Purpose of this Response to the Inquiry

The Productivity Commission's remit to "*inquire into ways to encourage private financing and funding for major infrastructure projects, including issues relating to the high cost and long lead times associated with these projects"*, is timely and rich with potential to initiate long term changes for good across Australia's construction industry and for the projects that it can deliver in future.

The purpose of this submission is to offer comment on the Commission's terms of reference, but to do this mindful of the objectives of earlier enquiries. Most importantly this submission seeks to elevate the need for industry leadership and measurable productivity goals as a national priority. It calls for the establishment of a strategic agenda to provide a roadmap for what needs to be achieved. In regard to Public Infrastructure this will require;

- Ensuring value for money is not masked by process
- Establishing simple universal productivity measures for all public projects
- Enabling informed buyer decision making through consistent performance benchmarks

The Australian construction and major projects industry is unlike the motor vehicle industry. This is because buildings are fabricated and assembled on thousands of sites and not at a single assembly facility. But construction's other characteristics mirror the motor vehicle industry. Its productivity is low, its wage and salary costs are high and its international competitiveness is poor.

Construction is now a fiercely competitive global business. Increasingly Australia's construction inputs are being sourced from overseas. This has significant implications for the future cost of projects, their investment viability, their delivered quality and eventually domestic employment.

This submission respectfully urges this enquiry to be mindful of the *"bigger construction picture."* Adopting a consistent agenda to redirect Australia's construction future will deliver industry wide dividends while enhancing "value for money" public infrastructure outcomes and service delivery. A case needs to be made for strong national leadership and a modest supporting investment in the industry's future. If well directed this investment will deliver large multiplier returns. These will not only flow down to the over 1 million people who work in the industry but to the nation's enterprises and households who depend on an efficient, cost effective and viable domestic construction sector.

Otherwise the Australian construction industry story will play out much like the motor vehicle industry, but perhaps less visibly than the closure of a few large assembly plants.

An Australian construction and infrastructure context

Australia's construction costs have risen at a faster rate than any other sector of the economy over the last 10 years. During this time there has been no appreciable, measured productivity off-set. Construction costs have largely become accepted as being a function of a high cost of living economy. New projects have been committed on the basis that their projected costs can continue to be passed on to clients and the public. The reality is that Australia's construction industry has yet to face up to the urgent need to become measurably more competitive. The situation is dire.

The industry's day of reckoning has been shielded by excessive economic stimulus measures, low interest rates and seemingly price insensitive overseas investment particularly in the commercial, retail and residential property sectors.

Furthermore the impact of Australia's construction spend in the domestic economy is falling. The ABS reports that construction now accounts for approximately 8.5% of Australia's GDP, while international commentators report that construction's global average GDP impact is close to 12%. This is forecast to rise to 13.5% by 2025[1].

Australia's construction industry has recently been stress tested. The delivery of major resource projects during the mining boom demonstrated the industry's lack of capacity and international competitiveness across large parts of the construction, engineering and residential sectors. This led to off-shore sourcing for much of the recent mining and resource boom investment. That has permanent flow on effects for the post boom construction economy. The former Labour government's $13.9 billion BER schools building program and other infrastructure stimulus measures demonstrated wide ranging disparities across the industry's performances nationally. Unfortunately important evidence based insights into these issues have been cast aside in favour of anecdotal voices representing the status quo that testify to tight margins and little room to do better.

Numerous enquiries and commissions over the last 20 years have examined the performance and capability of the industry. While informative these have mostly been piecemeal and of limited long term impact. The potential outcomes of earlier enquiries have been influenced and mostly dissipated by interests that have lacked a *"big-construction perspective"* which grasps the national and international imperatives. For an industry that represents over $170 billion in national investment annually a continued lack of national direction will have serious future consequences.

Many countries have national construction strategies which foster innovation, productivity and construction industry competitiveness domestically and internationally. A number have been in place for 20 years. Australia does not have a national construction strategy.

