Austrade Submission

Productivity Commission Inquiry into public infrastructure and the ways to encourage private financing and funding for major infrastructure projects, including issues relating to the high cost and the long lead times associated with these projects.

Closing date for submissions: 23 December 2013

Please note the information contained within is primarily based on information derived from ongoing engagement and discussions with international infrastructure companies, professional service providers to the infrastructure industry in Australia and Australian government agencies (both state and federal). Austrade is a government funded trade and investment promotion body and not an infrastructure specialist organisation. As such Austrade is not in a position to make claims regarding the veracity of the information contained but has sought to illustrate areas of commonality in the feedback received.

Australian Government
Austrade

23rd December 2013

TABLE OF CONTENTS

TABLE OF CONTENTS 3
EXECUTIVE SUMMARY 4
CONTEXT / BACKGROUND 5
  Case Study One: Legacy Way Brisbane 7
  Case Study Two: The Victorian Comprehensive Cancer Centre (VCCC) Project 8
  Case Study Three: 99 Year Lease of Ports Kembla and Botany 9
  Case Study Four: Australian Infrastructure Capability Globally 11
ISSUES 13
    Perceived predisposition to shortlist locally proven companies 18
    Relative difficulty finding suitable local consortium partners and subcontractors 19
    Perceived preclusion of international capability by accreditation and prequalification processes 20
    Sovereign risk considerations 22
ATTACHMENTS 25
  Attachment 1/. Engineering News Records Top 250* Global Contractors 25
  Attachment 2/. A Global View of Tier 1 Markets Provided by Austrade 28
  Attachment 3/. Australia's Services Export Statistics relating to Major Infrastructure 32
  Attachment 4 /. Comparison of International Markets Procurement Processes 34

EXECUTIVE SUMMARY

Austrade (the Australian Trade Commission) is the federal government's trade, education and investment promotion arm that also has responsibility for tourism policy, programs and research. Major infrastructure is a national investment priority. In partnership, Austrade and the Department of Infrastructure and Regional Development are jointly promoting and attracting major infrastructure investment into Australia to drive future growth and productivity in the economy.

Industry contacts advise Austrade that the Australian major infrastructure construction market is dominated by two companies- the Leighton Group and Lend Lease Corporation Ltd. Both appear well regarded in the industry, with the size, capabilities, experience and networks to deliver major infrastructure projects in Australia.

Nevertheless, Austrade - through its work in investment attraction - considers Australia has not yet fully reaped the benefits of international participation in major infrastructure delivery and financing in Australia. This is despite the gains broader participation would offer, as illustrated by the Legacy Way Project in Queensland and the 99 year lease of Ports Kembla and Botany in New South Wales.

International infrastructure companies advise Austrade that the issues constraining greater international participation in the Australian infrastructure sector are:

1. The relatively high cost of tendering in Australia;
2. A lack of transparency and comprehensive coverage of the Australian infrastructure pipeline;
3. Perceptions of institutionalised "status quo" bias in Australia; and
4. Possible sovereign risk considerations. (These are not confined to developing countries and can affect Australia.)

To address these issues, Austrade recommends consideration be given to greater international exposure, awareness and engagement at both an industry and policy level by:

- Continuation of the investment attraction and promotion strategy for major infrastructure with an expansion to include the global supply chains of international infrastructure companies;
- Continued support to Australian infrastructure-related companies and educational institutes to internationalise their businesses;
- The formation of an "Australian infrastructure alumni" to reconnect with expertise abroad;
- Benchmarking tender processes and costs in Australia against international best practice with a view to "removing red tape" and streamlining processes;
- Garnering support from international company head offices for their local offices to more fully compete in Australian public infrastructure, including the provision of tendering master classes;
- Ensuring there is a single source, transparent, cross jurisdictional (federal and state) commitment to an infrastructure pipeline profiling tool, including profiling privatisations;
- A state-focussed outreach programme promoting the benefits of international competition;
- Identification and mapping of potential local partners for international companies;
- Reviewing the way "Federal Safety Commission Accreditation" recognises global experience;
- Enhanced awareness that sovereign risk considerations may apply to developed countries like Australia, with consultation and predictability enhancing the likelihood of future investment.

