The South Australian Infrastructure Pipeline and Sustainability in The Heavy Construction Materials Industry

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CEMENT CONCRETE & AGGREGATES AUSTRALIA

About CCAA

Cement Concrete & Aggregates Australia is the voice of the heavy construction materials industry in Australia.

CCAA membership supply around 90% Australia's cement, concrete & aggregates used to build infrastructure.

The industry generates approximately $15 Billion in annual revenues and employs approximately 30,000 Australians directly and a further 80,000 indirectly.

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Strategic Summary

Our role

- Influencing the political, regulatory and market environment to ensure growth of the industry
- Supporting the industry's licence to operate
- Leading the understanding of our industry and its vital role in society

Strategic priorities

- Advocacy & Reputation
- Resource Access, Security & Efficient Logistics
- Sustainability & Decarbonisation

Summary

The Australian Cement and Concrete Sector – Key Facts

5 Integrated cement plants in Australia which produce clinker and cement as a continuous process.

60% of the cement manufactured in Australia is produced in integrated manufacturing plants

40% of cement involves the use of clinker which is imported and manufactured into cement at grinding facilities located around Australia's coastline

30 million m^3 ready-mixed concrete produced annually in more than 1,500 batching plants across Australia

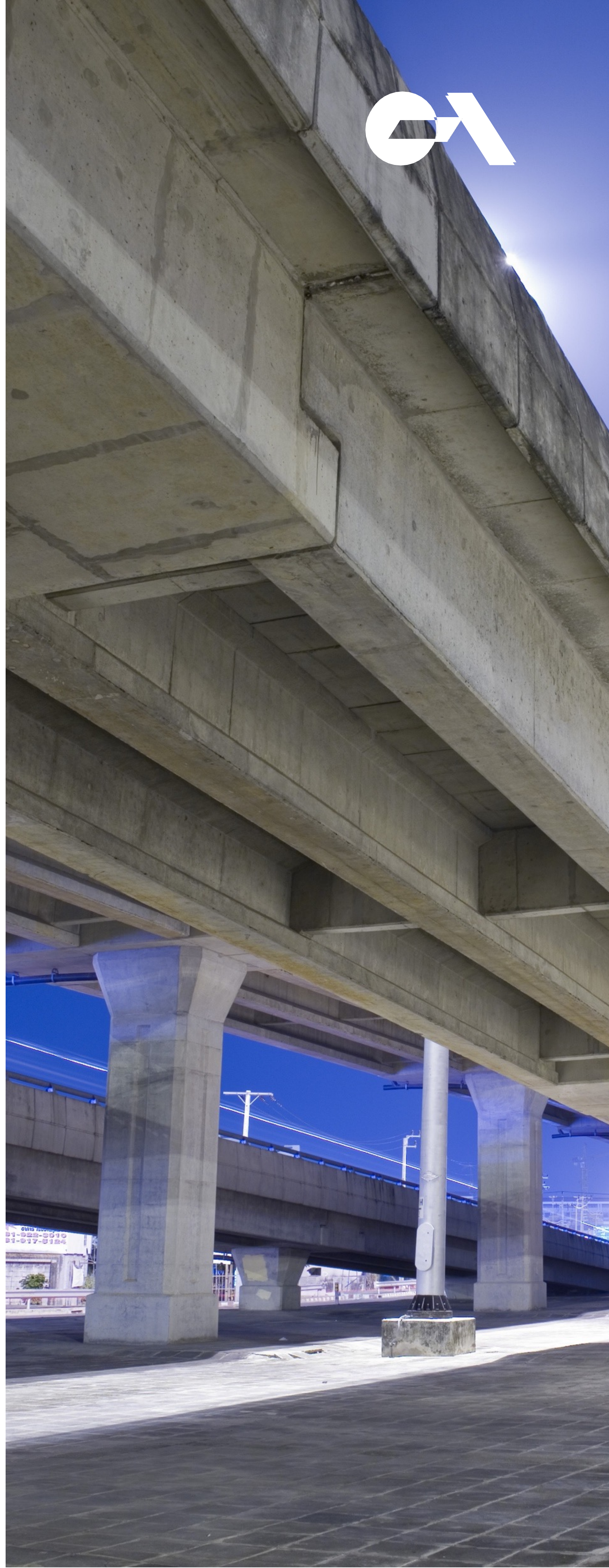
40% of all concrete is used for infrastructure projects

30% of all concrete is used for commercial and non-residential buildings

30% of all concrete is used for housing

80,000 people are indirectly employed in the whole cement, concrete and aggregate sector, compared to 30,000 who are directly employed

A$15 billion revenue is generated by the cement and concrete sector



Infrastructure Australia Market Capacity Report

IA's Chief Executive Adam Copp said:

- "demand for building materials, skills, and labour is at a historic high"
- "increasingly difficult to source key building materials and workers"
- "limited access to local steel and cement, as well as localised shortages of quarry products is contributing to price uncertainty in the supply chain, leading to delays and cost overruns"
- "acute quarry shortages loom in Melbourne, NSW's Mid North Coast and South East Queensland"

Extractives are critical to affordability...

