

Infrastructure Victoria  
Level 33  
140 William Street  
Melbourne, Victoria 3000  
Via online submission at Engage Victoria [here](#)

## Victoria's Draft 30-Year Infrastructure Strategy

Cement Concrete and Aggregates Australia (**CCAA**) welcomes the opportunity to respond to Infrastructure Victoria's Draft 30 year infrastructure strategy (**the Draft Strategy**).

### Background

CCAA is the voice of the heavy construction materials industry in Australia.

Our members operate cement manufacturing and distribution facilities, concrete batching plants, hard rock quarries and sand and gravel extraction operations throughout the nation. CCAA membership produce the majority of Australia's cement, concrete and aggregates, and ranges from large global companies to SMEs and family operated businesses.

It generates approximately \$15 billion in annual revenues and employs approximately 30,000 Australians directly and a further 80,000 indirectly. The Heavy Construction Materials Industry is vital to the nation's building and construction industries and underpins the development of Australia's physical infrastructure.

Australian cement, lime, concrete and aggregate producers form part of a critical manufacturing industry of national importance, especially given the need for sovereign capability to support Australia's infrastructure (such as roads, bridges, water supply structures, medical facilities, defence structures, housing and commercial buildings) and as part of the overall transition to net zero.

### Key Recommendations and Concerns

#### 1. Urban Development and Quarry Protection

- Support rezoning for housing but stress the need for industrial land protection.
- Advocate for Strategic Extractive Resource Areas (SERAs) to secure quarry materials.
- Call for buffer zones to prevent residential encroachment on industrial operations.

#### 2. Sustainability and Circular Economy

- Support performance-based standards over prescriptive material requirements to encourage low-carbon materials.
- Recommend adopting national measurement standards for carbon emissions and reviewing Australian cement standards (AS 3972-2010) to promote low carbon materials.
- Suggest regulatory changes to increase concrete recycling and facilitate a circular economy.

### 3. Resilient Infrastructure

- Highlight concrete's durability against bushfires, floods, and extreme weather.
- Advocate for using concrete in disaster-prone regions to reduce post-disaster reconstruction costs. Resilient Infrastructure
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### 4. Infrastructure Planning and Heavy Materials Supply

- Call for a Heavy Construction Materials Plan to streamline approvals, protect quarry sites, and improve material supply chains.
- Increased transport costs and emissions due to quarries moving further from urban centres.

### 5. Road Funding and Freight Efficiency


- Support federal collaboration to redesign road funding models after the High Court ruling on EV road charges.
- Recommend expanded off-peak freight deliveries and relaxed operating hour restrictions for materials supply.

CCAA urges Infrastructure Victoria to adopt these recommendations to ensure a sustainable, cost-effective, and resilient infrastructure future.

More detail against relevant recommendations made in the Draft Strategy is provided in Appendix 1.

To discuss this further, please contact Roger Buckley, State Director, Victoria and Tasmania

Yours sincerely



**MICHAEL KILGARIFF**  
Chief Executive Officer

## APPENDIX 1

### DETAILED COMMENTS AGAINST KEY DRAFT STRATEGY RECOMMENDATIONS

#### **Draft Recommendation 7 - Rezone locations near existing infrastructure for more homes.**

Extreme care must be taken when implementing a recommendation such as this.

If the Government is to meet the target to build 800,000 homes in the next decade as set out in [Victoria's Housing Statement](#), it is imperative that the entire cement and concrete supply chain can efficiently operate to meet this demand.

This will require concrete batching plants to operate near to the places where infrastructure will be built.

They are typically located on what are called industrial lands, recognised in instruments such as the [Melbourne Industrial and Commercial Land Use Plan](#).

CCAA members have experienced circumstances where residential amenity concerns conflict with the ordinary operational needs of a plant, leading to inefficiencies and in isolated circumstances a need to relocate.

The quarry sector also plays a key role in the state's economic development, infrastructure boom and the construction of 800,000 new homes by 2034. Demand for quarry resources in Victoria is expected to increase significantly through to 2050.

To keep transport and construction costs down, the Victorian Government has developed Strategic Extractive Resource Areas (SERAs). SERAs work to ensure that quarry materials are sourced close to where they will be used for construction. They are a key part of delivering the [Helping Victoria Grow: Extractive Resources Strategy](#) and [Plan for Victoria](#).

By using planning controls to secure quarry materials close to market, SERAs will help communities better understand where quarries might be in the future, taking into account neighbouring developments, environmental and community aspects as well as cultural heritage.

SERAs also help better identify existing and potential quarry sites so they are more clearly considered in the assessment of local development, which will help to protect the affordable supply of quarry materials into the future.

CCAA strongly suggests that the commentary supporting the proposed Recommendation 7 will need to consider buffers to limit encroachment by incompatible land uses into industrial zoned areas. This will ensure the efficient operation of manufacturing plants, warehousing and transportation hubs and quarrying sites necessary to support the Victorian economy.

