CIVIL CONTRACTORS FEDERATION

Opportunities in the circular economy 2024

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Submissions to the Productivity Commission - Opportunities in the circular economy inquiry

Via: Circular.economy@pc.gov.au

In recent years, the Federal Government has voiced its support for fostering a circular economy—one that prioritises sustainable resource use, waste minimisation, and recycling across all sectors. While this commitment is commendable, translating these principles into action at the state and local government project standards remains a challenge. The civil construction industry is uniquely positioned to lead in this space, given the scale of materials consumed and the waste generated during infrastructure projects. The successful integration of circular economy principles into this sector could serve as a cornerstone for broader sustainable practices across the Australian economy.

However, despite strong national support for circular economy principles, there is currently no uniform standard for applying these concepts to infrastructure projects across Australia. This lack of clear guidance and enforceable requirements at the state and local levels results in patchy and inconsistent adoption of sustainable practices. Some jurisdictions have taken proactive steps to incorporate circular economy principles into their planning and delivery processes, but others have yet to embrace these practices in a meaningful way. This inconsistency not only hampers the industry's ability to fully engage in sustainability efforts but also risks undermining the Federal Government's broader goals of reducing environmental impact, enhancing productivity, and promoting long-term economic resilience.

The Australian Government's vision for a circular economy aligns with global trends, where countries are increasingly moving towards sustainable construction practices. The European Union, for example, has implemented specific regulations that require the use of recycled materials in infrastructure projects. Australia's civil construction industry has the potential to become a global leader in this area, but only if the necessary regulatory frameworks and project specifications are established and enforced consistently across all levels of government.

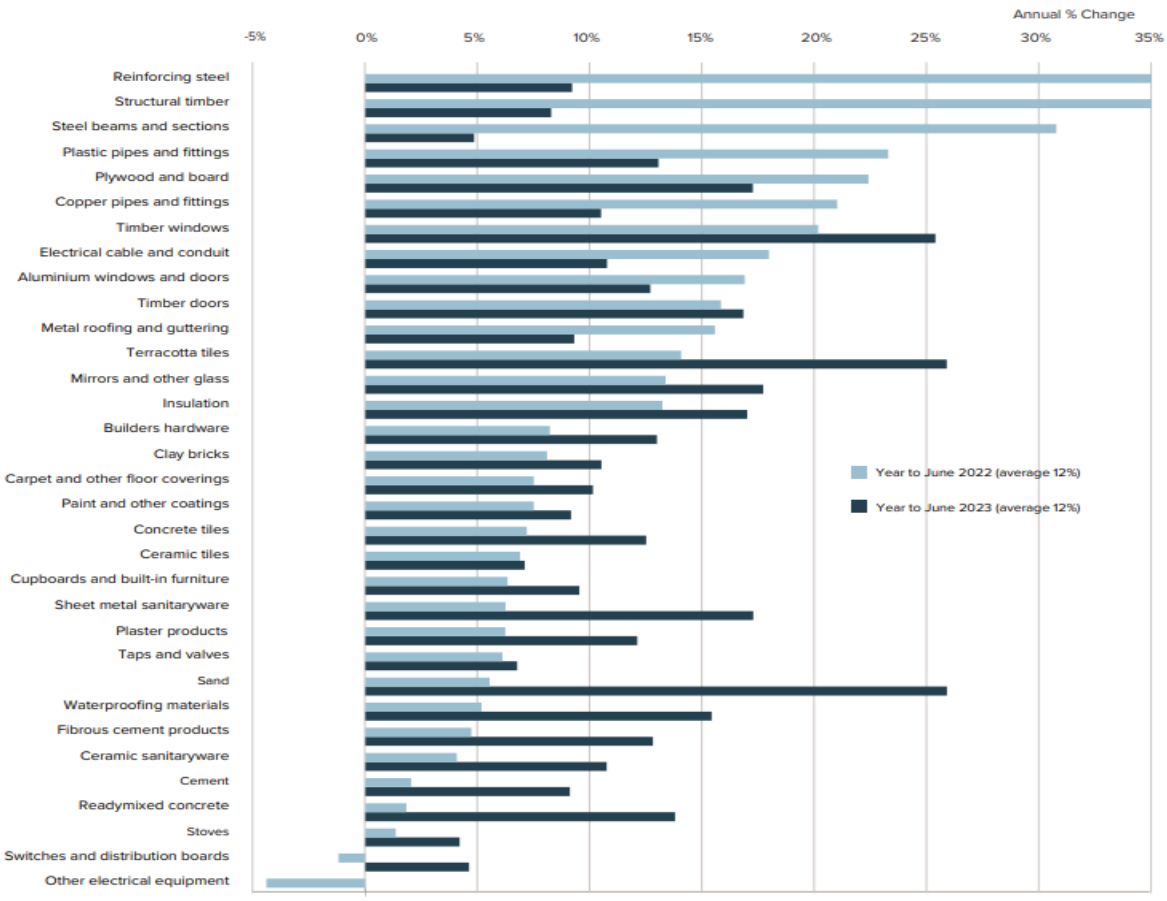
The Need for Consistent Standards Across Governments

For the circular economy to become a reality in Australia's infrastructure projects, there needs to be alignment across all levels of government. Currently, the Federal Government has taken steps to promote sustainable practices like the use of on site recycled steel or glass, but these efforts must be complemented by similar commitments from state and local authorities. Without such alignment, the circular economy will remain an aspirational goal rather than a practical reality.

