



23 December 2013

Public Infrastructure Inquiry
Productivity Commission
Locked Bag 2
Collins Street East
MELBOURNE VIC 8003

Via email: infrastructure@pc.gov.au

Dear Sir/Madam

SUBJECT: PUBLIC INFRASTRUCTURE

Cement Concrete & Aggregates Australia (CCAA) is the peak industry body for the heavy construction materials industry in Australia including the cement, pre-mixed concrete and extractive industries.

CCAA members account for approximately 90% of the \$7 billion in revenues generated by these industries that, between them, employ 18,000 Australians directly and a further 80,000 indirectly.

CCAA members produce and supply the heavy construction materials, namely cement, aggregates and concrete, which are used to construct Australia's infrastructure, including our roads, railways, bridges, ports, airports and engineering construction projects.

This submission will focus on the demand, supply and cost of heavy construction materials utilised in public infrastructure.

In Australia, these materials are typically the single biggest cost component in the infrastructure delivery chain. For instance, they have a larger impact on cost than labour and equipment.

In this regard, it is vital to have an efficient and local supply of these materials to infrastructure projects. CCAA recommends two vital regulatory reforms that will assist in the affordable supply of heavy construction materials. These are:

- Streamlined planning mechanisms.
- Identification and protection of key resource areas.

Regulatory reform in these two broad areas, as detailed in the attached submission, will assist in the provision of affordable public infrastructure projects, such as the East West Link in Victoria and the North West Rail Link in Sydney.

CCAA thanks the Productivity Commission for this opportunity to make a submission and we look forward to future consultations.

Yours sincerely

KEN SLATTERY
Chief Executive Officer
CEMENT CONCRETE & AGGREGATES AUSTRALIA



**CCAA SUBMISSION
PRODUCTIVITY COMMISSION INQUIRY: PUBLIC INFRASTRUCTURE**

1 DEMAND FOR HEAVY CONSTRUCTION MATERIALS AND PUBLIC INFRASTRUCTURE

Heavy construction materials, namely cement, aggregates and concrete, are utilised in all public infrastructure. Without these materials we would not have our roads, railways, bridges, ports, airports, workplaces or our homes.

The demand for public infrastructure and heavy construction materials is commensurate with growth. As our country grows, it requires more public infrastructure and therefore more heavy construction materials.

Demand for heavy construction materials is high, for example:

- Each Australian requires 7 tonnes per annum of quarry materials to support the building of roads, houses and infrastructure to service their needs.
- One kilometre of highway uses up to 25,000 tonnes of crushed rock.
- One kilometre of suburban roadway requires 5,000 tonnes of crushed rock, 750 tonnes of concrete for footpaths, kerbs and gutters and 450 tonnes of asphalt for road surfacing.
- One kilometre of railway requires 2,000 tonnes of aggregate.
- A high-rise building can use up to 1,000 tonnes of aggregate per floor.
- Construction of a typical house, including driveway and landscaping, uses about 110 tonnes of aggregate and 53 m³ of concrete.

According to the Australian Bureau of Statistics, over the next 13 years (to 2026), Australia's population is expected to grow by 4 million people to 27.2 million, and reach 36 million in 2056. The provision of infrastructure to meet this growth will require an increase in the supply of heavy construction materials.