Where applications are made for developments which encroach upon existing quarry and concrete plant operations, the onus must be on the proponent/developer to demonstrate that blasting, noise and other emission levels will not be exceeded at the development site. This *agent of change principle* is essential to help protect industrial land uses and activities. The costs in demonstrating this must be borne by the proponent.

More generally, the final strategy should reflect more directly the important role infrastructure operating in industrial zones plays in providing services and employment to all Victorians, with the final strategy needing to recognise the continued need for instruments such as [Principal Freight Network](#) to protect against encroachment on vital production.

These issues illustrate why instruments such as a whole-of -Government Heavy Construction Materials Plan are required as discussed on Page 7.

### **Recommendation 38 – Prepare for more recycling and waste infrastructure**

### **Recommendation 24: Reduce greenhouse emissions from infrastructure**

These recommendations deal with issues relating to achieving a circular economy with net zero emissions.

CCAA agrees with the observation on page 83 of the Draft Strategy that Victoria must calculate carbon values that will meet the jurisdictions' target of net zero emissions by 2045 and recommends that, to reduce industry compliance costs and promote national consistency, the final strategy should recommend Victoria adopt measurement standards that have been nationally endorsed.

That would mean, for example, endorsing the [Embodied Carbon Measurement for Infrastructure: Technical Guidance](#) approved by the Infrastructure and Transport Minister's meeting on 7 June 2024.

CCAA particularly agrees with the observation contained on page 84 of the Draft Strategy that:

*When it does build, the government should use more low carbon and recycled materials. These are not used widely, making them more expensive. Government procurement practices can discourage low carbon options because they specify using certain designs and materials instead of performance outcomes.*

*The government should work with industry to fast-track low-carbon materials. It should update standards and specifications to reflect required performance.*

It also notes that on 29 November 2024, Commonwealth, state and territory treasurers signed a landmark agreement to revitalise National Competition Policy to implement pro-competitive reforms including commercial land use and planning reforms and reforms to level the playing field for modern methods of construction to drive down housing costs.<sup>1</sup>

Given this context, CCAA advocates for a shift from prescriptive to performance-based infrastructure specifications to enable innovation and maximise resource utilisation.

Overly prescriptive specifications and restrictive material requirements are creating barriers to industry innovation and contribute to the increasing cost of infrastructure.

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<sup>1</sup> <https://ministers.treasury.gov.au/ministers/jim-chalmers-2022/media-releases/national-agreement-revitalise-competition-consumers#:~:text=Commonwealth%2C%20state%20and%20territory%20treasurers%20have%20to%20day%20signed,a%2010%E2%80%91year%20reform%20of%20National%20Competition%20Policy%20%28NCP%29.>

That means the Draft Strategy should recommend Victoria lead the process of reviewing relevant Australian Standards, so that they have the flexibility to capture improvements in processes without comprising safety or construction outcomes.

One such Standard that should be reviewed as a matter of priority is AS 3972-2010 *General Purpose and Blended Cements*. In the context of moving towards performance-based specifications and away from prescription, the minimum amounts of Portland cement required by the standard should be reviewed to promote the greater uptake of higher limestone additions and other supplementary cementitious materials (SCM) such as Fly Ash and Blast Furnace Slag and so facilitate the adoption of new, lower-carbon cement types. When fully utilised, the change would save 10% of the embodied carbon in concrete and so strongly support the Government's Net Zero objectives.

The final strategy should recommend this standard be reviewed as a priority.

CCAA also agrees with the observation made on page 125 that more recycling facilities for (amongst other things) concrete as part of the discussion of encouraging the circular economy. All quarries should be given the ability to recycle concrete as part on an ancillary use. This was previously available in Victoria. However, the EPA changed the regulations so that quarries now require an EPA large site permit in order to process clean concrete. This is an expensive and time consuming process to obtain the permit and is discouraging recycling activity.

The final strategy should recommend:

- Performance-based specifications for road infrastructure to increase demand for recycled and alternative materials, reducing reliance on prescriptive standards.
- A review of Victorian regulations with a view of removing regulatory barriers, such as additional consents, that prevent the re-processing of concrete waste by quarries.
- The adoption of a recovered materials framework such as the Queensland End of Waste Codes<sup>2</sup>, including priority materials such as construction and demolition waste, fly ash, lithium byproduct and incinerator bottom ash aggregate and so facilitate the development of a circular economy.
- Revising building standards and approval processes to accommodate recycled and alternative materials, and enabling the increased use of innovative, low-carbon materials such as supplementary cementitious materials (SCMs).
- Government grant scheme to facilitate the wider market take up of Green Cement & Concrete. Such a scheme could focus on helping to overcome the investment hurdle for new infrastructure that companies need to build to help deliver low carbon cement & concrete to the market. It would not include R&D which is largely covered by existing tax credits and CRCs. Such schemes for new infrastructure (plant, processing equipment, renewable energy, batteries installed on site, etc) for the recycling, waste and other industries have been quite successful in the past and could equally apply to invigorating the low carbon cement and concrete sector.