EVERY AUSTRALIAN
needs **8 TONNES** per year of stone, sand, gravel and cement to build the roads, houses and other infrastructure

HIGH RISE BUILDINGS
use up to **1,000 TONNES** of aggregate per floor

HIGHWAYS use
14,000 TONNES
of aggregate per km

WIND FARMS
use up to **1000m3** of concrete per tower

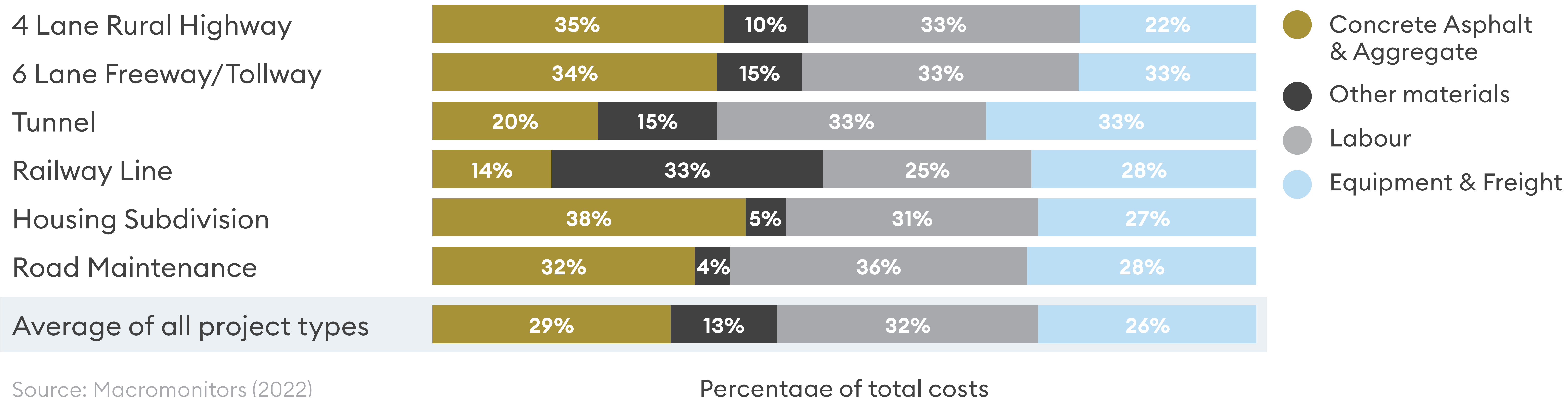
AVERAGE NEW HOME uses **110 TONNES** of aggregate and over **50m3** of concrete.

CAPABLE LOCAL SUPPLY CHAIN
Local industry, supporting local jobs on local projects in their local communities.

HEAVY CONSTRUCTION MATERIALS average
29% OF PROJECT COST

Extractives are critical to affordability...

