash and amorphous silica. CCAA is partnering with Transport for NSW (TfNSW) through Smartcrete CRC on a project to evaluate the greater use of supplementary cementitious materials (SCMs) in concrete to reduce embodied carbon;
- **Manufactured Sand:** Manufactured sand is a purpose-made crushed fine aggregate, which is made from material that was previously considered a quarry waste. Once processed, the material can reduce the amount of natural sand required, while still meeting the highest quality concrete specifications;
- **Recycled Aggregates:** Recycled concrete aggregates are used in fit for purpose end uses such as road base and fill, low strength concretes, and, to a limited extent, some structural-grade concrete. Positive benefits include the amount of material going to land fill is reduced, though consideration is given to the cost of recovery and processing; additional quality control; as well as design and construction adjustments;
- **Water Management:** Water storage reservoirs at many quarries allow water to be reused for dust washing and suppression. Similarly, rainwater is harvested from water tanks at many of our cement facilities and concrete batching plants and then redistributed for use in other parts of the operations; and
- **Concrete By-Products:** Quarries utilise returned concrete waste for recycled quarry products, thus preserving primary resources

We deliver the following products to support the Resource Recovery Framework across NSW:

- **Lower Carbon Concrete:** Introduced lower carbon products which allow less cement to be used in the concrete manufacturing process;

- **Recycled Material Usage:** Growing the range of recycled materials for use in products such as crushed glass and recycling operations that focus on products from construction and excavation waste materials;
- **Environmental Product Declarations:** Environmental Product Declarations (EPDs) are independently verified documents that provide data and environmental information about the life-cycle environmental impact of a product and encourage concrete manufacturers to consider a multitude of ways in which they can minimise the embedded carbon;
- **Improved Design Processes:** The Design for Manufacturing and Assembly (DfMA) process reduces waste through factory-controlled quality processes for “precast” concrete products. With the Design for Disassembly (DfD), concrete structures can be disassembled, reused and repurposed;
- **Better Supply Chain Integration:** To improve efficiencies in the transportation and emissions of the supply of construction materials across the building and supply chain;
- **Energy Offsets:** Companies are offsetting emissions through the purchase of low or zero carbon electricity generation &/or installation of solar panels; and
- **Waste Innovation:** Developing the use of new products that were previously considered waste. For example, bottom ash from Waste to Energy plants as a new aggregate and Alumino silicate from lithium production for use as a supplementary cementitious material.

Encouragement and support for industry to innovate

To deliver emissions reductions and support decarbonisation, we call upon the EPA, and all other arms of the NSW Government, to remove roadblocks to the use of, and positively incentivise, the development and adoption of new lower carbon cement and concrete products.

The inconsistent approach to waste regulation across various jurisdictions, complex approval processes, excessive red and green tape, restrictive specifications, and barriers to the use of new waste streams can make positive industry ambitions difficult to achieve.

While we acknowledge the role of the EPA to address the impacts of climate change through its regulatory activities, we again make the point that Net Zero by 2050 can only be achieved through full collaboration and partnership throughout the construction supply chain. As per **New Action 1**, this includes EPA officers ensuring that a careful review of whole of life carbon impacts across the supply chain is undertaken, rather than proposing sector wide targets or site-specific, facility-based regulatory action or outcomes.

Finally, as noted earlier, the cement industry in Australia is highly competitive, emissions intensive and trade exposed. Regulation, unevenly or inequitably applied, can cause significant distortions in the market that may have unintended adverse consequences. It should be noted that imported

cements already play a significant role in our sector and if only domestically produced products are subject to emissions regulation it may create the perverse outcome of replacement of domestically produced cements with imported products of potentially higher carbon emissions.

It is imperative that the EPA understands the impacts of regulatory burdens on industry become insurmountable. There is the real risk that well intended regulatory actions may lead to an unintended outcome where it would be simpler or more cost-effective for some materials to be imported from outside of Australia, rather than produced locally.

Thank you again for the opportunity to comment upon the upon the Draft Climate Change Policy and Action Plan. Given the critical role of the heavy construction materials sector plays in the NSW economy and our key link in the circular economy, we are very keen to do our part to ensure that NSW can achieve its Net Zero objectives by 2050.

We would appreciate the opportunity to further discuss our submission. Accordingly, please contact Andrew Jefferies, National Policy Manager at andrew.jefferies@ccaa.com.au or phone 02 9667 8325 or Jason Kuchel, State Director NSW & SA at jason.kuchel@ccaa.com.au or phone 0448 848 848.

Yours sincerely,



**KEN SLATTERY
CHIEF EXECUTIVE OFFICER
CEMENT CONCRETE & AGGREGATES AUSTRALIA**