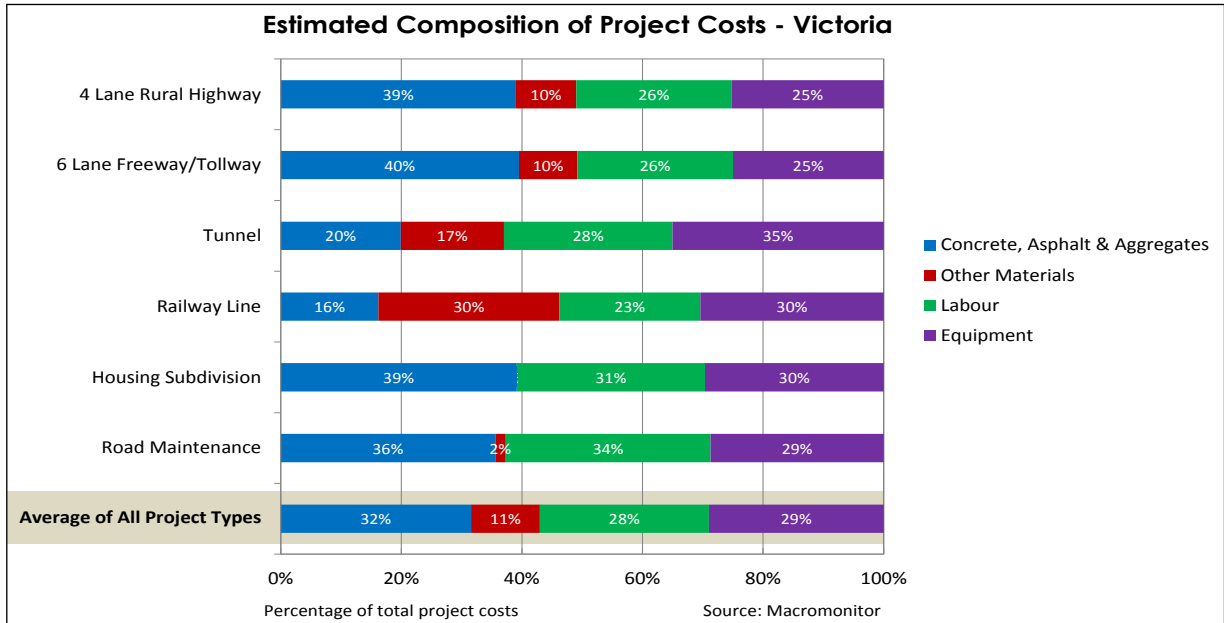
The extractive industry currently produces about 130 million tonnes of aggregate per year and the cement industry produces about 9 million tonnes of cement. These materials are mixed to produce some 24 million cubic metres of concrete.

If current demand trends with population growth by 2056 the Australian industry will need to produce some 210 million tonnes of aggregate, 14 million tonnes of cement and 37 million cubic metres of concrete per year.

2 COST OF HEAVY CONSTRUCTION MATERIALS FOR PUBLIC INFRASTRUCTURE

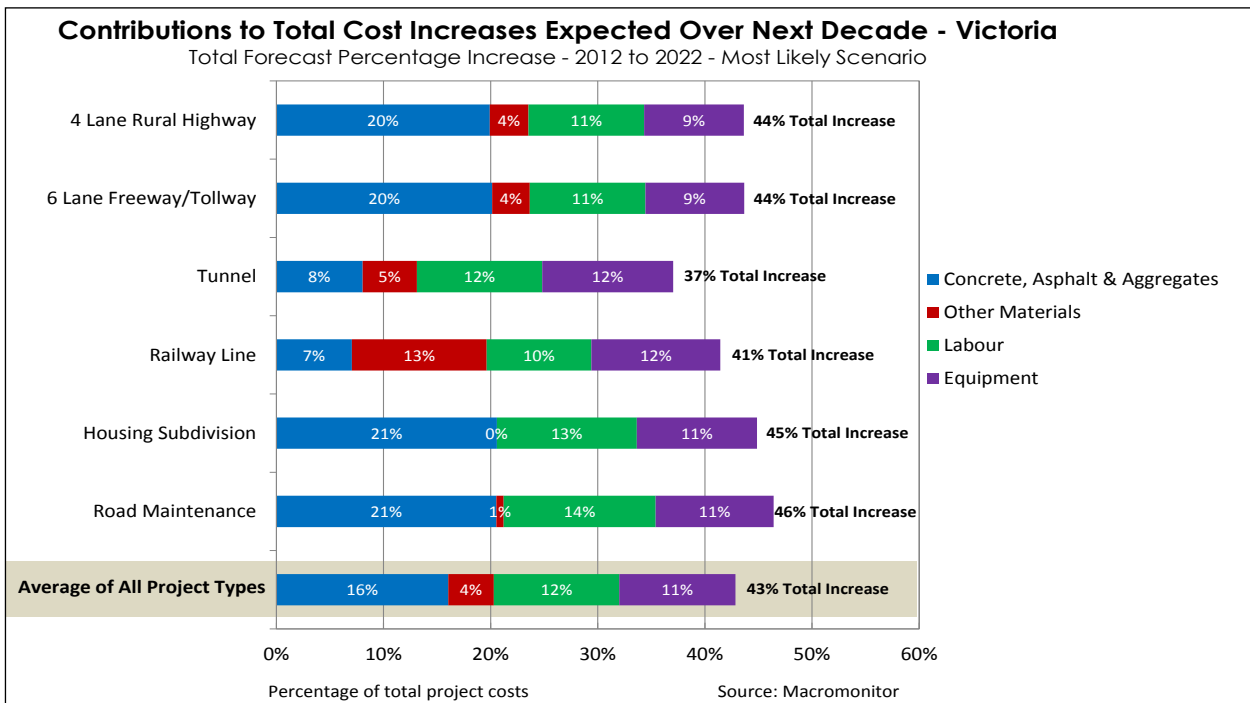
CCAA recently commissioned Macromonitors¹ to analyse the cost impacts on constructing infrastructure in Victoria. This report found that the single biggest cost component in the infrastructure delivery chain in Victoria is heavy construction materials, as illustrated in the table below:

¹ The Impact of Heavy Construction Materials Prices on Infrastructure Costs in Victoria, Macromonitors, June 2013.



Source: The Impact of Heavy Construction Materials Prices on Infrastructure Costs in Victoria, Macromonitors, June 2013.

The Macromonitors report also forecasts that infrastructure delivery costs will most likely increase on average at 3.6 per cent per year over the next 10 years in Victoria. In addition, heavy construction materials costs will be the single biggest contributor to these future infrastructure project cost increases, contributing on average 37 per cent of the total cost increase over the decade, as illustrated in the table below:



Source: The Impact of Heavy Construction Materials Prices on Infrastructure Costs in Victoria, Macromonitors, June 2013.

The Victorian examples provided above are indicative of the cost of infrastructure throughout Australia and it means that the cost of meeting future demand for public infrastructure will increase and that supplying heavy construction materials to meet this demand will have a significant impact on this cost increase.

Macromonitors have developed a calculator that forecasts the financial impacts of increases in the cost of heavy construction materials on major public infrastructure projects in Australia, such as:

- The \$6 to 8 billion East West Link (Stage One) in Melbourne could be increased by \$250 to 330 million.
- An extra \$1.1 to 1.3 billion could be added to the cost of the \$9 to 11 billion Melbourne Metro rail tunnel.
- The \$8.5 billion North West Rail Link in Sydney could be increased by \$400 to 500 million.
- A further \$1.4 to 1.7 billion could be added to the \$10 billion WestConnex project in Sydney.

3 SUPPLY OF HEAVY CONSTRUCTION MATERIALS FOR PUBLIC INFRASTRUCTURE

To meet future demand for affordable public infrastructure there must be efficient supply of heavy construction materials. The efficiency of the supply chain for heavy construction materials is largely determined by location, as transportation equates to approximately 20 to 25% of the total cost of materials.

The high-bulk, low-value nature of the materials means that transportation costs have a significant impact and the closer the materials are to their market the less impact transportation has on the cost. For example, if a quarry is 30 kilometres from its market it will cost about \$8 per tonne to transport. If the distance from market were increased to 60 kilometres, due to the exhaustion of existing quarries and/or an inability to establish new quarries close to end markets, the average transport cost would increase to \$13 per tonne.

The above scenario is exemplified in the cost difference of extractive materials in Melbourne and Sydney. The Melbourne market has many quarries located in the metropolitan area and the average transport distance from quarry to concrete batch plant is 30 km, whereas, in Sydney, which has one remaining metropolitan quarry, the average transportation distance is 60 km.

For example, the delivered cost of material is 70% greater in Sydney than in Melbourne, which is solely attributable to the increase in haulage distance, as identified above.

The location of cement plants, concrete batching plants and quarries is determined by jurisdictional planning system and resource access regimes. These regulatory frameworks must recognise the importance of locally supplied heavy construction materials to the provision of affordable public infrastructure to ensure affordable supply.

4 EFFICIENT REGULATORY FRAMEWORKS AND PUBLIC INFRASTRUCTURE

CCAA believes that there are two main areas of regulatory improvement that will directly impact on the industry's capacity to supply affordable materials for public infrastructure, these are:

- Streamlined planning mechanisms.
- Identification and protection of key resource areas.

4.1 Streamlined Planning Mechanisms

CCAA believes that the planning and development systems in Australia need to be streamlined to provide more efficient and effective decision making and that the following principles should be included in all planning frameworks:

- Timely, predictable and transparent decision-making.
- Competent, credible and accountable decision-making bodies.
- Proportionate and risk based conditions on planning approvals.
- Robust processes for ensuring that State and regional interest are taken into account during planning processes.
- Long-term outlooks.
- Extractive industry zones included in local planning schemes.