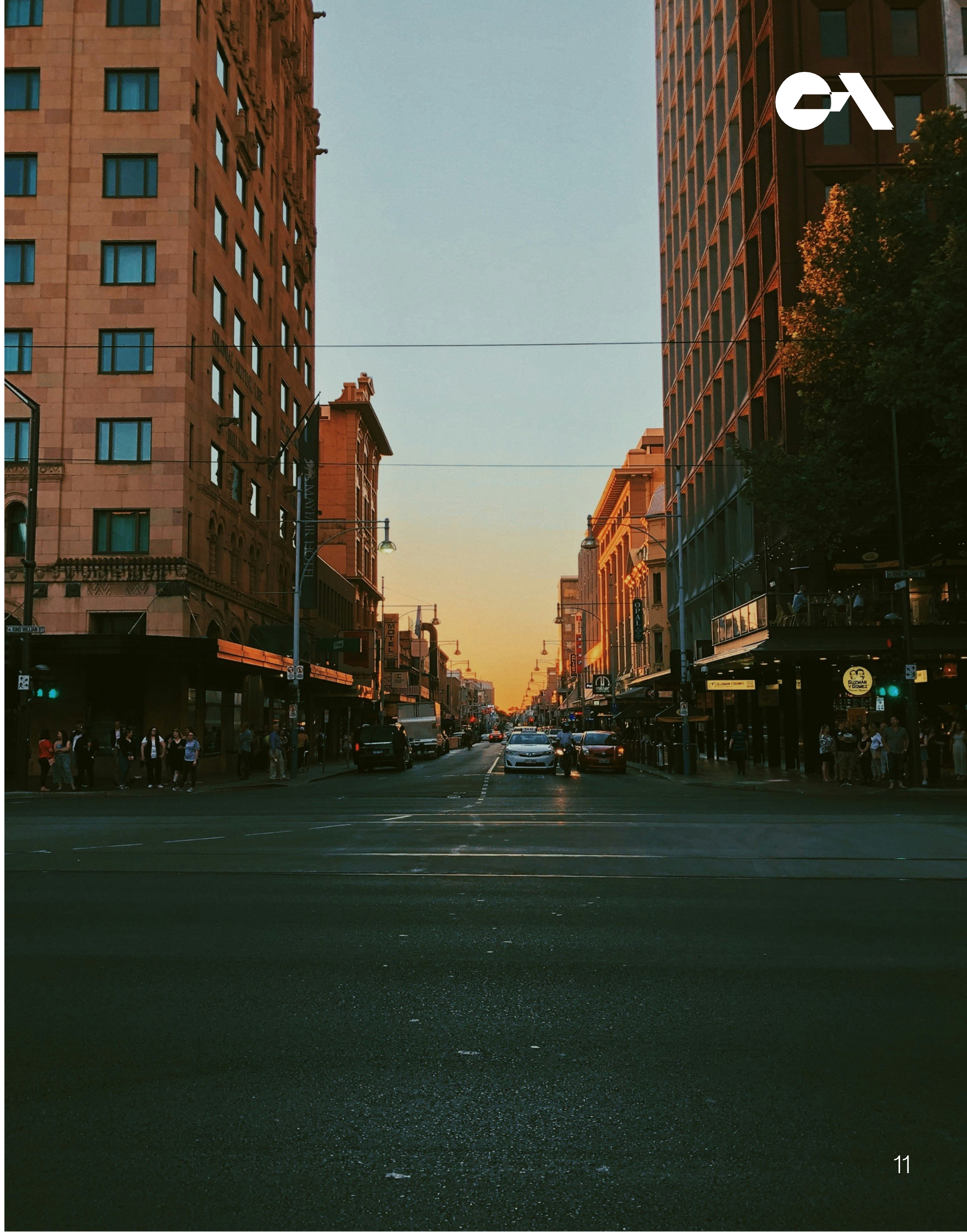
ESTIMATED PROPORTIONS OF TOTAL PROJECT COSTS BY TYPE OF PROJECT



Source: Macromonitors (2022)

South Australia's infrastructure boom

- $25.6 billion pipeline through to 2028
- Key projects: Torrens to Darlington, Osborne shipbuilding, hydrogen hubs, Northern Water
- Demand for materials rising sharply



A long-term vision for infrastructure

– South Australia’s 20-Year State Infrastructure Strategy (2025) outlines vision to 2045

– Strategic focus areas include:
  - Net zero economy
  - Housing and population growth
  - Regional development and climate resilience

Strong alignment with CCAA priorities

- CCAA supports the Strategy's long-term and integrated planning approach
- Aligned priorities include:
  - Resilient regional supply chains
  - Planning certainty for materials and freight
  - Innovation in low-carbon, circular infrastructure

CCA A's response – unlocking material supply

CCAA welcomes the Strategy and proposes:

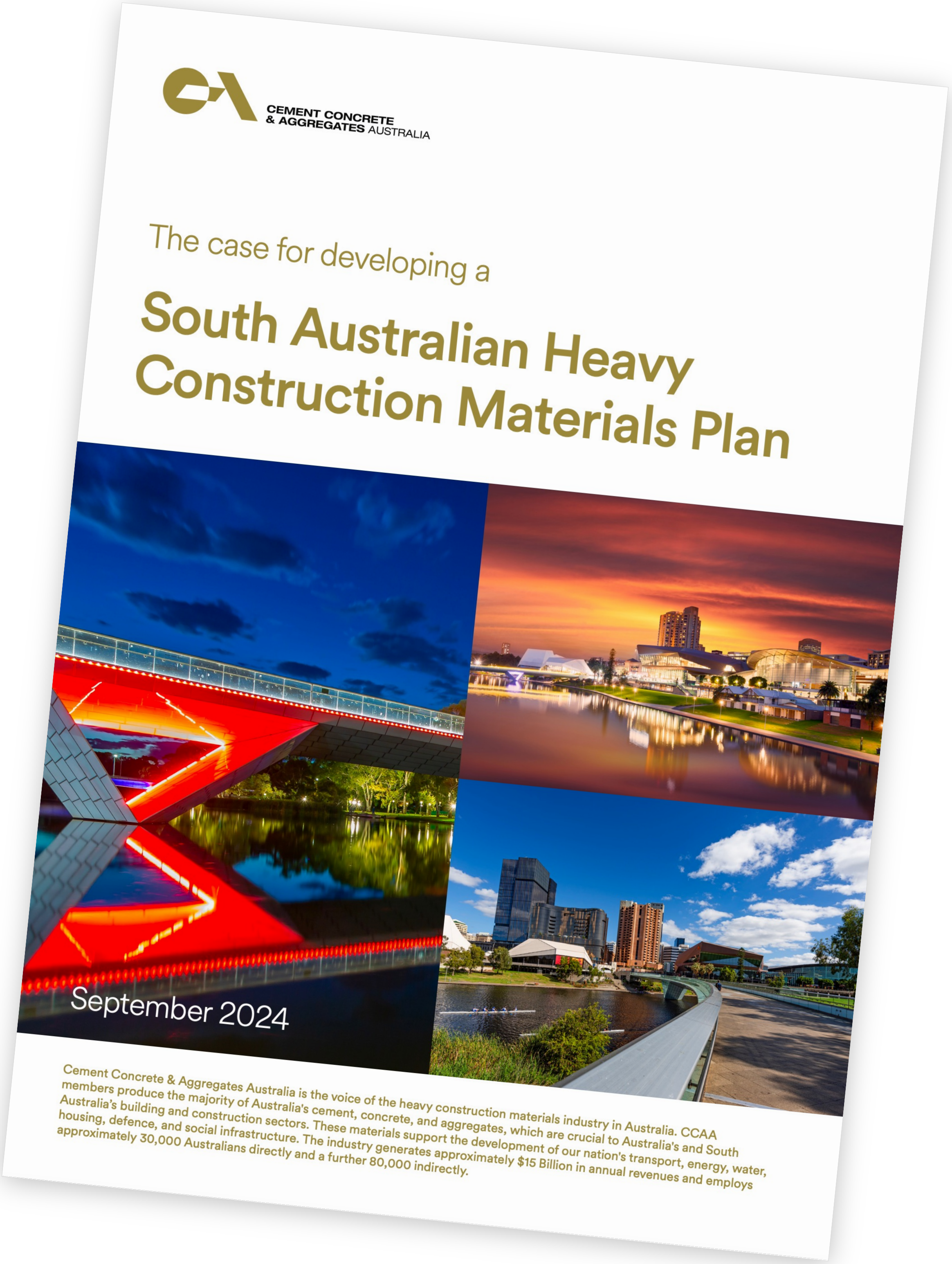
1. Quarry resource protections
2. Streamlined planning and environmental approvals
3. Investment in freight corridors and batching locations
4. Circular economy policies (e.g. End-of-Waste codes)

South Australia needs a Heavy Construction Materials Plan

- Strategic, integrated approach to materials supply to 2050
- Must align with infrastructure, planning, freight and housing policy
- Foundation for sustainable growth and state-building projects

SA Heavy Construction Materials Plan

1. Protect extractive resources through quarry planning overlays
2. Streamline quarry approvals for regional and metro projects
3. Secure key freight routes and batch plant locations
4. Reserve industrial land for future concrete batching operations
5. Fast-track circular economy initiatives (e.g. End of Waste codes)
6. Embed lifecycle carbon in planning and procurement