This Inquiry and others – there are common themes

This Productivity Commission Inquiry in Public Infrastructure must strive to influence viable medium (3-5 years) and longer (7-10 year) term strategies that can make all construction related investment more attractive. Nothing is more pressing than improving the industry's cost to productivity ratios in the medium term. This focus is consistent with this inquiry's remit and those of earlier similarly intended reviews. In this instance the Commission is to;

"Conduct a broad ranging investigation into costs, competitiveness and productivity in the provision of nationally significant economic infrastructure and examine ways to: reduce infrastructure construction costs; address any barriers to private sector financing, including assessing the role and efficacy of alternative infrastructure funding and financing mechanisms, and recommending

[1] **Note**. Assertions made in this submission are evidenced in a number of discussion papers prepared by David Chandler OAM. Links to relevant material will be provided in this submission via the author's web site at: www.constructionedge.com.au in the interests of maintaining the narrative of this submission. In this instance refer: http://constructionedge.com.au/wp-content/uploads/2013/07/Aussie-by-design.pdf

mechanisms and operating principles that may be applied to overcome these barriers; and, without limiting the generality of this reference, outline options to reduce construction costs."

Nothing could do more to improve the viability and attractiveness to new investment in public infrastructure than evidenced productivity achievement across the industry in the medium term.

A similar Inquiry initiated and then abandoned by the former Commonwealth government was COAG's[2] panel to review Construction Costs and Productivity. Its Terms of Reference stated;

"The construction sector is a significant industry for Australia. Constraining cost growth and improving productivity has the potential to deliver economic benefits nationally.

The Panel will draw on any relevant existing reviews and work being undertaken that have implications for the construction sector. This includes the work being undertaken as a part of the Seamless National Economy reforms, such as the work on a National Construction Code, a national trade licensing system, national work health and safety laws, and work being undertaken as part of priorities identified by the COAG Business Advisory Forum including major project approvals and development approvals.

An independent Review Panel is to conduct a broad ranging investigation into cost pressures, competitiveness and productivity in the commercial, civil and large-scale residential construction industry".

The COAG inquiry's detailed terms of reference were consistent with the former government's acceptance of BER Implementation Review Taskforce's [3] final report and recommendations resulting from the $13.7 billion School building economic stimulus initiative. These included;

Recommendation 4: Twenty years ago, the Productivity Commission published a report on Construction Costs of Major Projects[4]. At the time four major issues limiting productivity improvement were: industrial relations, planning consents, Australian participation and project management. The Taskforce believes the major issues confronting the construction industry today are different. The BER program has been notable for negligible industrial disputation, and we have observed the benefit of the streamlined BER planning approval process. We have however witnessed deficiencies in the quality of workmanship, in project management, in public works capacity and in the framework of private certification. Australia confronts a significant infrastructure and maintenance spend over the next 20 years. The Taskforce recommends that the Productivity Commission update its work on the construction industry.

The Commission should be mindful of the considerable effort industry makes in responding such inquiries. It is understandable that there is a level of cynicism about the ability of this and other inquiries to make a real and long term difference. The timing on this occasion is good. The Commission has the prospect of bringing a productivity agenda on early and harmonizing this with the soon to be revitalised role of the Australian Building Construction Commission (ABCC).

[2] See: Terms of Reference: COAG Review Panel on Construction Costs and Productivity www.coag.gov.au/
[3] See: http://foi.deewr.gov.au/BER/Implementation/Final/Report
[4] See: PC 1991 Productivity Commission, 1991, Construction Costs of Major Projects, Industry Commission Inquiry Report (Report No.8, 11 March 1991).

Recently the UK government recognised the declining performance and competitiveness of its national construction industry. In February 2012 the UK Cabinet Office established for the first time a Joint data and Benchmarking Task Group[5] to;

"*Help deliver the objectives of the Government's Construction Strategy and Infrastructure UK Cost Review Implementation Plan. The plan supports new procurement models being trailed as part of the delivery of the Government Construction Strategy. The strategy is to be effected without impacting either whole of life value or the long term health of the construction industry.*

The strategy will establish common approaches for measuring costs and value across the Government estate and embed a benchmarking methodology going forward.