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<sup>2</sup> <https://www.business.qld.gov.au/running-business/environment/waste-management/regulated-waste/eow-codes>

## Recommendation 27 - Better prepare infrastructure for climate change

Recognise the benefits of concrete in delivering resilient infrastructure.

Concrete stands strong in the face of disaster, it doesn't burn<sup>3</sup>, is resistant to bushfires<sup>4</sup> and is weather-resilient<sup>5</sup>. This is vital for sustainable buildings and infrastructure in Australia.

Natural disasters are becoming increasingly common, and building for resilience to flooding, bushfires and high wind events is vital for economic, social and environmental sustainability.

Resilient homes and infrastructure are often made from concrete as its natural strength and durability makes it more able to survive disasters. Designing and constructing for disaster resilience helps reduce the need (and therefore cost and speed) of post-disaster reconstruction<sup>6</sup>. In this way, demand for raw materials in reconstruction is lowered, as is the product of demolition waste, both of which lower potential greenhouse gas emissions. Concrete's resilience then also supports the recovery of communities, as businesses can return to operation and occupants to housing more quickly.

### *Wind*

Storm events, cyclones, blizzards in alpine regions and other high wind events have devastating impacts on buildings and their occupants. Concrete is more resistant to high winds and to damage/penetration by wind-borne objects. Indeed, many concrete buildings, such as schools and hospitals have become safe room shelters in storm events. Moreover, according to MIT researchers, concrete-engineered building in coastal regions shows cost savings when hazard costs are incorporated into evaluations with affected communities spending less energy and fewer resources on emergency response, reconstruction, repair and recovery<sup>7</sup>.

### *Floods*

Floods exert huge pressure on buildings, while debris carried by floodwaters - as well as the dynamic forces of the water itself - place additional strain on structures. The rigid nature of concrete and its high density, enables it to endure high water pressures. Concrete buildings therefore often survive flooding, and as with high wind events, concrete buildings can also provide shelter from flooding.

Case Study: Windsor Bridge, Sydney. When it came time to replace the historic but flood-prone Windsor Bridge, in Sydney's north-west, there was really only one choice in terms of durability and resilience – and that was concrete. Originally built for horse-drawn vehicles and foot traffic in 1874, the Windsor Bridge had reached the end of its life by the early 2000s. Constructing something high enough to completely escape floodwaters wasn't feasible, so the challenge was to construct a replacement concrete bridge that could better cope and rebound from severe flood events.

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<sup>3</sup> Bushfire Resilient Building Guidance for Queensland Homes (2020) Queensland Government and CSIRO - Page 91

<sup>4</sup> Storm Tide Resilient Building Guidance for Queensland Homes (2019) The State of Queensland - Pages 17-19, 22

<sup>5</sup> Flood Resilient Building Guidance for Queensland Homes (2019) The State of Queensland

<sup>6</sup> Come Heat or High Waters, World Disasters Report (2020) International Federation of Red Cross and Red Crescent Societies - Pages 43-55.

<sup>7</sup> Molecular Dynamics-based Resilience Assessment of Structures (2020) MIT CSHub

Although the flood immunity of the new concrete bridge is around the one in three-year flood level (compared to one in two for the old bridge), its real benefit stems from its strength and ability to resist damage that would otherwise result in lengthy and costly repairs.

### *Bushfires*

Bushfires are unfortunately a fact of life in many parts of both rural and urban Australia, and construction materials in at risk areas should be non-combustible and robust. Concrete fulfils this criteria exceptionally well.

### **Recommendation 35 Prepare and publish infrastructure sector plans to shape Victoria's cities**

CCAA agrees with the proposals contained in this recommendation to develop infrastructure sector plans for areas including transport and recycling and resource recovery.

It would therefore recommend developing the concept further and develop a Heavy Construction Materials Plan for Victoria.

This is because an efficient cement and concrete supply chain will provide for the sustainable, reliable, affordable and predictable supply of heavy construction materials to meet the growing needs of the Australian economy.

Such a supply chain is at risk due to:

- A long, slow, complex development approvals process across multiple government agencies for new or extension of existing operations
- Encroachment of state significant quarry resources and key concrete batch plants by incompatible land uses
- Prescriptive standards and specifications acting as barriers to the increased use of innovative materials that will decarbonise the economy
- Port and road access bottlenecks that potentially limit clinker imports and high quality silica sand exports.

