

6 December 2019

Infrastructure Victoria  
Level 33  
140 William Street  
Melbourne,  
Victoria 3000

Via Infrastructure Victoria website submission page

**SUBJECT: ADVICE ON RECYCLING AND RESOURCE RECOVERY INFRASTRUCTURE IN VICTORIA**

Cement Concrete & Aggregates Australia (CCAA) welcomes the opportunity to provide a submission to Infrastructure Victoria on the recycling and resource recovery infrastructure evidence based report.

CCAA is the peak industry body for the heavy construction materials industry in Australia including the cement, pre-mixed concrete and extractive industries. Our members operate cement distribution facilities, concrete batching plants, hard rock quarries and sand and gravel extraction operations throughout Victoria. For your information, a list of CCAA Victoria's members is provided in Appendix 1.

CCAA members nationally account for 80% of total industry output, with the industry generating \$15 billion per annum in revenue, employing 30,000 Australians directly and supporting the employment of a further 80,000 people. CCAA members produce and supply the heavy construction materials that are used to construct Victoria's infrastructure. Providing both the raw material and finished product, heavy construction materials contribute to the construction of our roads, railways, bridges, ports, airports, hospitals and schools.

CCAA's members service local, regional and national building, construction and infrastructure markets. The reliable and cost-effective supply to these markets is fundamental to sustainable growth and it is CCAA's aim to promote policies that recognise the importance of these materials to Australia's sustainable future.

CCAA is supportive of efforts to improve waste and resource management and increase recycling in the state and taking an integrated approach under a circular economy policy regime to this issue. CCAA also believes that there are a number of possibilities for Government and this industry to contribute in partnership to the growth of the resource recovery and recycling sector in Victoria.

CCAA provides the following comments regarding developing end markets for recycled material.

- Continued research and development on further end-uses for recyclable materials.

The heavy construction materials industry has the capacity to conduct and support research into alternative material usage. For example, in February 2019, the Victorian Government announced the provision of grants through Sustainability Victoria under its *Recycling Industry Strategic Plan* worth over \$1.5 million for innovative road surface projects including research into development of a premix concrete that uses recycled plastics and rubber, and a

demonstration project trialling a permeable pavement using recycled concrete, brick, glass, plastics and rubber, under real traffic conditions.

Innovation that is being sponsored in other states can also be transferred to Victoria. Lendlease with the help of a grant from the NSW Environment Protection Authority's Civil Construction Market Program, has trialled recycled [crushed glass in the concrete road pavement](#) on the Woolgoolga to Ballina Pacific Highway Upgrade in NSW. This project was recently awarded the Road Construction Innovation Award in the 2019 ARRB National Transport Research Awards.

CCAA supports the ongoing availability of research and development grants and would welcome the expansion of these grants downstream to the infield demonstration phase, and believe our members can play a key role in the expansion of innovative and broader use of alternative and recycled materials.

- Any R&D must reinforce the concepts of **Fit for Purpose Use** and **Highest and Best Use** of materials.

CCAA supports the use of fit for purpose heavy construction materials in road pavements to improve resource utilisation, increase use of recycled materials and reduce costs of construction.

It is widely recognized that over specification or 'gold plating' of non-VicRoads assets with inappropriate, over restrictive specifications does occur. CCAA estimates that between 70-95 per cent of the pavement market uses VicRoads specifications for non-VicRoads projects such as local suburban streets.

Improving quarry resource utilization, using high quality resource for high quality product only, is of increasing concern for the extractive industry as viable locations for future quarries are becoming increasingly constrained as urban development and rising environmental constraints sterilize known resources close to market.

This is recognised by the Victorian Government's 2018 *Helping Victoria Grow, Extractive Resources Strategy* that commits to supporting the recycling of recovered construction materials where feasible.

Fit for purpose materials is about using the right materials in the right location where it makes economic sense and includes quality raw quarry materials, recycled construction materials and marginal quarry materials.

VicRoads has recently amended a range of road construction specifications to allow for the inclusion of recycled products such as crushed concrete and brick, glass fines and reclaimed asphalt but only in specific, certain circumstances. There is still significant opportunity in this area.

Sustainability Victoria supports the use of fit for purpose use of recycled materials<sup>1</sup>. Set minimum recycled content requirements for infrastructure projects should **NOT** be mandated due to the limited capability of the recycled materials supply chain to economically respond to such a potentially massive increase in demand. The cost of transport and distance from source of materials to market is also a key cost consideration in deciding between using recycled versus virgin quarry materials.

The Infrastructure Victoria<sup>2</sup> figures indicate that 80 per cent of masonry waste from demolition works is recycled, providing about 4.2 million tonnes of material. This equates to just 7 per cent of the virgin quarry materials market in Victoria. Austroads, the peak organisation of Australasian road transport and traffic agencies, has also recently released a guide<sup>3</sup> to encourage the wider use of marginal quarry materials in fit for purpose sealed pavements.

VicRoads have developed robust material specifications for major roads and freeways that provide for long life assets. Such high quality material is not required for many local suburban roads due to the lower road traffic and lack of heavy freight transport. Yet many local council engineers are risk adverse and lack a wide skill set and due to a lack of readily available alternatives, often copy VicRoads specifications for use in local suburban roads. Such 'gold plating' may provide for long life assets, but at additional upfront construction costs<sup>4</sup>.