Key features to be included are;

- *Establish the approach in the form of common minimum requirements*
- *Adopt common cost summary formats and mandate this for clients and industry*
- *Identify against common cost summary where differences occur between different sectors*
- *Establish additional cost data collection requirements e.g. pre-contract and whole of life costs*
- *Identify Standard project descriptions or categories that can be common to any data set to assist in identifying comparable project types used across sectors, including the private sector for benchmarking purposes*
- *Identify elements which need further detailed cost analysis*
- *Identify approaches to data collection which allow benchmarking of procurement approaches e.g. Design& Build, Frameworks and Cost Led Procurement*
- *Establish a method for assessing the effect of legislative, Technical changes or government polices (e.g. BIM) that could be expected to flow through to construction costs*
- *Identify possible private sector comparators of building types worthy of future consideration to identify cost differences*
- *Government departments to meet on a regular basis to discuss current trends in costs, contractor intelligence and new work practices*

The UK Cabinet office has set Departmental Cost Reduction Trajectories. Each department is to report progress that is being made in delivering the Government's Construction Industry Strategy target of achieving 15 – 20% reduction in cost by the end of the current parliament. The trajectory profiles will be subject to each department's individual capital programs. The UK government set the following headland objectives for the construction industry;

- *Lower costs by 33%*
- *Achieve faster project delivery by 50%*
- *Lower emissions in the built environment by 50%, and*
- *Achieve a 50% reduction in the trade gap between total exports and imports for construction products and materials*

[5] See: https://www.gov.uk/government/publications/government-construction-strategy

The quantifiable goals set by the UK government are distinctive. They are understandable, measurable and capable of progressive accountable implementation. The UK's approaches for measuring costs and value across the Government estate and embedding a common benchmarking methodology are appropriate for Australia to achieve as a longer term goal, say by 2023.

The UK cost benefit targets are achievable. There is evidence across projects completed in Australia that 15 - 20% of project capital cost can be avoided. Improved productivity in the form proposed in this submission involves much more than cost of labour inputs. The duration of projects adds to the cost of expensive site overheads and financing costs. Many of the current procurement methods employed in Australia create dysfunctional relationships across the supply chain, avoidable risk transfers, duplications and waste. Improved utilization of construction resources and time can deliver enormous recurrent savings to the economy. If a 15% cost reduction could be achieved across the industry in Australia by 2023, the recurrent cost of projects nationally could be reduced by at least $25.0 billion.

The potential for cost savings of this magnitude cannot be ignored. These will not be achieved by continued adherence to business as usual models and practices.

The construction productivity opportunity – Public Infrastructure Inquiry

The most effective medium term actions to help turn around the productivity and competitiveness of Australia's construction (and Public Infrastructure projects) are to;

- Require measured construction productivity achievement as a precondition to future wage and salary increases from 2015
- Reduce on-site workforce inputs by 30% by 2019
- Reduce on-site construction durations by 50% by 2023
- Pursue a 50% reduction in the trade gap between total exports and imports for construction products and materials by 2023.

Reducing on-site workforce inputs (for both labour and management), and reducing the onsite construction durations are the immediate priorities. The measurement data essentially exists as a normal construction practice and would be relatively easy to collect with limited cost impact on the industry. These measures have the ability to set unambiguous, consistent strategic directions for clients, consultants, contractors and the workforce. The reasoning for this is;

I. The global construction industry is rapidly becoming industrialised. This means that traditional on-site fabrication and assembly is being displaced by value added off-site fabrication and pre-assembly. Traditional craft based work, work sequences and their resultant discontinuities must be displaced by smarter integrated work packaging, multi-skilling and the deployment of integrated computer technologies.
A goal to measure the reduction of on-site workforce inputs by 30% is simple, universal and calls for multi-party collaborations during off-site and on-site production.

II. On-site construction durations are not only the product of on-site work practices. They are the result of pre-construction planning, construction innovation and process improvement.

A goal to measure and track a reduction in on-site construction durations by 50% is feasible and has already been achieved in Australia. Achievement again requires multi-party off-site and on-site collaboration. A new procurement psyche and practices will be required.