Decarbonisation

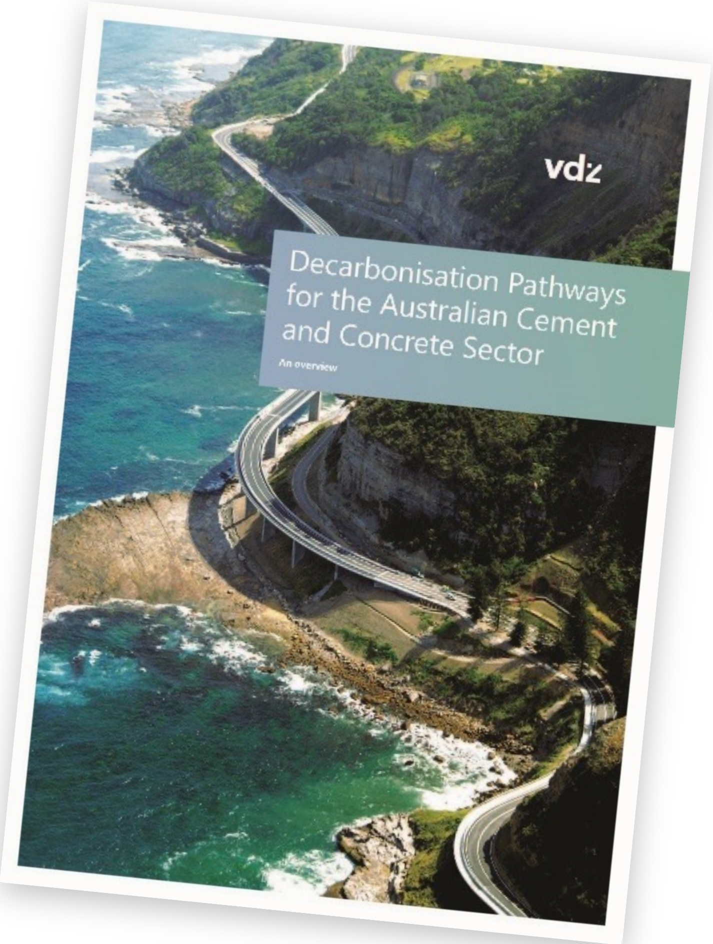
In 2021, the Cement and Concrete industry declared its ambition to deliver net zero carbon cement and concrete to Australian society by 2050.

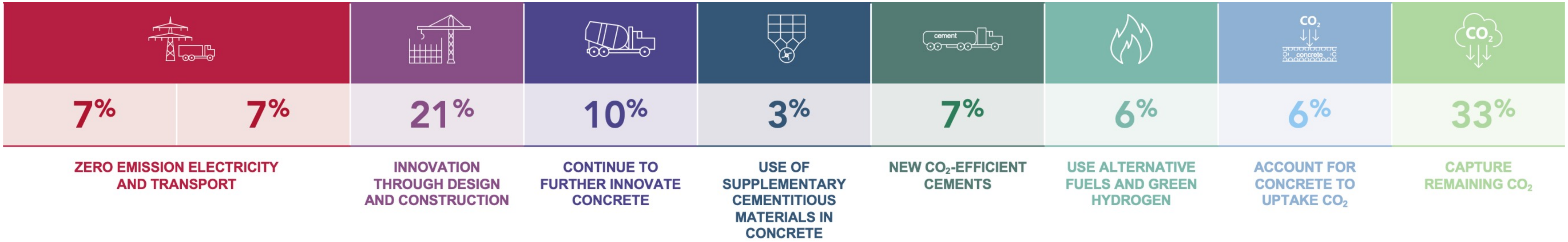
Decarbonisation Pathways for the Australian Cement and Concrete Sector (2021) has enabled a better understanding of the technologies and practices necessary to decarbonise Australian cement and concrete.

Eight Decarbonisation Pathways were identified.