Compromising the performance of quality materials by specifying low grade alternatives may qualify for incentives initially, but may affect the durability and performance of the road during its design life, leading to costly remediation or the need to re-build. Similarly, specifying very-high grade materials for an element that has low performance requirements, such as footpaths, will lead to unnecessary depletion of valuable resources when a lower grade virgin or recycled 'fit for purpose' alternative would be adequate.

- Removing barriers to government procurement of recyclables can contribute to the development of end markets for materials.

CCAA supports the use of government procurement processes to help develop the end market for materials. A key aspect that the procurement process should be based on is a whole of government approach to developing **Performance Based Specifications**.

CCAA recommends that developing Performance Based Specifications must include the whole of Government including the Department of Transport, Major Transport Infrastructure Authority, Office of Projects Victoria, Sustainability Victoria and VicRoads. These bodies together can consider the increased use of alternate and recycled materials in specifications and road infrastructure under a 'fit for purpose' and 'highest and best use' paradigm. An increased emphasis on performance based specifications rather than the current prescriptive road pavement material specifications would help to increase market demand. As well, a whole-of-

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<sup>1</sup> Recycled products in pavement construction. A business case for councils to use in local recycled products in pavement construction. Sustainability Victoria. 2015.

<sup>2</sup> Recycling and resource recovery infrastructure. Evidence base report, Infrastructure Victoria, October 2019

<sup>3</sup> Appropriate Use of Marginal and Non-standard Materials in Road Construction and Maintenance, Austroads June 2018

<sup>4</sup> CCAA Briefing 19, Sustainable Use of Aggregates, Cement Concrete & Aggregates Australia, 2013

government and consistent approach will give confidence in the quality, durability and safety of these products and provide the long term policy setting that is required to support industry investment.

As mentioned previously, minimum recycled content requirements for infrastructure projects should **NOT** be mandated. This position is supported by other organisations such as Sustainability Victoria which state that the mandated setting of recycled material quotas may lead to perverse outcomes.

At a public meeting for the Parliamentary Inquiry into Recycling and Waste Management, Mr Genever, Director of Resource Recovery at Sustainability Victoria warned against specific procurement targets due to the potential for unintended consequences:

*... we need to be careful not to set up counterproductive outcomes or perverse outcomes as a result of number-based targets. So whilst we definitely want to see strong commitment from Government and preferencing from Government for these materials, we just need to be careful that we are not lugging recycled glass sand from Laverton down to Wonthaggi to meet the requirement of a target where you are less than 2 kilometres away from a virgin sand quarry. Equally it might make less sense to truck that material to the other side of the city from Wonthaggi where Alex Fraser's Laverton glass plant is only a couple of kilometres away. So I think it is about the balance<sup>5</sup>.*

Victoria's regulatory environment needs to be internationally competitive to continue to attract capital to invest into Victoria to ensure a sustainable and competitive heavy construction materials industry. This in turn facilitates Victoria's improved productivity, housing affordability and lower infrastructure costs.

The provision of affordable heavy construction materials through an efficient supply chain helps to facilitate the delivery of affordable infrastructure, contributing to the completion of Victoria's Big Build within budget.

Please do not hesitate to contact me to discuss any of these issues in more detail.

Yours sincerely



**BRIAN HAUSER**  
State Director Vic/Tas

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<sup>5</sup> Inquiry into recycling and waste management. Final Report. Parliament of Victoria. Legislative Council Environment and Planning Committee, November 2019, page 198.

**APPENDIX 1**

**CEMENT CONCRETE & AGGREGATES AUSTRALIA**

**MEMBERSHIP**

**FOUNDATION MEMBERS**

 <i>Adelaide Brighton Ltd</i>	 <b>Boral Construction Materials</b>	 <b>Boral Cement Limited</b>
 <b>Cement Australia Pty Ltd</b>	 <b>Hanson Australia Pty Ltd</b>	 <b>Holcim (Australia) Pty Ltd</b>

**VICTORIA**

**ORDINARY MEMBERS**

<p>Alsafé Pre-Mix Concrete Pty Ltd          Barossa Quarries Pty Ltd          Barro Group Pty Ltd          Baxters Concrete Pty Ltd          Broadway &amp; Frame Premix Concrete Pty Ltd</p>	<p>Fulton Hogan Industries          Hillview Quarries Pty Ltd          Hymix Australia Pty Ltd          Independent Cement &amp; Lime Pty Ltd          Kennedy Haulage Pty Ltd</p>	<p>Mansfield Pre Mix          Mentone Pre Mix          Metro Quarry Group Pty Ltd          Premier Resources T/A Hy-Tec Industries Pty Ltd          Volumetric Concrete Australia Pty Ltd</p>
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**ASSOCIATE MEMBERS**

<p>Agi-Kleen Pty Ltd          BASF Australia Pty Ltd          BHS-Sonthofen (Aust) Pty Ltd          Concrete Colour Systems</p>	<p>Concrete Waterproofing Manufacturing Pty Ltd T/a Xypex Australia          GCP Applied Technologies</p>	<p>Sika Australia Pty Ltd          Tieman Trailers          WAM Australia</p>
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