III. Developing a national interest in *"off-site and **on-shore**"* is needed to ensure that the product of improved on-site productivity and off-site value add delivers domestic benefits such as new production facility investment and jobs. New business opportunities must be shown to help change to the status quo. Unfortunately many in the industry continue to believe that their business as usual models and construction methodologies remain sustainable. Those who have moved on from that belief are limited by domestic supply choice and show little sentimentality towards encouraging domestic off-site supply.
A goal to turn around the net value of off-site and off-shore imports should be a priority in future industry skilling, business capability building, research and innovation endeavours.

There is a compelling reason to support the adoption of these productivity initiatives in the medium term as a precursor to wider measures such as those being adopted in the UK over a longer period.

The re-establishment of the ABCC has the potential to not only secure lawful conduct across the construction industry. The ABCC has the capacity to declare that future wage and benefit increases across the construction industry must be preceded by evidence based on-site productivity achievement from 2015. This is currently not the case in the current EBA process[6]. Further:

- There is a direct correlation between construction wages and salaries. The industry's culture is that it's rising costs are inevitable and can continue to be absorbed into projects[7]. This is patiently unsustainable,
- Establishing consistent Value for Money measures across Public Infrastructure (and often PPP) projects suffers from a lack of reliable evidence based comparators. Often the case made by Public Infrastructure delivery proponents has been supported by less than independent and credible quantification. At best this quantification compares the industry's current modus operandi and lacks engagement with any nationally aligned productivity endeavour[8],
- Requiring prior evidence based on-site productivity achievement will not only constrain unsustainable wage growth, it will break the insidious relationship which flow on salary increases and in turn project cost to client projects, and
- Construction clients will then have access to a new set of performance benchmarks that will benefit the cost, time and quality outcomes of their projects. These will immediately benefit client projects by turning around the automatic escalation of construction prices without any prior improvement in industry productivity. Clients will be able to use this information to pre-qualify construction teams and implement project initiation actions which enable other evidence based productivity innovation.

[6] See: http://constructionedge.com.au/wp-content/uploads/2013/03/C8-Fair-go-Fair-Work.pdf
[7] See: http://constructionedge.com.au/wp-content/uploads/2013/11/Federation-of-Construction-Road-Map.pdf (Note correlation between site wages and management salary costs for Sydney and Melbourne)
[8] See: http://constructionedge.com.au/wp-content/uploads/2013/06/Contestability-and-VFM.pdf

The Productivity Commission's inquiry and final report will include many other recommendations in response to its remit. Many of these will need to be worked through with the States and other stakeholders. Most will take a number of years to adopt and implement. However, providing the industry with early transformational direction on project productivity in conjunction with the ABCC could ensure that this inquiry sets in place some early and enduring benefits across the industry.

Summary

This submission has not sought to address issues other than promoting the need for early action to drive construction industry wide productivity and commonly targeted project implementation. Construction costs are a product of project implementation methods and productivity endeavour. Improved industry wide productivity achievement will ensure government, the public and construction industry participants can look forward to achieving better value for money outcomes and ensure more sustainable futures.

There is considerable evidence of improving public infrastructure procurement initiatives across the states. Some of these involve breaking up projects into more definable and risk assessable packages. Moves to include service delivery in areas such as health are also positive. These are further discussed in reference 8 of this submission. These initiatives will continue as governments continue their quest to achieve better value for money outcomes.

Most project procurement and delivery has however yet to address the need for urgent correction of the cost to productivity ratio. Costs, especially wages and salaries continue to be absorbed with little if any productivity improvement. The cost of projects being delivered across the nation is highly variable. Establishing productivity direction and measures is the first step in turning these burdens on project cost around. Measures described in this submission have direct correlation with reduced disruption and movement to address the Australian construction industry's unchecked costs.

Placing measurable productivity requirements as a pre-requisite of future wage and salary increases will have a seminal effect across all aspects of the industry. They will do more to install client and investor confidence to undertake new public and private sector infrastructure projects than any other medium term initiative available to the Commission and the Commonwealth government.

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David is an independent industry advisor and advocate for Australia's construction and housing industries to investigate more productive ways of operating to ensure their future viability. He has extensive industry experience. Through his web site at www.constructionedge.com.au He conducts wide ranging conversations about Australia's construction future, its challenges and presents examples of organisations leading the way. He has previously commented on the need for a national agenda for the construction industry beyond 2013 and the need for better public accountability for delivering value for money.