CONTEXT / BACKGROUND

Austrade is the federal government's trade, education and investment promotion arm that also has responsibility for tourism policy, programs and research. Austrade is part of the Foreign Affairs and Trade Portfolio. Austrade's Investment Division promotes foreign investment into Australia in areas of national importance. Investment promotion and attraction is typically undertaken by Austrade internationally with Australia-based facilitation of investment delivered by, or with state government investment promotion agencies.

Major infrastructure has been identified as a national investment priority. This was established via an inter-departmental committee process in 2011, announced publicly by the then Prime Minister, and reaffirmed by the current Government. The "Major Infrastructure Investment Priority" positions Australia as a preferred infrastructure investment destination by a whole-of-government approach to world class infrastructure players. It aims to increase economic growth and productivity by promoting investment in design, construction, operation and financing of Australia's major infrastructure.

Austrade and the Department of Infrastructure and Regional Development (the Department) have entered into a five year "Agency Partnership Agreement" to promote and attract Foreign Direct Investment into Australia jointly. This partnership is underpinned by the Foreign Direct Investment (FDI) Promotion and Attraction Strategy for Major Australian Infrastructure 2012-17. Austrade and the Department work with other stakeholders, including Infrastructure Australia and state and territory governments, to deliver the key objectives of the strategy.

The ultimate objective of the Strategy is to drive future growth and productivity in the Australian economy through the promotion of increased FDI in Australia's major infrastructure industry by:

- Increasing competition in the design, construction, operation and financing of infrastructure to drive value for money for government and lift Australia's economic productivity;
- Filling gaps in existing Australian infrastructure capability by increasing technology, capability transfer to Australia and providing for innovation;
- Sustaining and building on employment opportunities and skills;
- Bringing commercial opportunities to fruition in Australia by accessing of global supply chains;
- Increasing the availability and options for financing Australian infrastructure projects including international superannuation, pension, other funds and alternative debt solutions; and
- Delivering market and policy insight regarding global best practice in public infrastructure.

The Strategy focusses on public infrastructure and has identified a number of priority markets which are the most aligned with the above objectives. The priority markets are:

Construction					
Tier 1*	Spain	France	Italy	USA	South Korea
Tier 2*	Canada	China/HongKong	Japan	India	Germany
Finance					
Tier 1*	UK	Canada	Japan	USA	UAE
Tier 2*	South Korea	China/HongKong	India		

*Tier 1 markets are the main focus of the strategy's proactive activities with tier 2 markets being those with a more reactive focus.

BENEFITS OF GREATER INTERNATIONAL PARTICIPATION IN AUSTRALIAN INFRASTRUCTURE

The Australian major infrastructure construction market is dominated by two companies- The Leighton Group and Lend Lease Corporation Ltd. Austrade's contact with industry is extensive and anecdotally both are well regarded in the industry and have the size, capabilities, experience and networks to deliver major infrastructure projects in Australia. Leighton Group ranks 11th on the Global Contractors Top 250 List for Engineering News Record (ENR) in 2012 whilst Lend Lease Corporation ranks 26th. The only other Australian company listed in the "ENR Top 250" is Worley Parsons listed at 138th (*refer attachment 1 for the Top 100 Global Contractors List according to Engineering News Record)*. This is despite Australia being the 12th largest economy globally and having what is regarded by industry as a globally significant infrastructure pipeline.

Austrade has been actively working to identify markets with global capability in major infrastructure design, delivery, financing and funding. A global view of these Tier 1 markets is provided by Austrade in attachment 2. The Australian economy has benefited from the introduction of global capability. Other markets have also benefited from the export of Australian infrastructure capability and talent with Australia particularly well regarded by international counterparts for "Public Private Partnership" delivery.

Due to a range of reasons that will be explored in this submission, Austrade considers Australia has not yet fully reaped the benefits of international participation in major infrastructure delivery and financing in Australia. Industry advises Austrade the benefits to Australia of greater international participation are typically:

- Greater competition delivering better value for money outcomes;
- Access to innovation, global best practice and capital;
- Access to / and profile in global supply chains; and
- Enhancing interest and capability of local firms to deliver and finance Australian infrastructure.

For example, a senior official from a state government informed Austrade in 2013 that they consider the bids submitted for a significant state project were well below the cost that was anticipated and budgeted and they consider this was due to competition introduced by international constructors to Australia.