It is particularly concerning to industry that quarries are being forced further and further away from high population centres where the aggregates are most needed. This, in turn, increases the transport related carbon emissions in supplying these materials.

The *Infrastructure Australia Market Capacity Report 2023* elaborated on this point:

*Acute quarry shortages loom in a few hotspots across the country. Shortages in local quarry supply threatens the deliverability of major public infrastructure works, increases project costs and schedule delays, and contributes greater emissions by bringing heavy materials to site from further afield via truck or train. Data availability of raw quarry products varies by state and territory, while long quarry approval times (5—10 years) impede efforts to plan supply for demand. While quarries are monitored and managed by state and territory governments predominantly, national regulation and policies across biodiversity and environment, cultural heritage, and net zero requirements, may also contribute to delays in quarry approvals.<sup>8</sup>*

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<sup>8</sup> Page 12 <https://www.infrastructureaustralia.gov.au/publications/2023-infrastructure-market-capacity-report>

Of equal concern is a reduction of sufficient amounts of industrial lands in urban areas to accommodate concrete batch plants near to the construction sites that build the modern urban environment. Operations are continually being encroached on by sensitive land users. All quarries should be able to contain a concrete batch plant as an ancillary use and not require additional lengthy and costly planning approvals to establish them. This was previously the case in Victoria.

The final strategy should recommend a Heavy Construction Material Plan that will (amongst other things):

- Ensure proximate and adequate materials supply for housing, infrastructure and renewable energy projects.
- Protect extractive resources and concrete batch plants from urban encroachment and sterilisation.
- Retain the Quarry Approvals Coordinator concept, to navigate joined up approvals for priority sites and resolve approval roadblocks across State and Local Governments.
- Commit to regular demand: supply data collection and analysis to better understand barriers to increasing supply of material and to better plan for major infrastructure project delivery to ensure efficient and economical delivery into projects.
- Deliver stronger planning protection for strategic extractive resources to give priority to extracting quarry materials.
- Protect key concrete batch plants and quarries from encroachment.
- Enable a streamlined environmental and development approval process.
- Align State and Federal energy and climate change policies to minimise complexity and ensure national targets are met.
- Encourage public procurement practices that reflect government policies on reducing emissions.
- Remove barriers for lower carbon concrete by moving from prescriptive to performance based specifications.
- Support the introduction of lower carbon cement standards.

### **Future option – charge people fairly to use roads**

The Draft Strategy properly raises the issue of how the roads of the future will be funded in the context of the recent *Vanderstock v State of Victoria* High Court case handed down on 18 October 2023<sup>9</sup>.

The case found that charging by jurisdictions of electric vehicles based on distance travelled was unconstitutional, and so precluded the ability for jurisdictions to recover costs for the construction and maintenance of roads from electric vehicle operators as happens in New Zealand.<sup>10</sup>

This poses a threat to state revenue streams as it precludes the ability for jurisdictions to fund the road infrastructure necessary to support all forms of vehicles, be they fossil fuel powered or zero emissions vehicles.

Jurisdictions must now accept that the funding of public roads<sup>11</sup> will now require federal action.

<sup>9</sup> <https://eresources.hcourt.gov.au/downloadPdf/2023/HCA/30>

<sup>10</sup> <https://www.nzta.govt.nz/vehicles/road-user-charges/ruc-for-electric-vehicles/>

<sup>11</sup> Cf. tollways

As the Council of Federal Financial Relations said on 24 May 2024:

The Commonwealth, state and territory treasurers agree that a substantial decrease in state and territory revenue bases is not in the interests of the Australian federation.

The Commonwealth supports states and territories maintaining stable revenue bases for the delivery of essential community services and infrastructure, which benefit all Australians.

The Commonwealth Government is working with the states and territories to ensure they have secure own-source revenue bases and will continue to explore options, including legislative options, to protect state revenue sources.<sup>12</sup>

The final strategy document should recognise this fact and recommend the Victorian Government work urgently with the Australian Government with a view to redesigning funding models to ensure that roads can continue to be constructed and maintained.

#### **Recommendation 42 - Encourage off-peak freight delivery in urban areas**

Night-time freight should be a focus to use urban roads when they are less congested. More support and flexibility on 24-hour operating approval for the materials supply chain, including quarries, concrete batch plants and cement operations should be considered to enable extended hours to deliver materials. This is especially important when the supply chain is required to deliver materials to support a 24-hour infrastructure build.

CCAA notes that the Victorian Planning Provisions were changed in Nov'22 to make the application of temporary extensions to operating hours a simpler process to assist the state with delivering the 2022 flood recovery road repair program in regional Victoria. This needs to be broadened from just flood recovery focused work to support the infrastructure build.

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<sup>12</sup> <https://ministers.treasury.gov.au/ministers/jim-chalmers-2022/media-releases/council-federal-financial-relations-statement>