This means that the Federal Government must work closely with state and local authorities to ensure that circular economy principles are not merely aspirational but are embedded into the regulatory frameworks governing infrastructure procurement, construction, and maintenance. The creation of consistent, enforceable standards that apply to all government-funded projects—whether managed by state or local authorities—will be critical to achieving this goal. Such standards should include specific targets for recycling rates, the use of sustainable materials, and waste minimisation strategies, all of which would help to drive the transition towards a circular economy in the civil construction sector.

The civil construction industry continues to face significant challenges related to material shortages, particularly with essential resources such as aggregates, concrete, and steel.

These shortages not only drive up costs but also delay project timelines, undermining productivity and the ability to meet critical infrastructure needs. In this context, recycled materials present an ideal solution to alleviate the pressure on supply chains.



Annual % change in price from 2022 to 2023 by material (2023 Infrastructure Australia Market Report)

According to the 2023 Infrastructure Australia Market Report, construction input price increases have eased over the past 12 months but remain elevated at 7-10%, with specific materials such as sand, glass, reinforcing steel, and aluminum seeing growth of 20-30%.

Survey results from the report show that 71% of Tier 1 constructors reported cost escalations similar to or higher than in 2022 across a range of materials, while 46% of Tier 2 and 3 constructors experienced increases of at least 25%. Additionally, 88% of construction companies attributed these cost escalations to contract variations, and 82% believe price growth has peaked. This is set to remain a challenge, 60% of Tier 1 constructors anticipate supply chain challenges persisting for more than two years, up from 26% in 2022.

By incorporating recycled aggregates, asphalt, and other materials into infrastructure projects, the industry can reduce its reliance on virgin resources, create more resilient supply chains, and support environmental sustainability. Expanding the use of recycled materials would not only help address material shortages but also align with the Federal Government's broader goal of transitioning to a circular economy.

Construction and demolition waste accounts for a significant proportion of Australia's total waste output, yet there are few national guidelines on how this waste should be managed. State and local governments should implement measures that not only minimise waste but actively promote the reuse and recycling of materials during the planning and delivery of civil infrastructure projects. By mandating the use of recycled materials and ensuring that waste is managed responsibly, Australia can reduce the environmental impact of its infrastructure projects while simultaneously promoting the circular economy.
Similarly, standards should be established to ensure that the materials used in infrastructure projects—whether for roads, pipelines, or utilities—are sustainably sourced and conducive to a circular economy approach. This practice must be made in consultation with the additional costs and viability of infrastructure delivery.

The use of recycled materials, such as recycled asphalt or concrete, should be encouraged where possible, and procurement processes should prioritise contractors who can demonstrate their commitment to sustainable practices. While there are regional factors at play, recycling concrete in road base and fill is often a much cheaper, lower energy alternative.

When considered with the overall increases in input costs which can hamper delivery, this would not only help to reduce the environmental impact of infrastructure projects but also create new economic opportunities in the recycling and waste management sectors.

The Role of Procurement and Industry Collaboration

While the Commonwealth Government continues to promote the circular economy as a national priority, it is important to recognise that it is not the primary deliverer of infrastructure. State and territory governments are responsible for much of the procurement and delivery of infrastructure projects, and their current standards are often not conducive to the widespread use of recycled materials.

To fully realise the benefits of a circular economy in the civil construction sector, the Commonwealth must work closely with states and territories to develop uniform procurement guidelines that enable infrastructure incorporating recycled materials to meet insurance requirements and comply with standards set by Austroads and state construction guidelines.

The importance of procurement reform cannot be understated when discussing the integration of circular economy principles into the civil construction sector. Government procurement agencies at both the state and local levels must adopt best practices that prioritise sustainability alongside other key criteria such as cost, efficiency, and quality.

One potential solution is to encourage the use of recycled materials in large-scale government infrastructure projects. For example, recycled aggregates could be used in road construction, while recycled steel and concrete could be incorporated into the design of new bridges and tunnels, however contractors on individual projects are best placed to provide a project specific management system that would ensure maximum recycled content.