CCAA considers that the Victorian Government's Parliamentary Economic Development and Infrastructure Committee (EDIC) *Inquiry into Greenfields Mineral Exploration and Project Development in Victoria* (attached) recognised these principles and provides a commendable blueprint for streamlining planning mechanisms in Australia.

The EDIC inquiry recognised the need for strategic land use planning for construction materials and a streamlined planning mechanism through the provision of a one-stop-shop framework to ensure the provision of affordable public infrastructure. In this regard, the inquiry has recommended that the following improvements to the States planning system be implemented:

A clear lead agency within State Governments focused on construction materials that oversees the development and implementation of government strategies affecting construction materials would ensure a coordinated approach that facilitates the development of public infrastructure.

The Productivity Commission's report, *Major Project Development Assessment Processes*, made a number of recommendations that CCAA commends and we would support these improvements being adopted in all State jurisdictions:

- A clear link between State Government Infrastructure Plans and strategies for long-term access to construction materials.
- Proportionate and risk-based environmental conditions, where compliance efforts are focused on poor environmental performers, not the vast majority of operators who are doing the right thing.
- Competent, credible and accountable decision-making bodies.
- Regulatory framework and approval conditions take into account Recognition of the distinct elements of quarrying (compared with other industries) and of individual quarry sites so that conditions take into account the industry and site-specific nature of quarrying.
- Provides consistency across government levels, and provides provision for a "one-stop-shop" between Commonwealth and State Governments (eg through bilateral agreements).
- Simplified environmental offset requirements that provide flexibility, certainty, be easily obtainable (land or cash payment) and strong and measurable environmental outcomes. In addition, rehabilitation on quarries should be considered as offsets.

Further, many of these principles have been recommended for Europe in the European Aggregates Association's 2010 Leoben Report², which is attached to this submission.

The Leoben Report argues that planning and development processes are more effective when there is a simplified regulatory framework and a central agency, or 'one-stop-shop', whose role it is to lead and coordinate the planning process. This approach minimises the chance of political interference and

² Department of Mineral Resources and Petroleum Engineering, June 2010, *Planning Policies and Permitting Procedures to Ensure the Sustainable Supply of Aggregates in Europe, Final Report*, University of Leoben, Austria.

improves the probability for efficient decision-making. This not only reduces the time taken to receive a planning approval, but also increases certainty for investment decisions and reduces risk.

In addition, investment in innovation in the sourcing and specification of heavy construction materials for infrastructure construction, especially in the area of sustainable aggregates, will assist in a sustainable supply of material.

4.2 Identification and Protection of Key Resource Areas

Associated with efficient planning mechanism is the capacity to access new and existing resources. This is achieved through identifying the location of a resource and then protecting it from incompatible land use that sterilises the industry's capacity to access the resources, such as inappropriately located housing development.

CCAA considers that the Queensland Government's Key Resource Area policy to be an appropriate planning mechanism that identifies and protects heavy construction material resources. The key principles of this policy are:

- Public identification, in the planning system, of key resource areas, processing sites and associated transport routes.
- Provision of buffer zones around the identified areas to prevent encroachment by incompatible land uses.
- Provision of a framework for local authorities to utilise in the planning process when making development assessments.

Other State jurisdictions have also began the process of identifying and protecting resources, such as South Australia whose *Resource Area Management and Planning Project* attempts to address the urban encroachment and incompatible land use for its current and future heavy construction material resource areas.

Just as agricultural and environmental values are assessed during the strategic land use planning process, so should earth resource values. This is achieved through the adoption of Key Resource Areas in all States and will provide strategic land use planning for heavy construction materials, which will help to guarantee a secure supply of materials for future public infrastructure developments.

5 NEXT STEPS

Heavy construction materials, namely cement, aggregates and concrete are utilised in the construction of all public infrastructure projects. As Australia's population grows, there will be an increasing demand for public infrastructure and heavy construction materials. These materials are the foundation of Australia's growth and economic future.

The affordable supply of heavy construction materials is the largest factor contributing to affordable infrastructure. There are a number of regulatory reforms, including streamlined planning mechanisms and identifying and protecting key resource areas that will help reduce future cost increases in these materials.

CCAA, on behalf of the heavy construction materials industry, is committed to working with the Governments of Australia to see these important reforms implemented as soon as possible, as the reforms will help deliver affordable heavy construction materials that will provide a strong foundation for Australia's future.

CCAA thanks the Productivity Commission for this opportunity to make a submission and we look forward to improved provision of public infrastructure in Australia.