Decarbonisation

Cement & Concrete Industry Decarbonisation Pathways Report



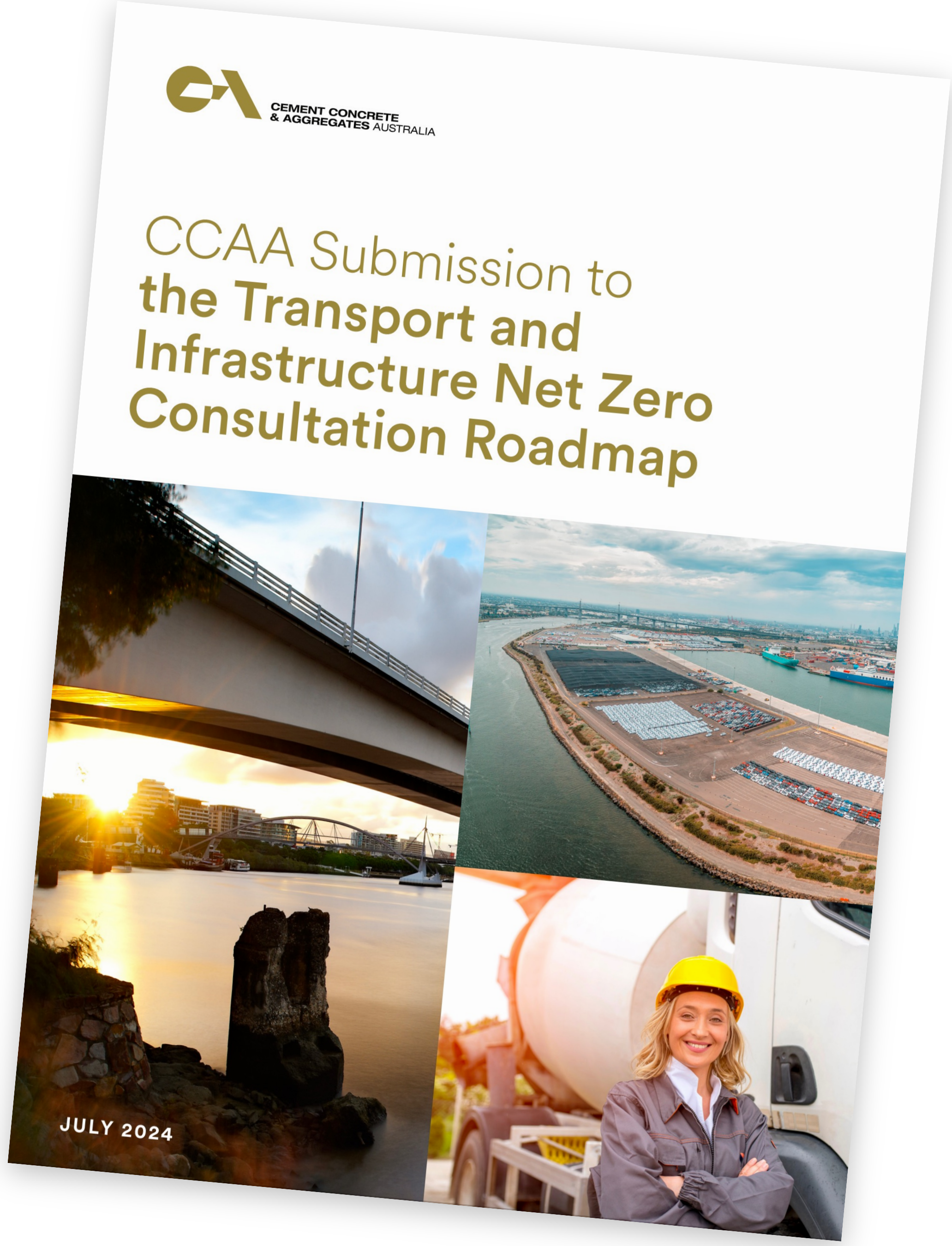


This independent report was released in 2021, following the Australian cement and concrete industry declaring its ambition to deliver net zero carbon cement & concrete by 2050.

The new report enables a better understanding of the technologies and practices necessary to decarbonise Australian cement and concrete, and identifies eight decarbonisation pathways and key future research requirements.

CCAA's submission on the Transport and Infrastructure Net Zero Consultation Roadmap

- Whole-of-Life Carbon Approach
- Revised Standards
- Adopting Global Practices
- Material Efficiency
- Supplementary Cementitious Materials
- Supporting EPDs
- Training and Information
- Support for zero-emission vehicles (ZEVs) in the concrete supply chain, incentivise industry adoption of ZEVs, and upgrade road infrastructure to accommodate these vehicles



Decarbonisation

Government Sustainable Procurement Policies

- Lifecycle carbon approach must be embedded in procurement policies
- Recognition of need to change specifications
- Metrics to recognise EPDs

Decarbonisation

Changing Australian Standards and Concrete Specifications

- Time to change is years….. Must prioritise this work NOW!
- Many specs limit use of SCMs through testing regimes etc.
- Cement Standard AS3972, significantly limits lower carbon cement options for Type GP, GL and alternative binders

What we need from government

- **Certainty:** through protection of key resources and transport routes
- **Capacity:** faster approvals to match infrastructure pipeline demand
- **Collaboration:** cross-sector steering group to guide implementation
- **Commitment:** SA Heavy Construction Materials Plan by end 2025

Final thoughts

- South Australia is building for the future – and materials are the foundation
- We must act now to ensure supply is affordable, sustainable, and secure
- CCAA is committed to working with government and industry to deliver

Thank you!