This would not only reduce the demand for virgin materials but also help to stimulate the market for recycled products, creating a virtuous cycle that supports the circular economy. Additionally, requiring tenderers to demonstrate how they will minimise environmental impact through waste reduction, resource reuse, and sustainable sourcing would encourage innovation and drive the adoption of circular economy practices across the industry.

Furthermore, the Federal Government should actively encourage collaboration between industry and procurement agencies to ensure that the transition to a circular economy is both achievable, demonstrable and beneficial for all parties involved.

Contractors, subcontractors, and suppliers must be included in early planning stages to identify opportunities for waste reduction, resource reuse, and other sustainable practices that can be integrated into project delivery. By involving industry partners in the planning process, governments can ensure that infrastructure projects are designed with sustainability in mind from the outset, rather than as an afterthought.

Overcoming Barriers to Circular Economy Adoption

While the benefits of adopting circular economy principles in the civil construction sector are clear, there are several barriers that must be overcome to ensure their widespread adoption. One of the primary challenges is the perception that sustainable practices are more expensive and time-consuming than traditional construction methods.

To address this challenge, the Federal Government should consider introducing financial incentives for contractors who demonstrate a commitment to circular economy principles. This could include contract incentives, tax breaks, grants, or other forms of support for companies that invest in sustainable technologies or adopt innovative practices that reduce waste and promote resource reuse. By providing financial incentives, the government can help to offset the initial costs of adopting circular economy practices and encourage more companies to embrace sustainability as a core component of their business models.

In addition to financial incentives, the Federal Government should also invest in research and development to support the adoption of circular economy practices in the civil construction sector. This could include funding for projects that explore new ways of recycling construction waste, developing sustainable building materials, or improving resource efficiency in infrastructure delivery. By supporting innovation in this area, the government can help to ensure that Australia remains at the forefront of sustainable construction practices and continues to lead the way in the global transition to a circular economy.

Recommendations

To ensure the successful translation of circular economy principles into practical action within the civil construction industry, CCF makes the following recommendations:

Development of model regulatory scheme for States and Territories: The Federal Government should oversee the development of a regulatory model that promotes best practice initiatives and assist contractors in delivering projects that are insurable and compliant to be delivered.

Circular Economy Standards: The Federal Government should work with state and local governments to integrate circular economy principles into the planning, procurement, and delivery of all federally funded government-funded infrastructure projects. This could include specific targets for recycling rates, the use of sustainable materials, and waste minimisation across the project lifecycle.

Procurement Reforms: State and local government procurement agencies should be required to adopt best practices that prioritise sustainability. This includes considering circular economy criteria in tender evaluations, simplifying procurement processes to encourage innovation in waste management, and incentivising contractors to minimise environmental impact.

Collaboration and Knowledge Sharing: Industry and government must work closely together to overcome barriers to circular economy adoption. This could involve the establishment of consultative forums where industry stakeholders can collaborate with government to share knowledge, develop innovative solutions, and ensure that circular economy principles are applied effectively across all levels of infrastructure planning and delivery.

Financial Incentives for Sustainable Practices: The Federal Government should introduce financial incentives for contractors who adopt circular economy principles, such as tax breaks or grants for companies that invest in sustainable technologies or demonstrate a commitment to waste reduction and resource reuse.

The transition to a circular economy in the civil construction industry represents a critical step in ensuring Australia's infrastructure remains sustainable, resilient, and cost-effective. However, achieving this goal requires a concerted effort to align the standards and practices of state and local governments with the Federal Government's broader vision. By mandating the integration of circular economy principles into project planning and procurement, supporting industry collaboration, providing financial incentives, and investing in research and development, the Federal Government can lead the way towards a more sustainable future for Australia's infrastructure.

The civil construction industry has a vital role to play in this transition, and with the right regulatory frameworks and support in place, it can become a global leader in sustainable infrastructure delivery. By working together, government and industry can ensure that the principles of a circular economy are fully embedded into Australia's infrastructure pipeline, driving long-term economic growth,

About Civil Contractors Federation Australia

Civil Construction refers to the design, construction, and maintenance of the physical and naturally built environment, including public works such as roads, bridges, dams, airports, drainage, energy, and sewerage systems, pipelines, structural components of buildings, and railways.

Across Australia and our great State, Infrastructure Projects have been and remain the cornerstone of Australia's communities and cities. Infrastructure is a billion-dollar industry supporting our everyday way of life and every business. Civil Construction is its foundation industry, without the civil industry nothing is built.

The Civil Contractors Federation is the registered organization for the civil infrastructure industry nationally, representing 1,800 businesses ranging from those smaller business to a sizeable group of around 40 of these employer Contractor Members with around 1,000 employees each.

CCF is the only Registered Organisation recognised as the peak body representing the industry nationally for:

- Infrastructure Policy;
- Industrial Relations;
- Training and Workforce Development;
- Energy Transition including wind farms;
- Construction of all major roads, rail, bridges, ports, water, sewerage, and utilities.