These benefits are demonstrated by the use of case studies involving international and Australian companies that Austrade has worked with under the major infrastructure investment priority.

Case Study One: Legacy Way Brisbane

This AUD1.5b Brisbane City Council project is a design, construct, maintain & operate contract for a twin 4.6km toll road tunnel. The winning Transcity Consortium comprised of BMD (QLD), Ghella (Italy) and Acciona (Spain). Construction commenced 2011. Competing consortiums were:

- Northern Direct – a joint venture of Bouygues (France), Laing O'Rourke (UK), Transfield Services
- LBRJV – a joint venture of Leightons, Baulderstone (part of Lend Lease) and Razel

Industry sources advised Austrade that Transcity was more than AUD100m below other tenders.

ACCIONA Australia was subsequently announced winner of the "Lord Mayor's 2012 Award for Business Innovation". The award citation advised ACCIONA used a number of approaches that reduced cost, minimised environmental impact and increased efficiency such as the use of a spoil conveyor tunnel from Toowong to Mount Coot-tha Quarry Brisbane, eliminating 96,000 haulage truck movements.

Inside Legacy Way in Brisbane, where tunnel backfilling is underway.

Lord Mayor Graham Quirk said *"ACCIONA's drive to constantly find new and better ways to operate is evident in its design and construction of the Legacy Way road tunnel"*. ACCIONA was also a finalist in the "Energex Award for Sustainability in Business" and the "Award for New Investment".

This project also received international recognition for "A World Record for Tunnel Boring Machine (TBM) Performance" and the "2013 International Tunnelling Project of the Year".

Legacy Way wins world tunnelling award Marion Lopez 27 Nov 2013 http://www.constructionindustrynews

BRISBANE'S Legacy Way project has won the major tunnelling project of the year (over $500 m) at the International Tunnelling Awards held in London yesterday.

The $1.5 billion, 4.6km road tunnel stood out from the crowd for the innovative design and tunnelling methods managing contractor Transcity used to deliver the project. Transcity was a joint venture between Spanish tunnelling and civil infrastructure giant Acciona Infrastructures, Italian tunnelling specialist Ghella and Brisbane local experts BMD Constructions. In particular, the project was recognised for its record speed boring, with the best excavation month allowing one of the two tunnel boring machines to progress 858.1m. Transcity project director Fernando Fajardo said record speed was a major factor in Legacy Way taking the coveted award. "At Legacy Way we have been able to achieve a record 49.68metres excavation in a 24-hour period, 258.3metres in a week and 858.1metres in one month," Fajardo said. "Our tunnel boring machines completed their tunnelling journey 3 and 6 months ahead of schedule, records such as these have not been seen anywhere else in the world using 12.4 metre diameter TBMs." Another technical aspect of the project that was deserving of the award was the cut and cover structure and its double application. In fact, it was built as a permanent structure of the tunnel to link it to the surface but also used to disassemble the two large TBMs onsite. Fajardo said yesterday's win was a "fantastic achievement" for the project partners. "We are very proud of Transcity's achievements in delivering Legacy Way through many innovations in safety, design and construction since works began in early 2011," Fajardo said. "Through the hard work and dedication of the entire Transcity team, we have been able to achieve great success." Legacy Way was funded by Brisbane City Council. Brisbane Lord Mayor Graham Quirk said Transcity's win at the International Tunnelling Awards came as no surprise. "Council takes great pride in its reputation as Australia's new world city and the world-class construction being delivered on Legacy Way is a credit to the work being undertaken by Transcity," Quirk said. "The appointment of Transcity to design and build Legacy Way has brought a wealth of international experience and expertise to Brisbane to deliver this vital project for the city's transport network." The project placed Australia on the world map of tunnelling excellence and ahead of China and America in the major projects category. It beat Atkins' West Island Line tunnels project in Hong Kong, as well as Bouygues' Port Miami tunnel in Florida. Also Legacy Way was the only Australian tunnel shortlisted

Legacy Way Brisbane highlights the:

- Potential for budgetary savings from competition (anecdotally reported to be more than AUD 100m);
- Innovation and global best practice introduced by the international consortium members such as drilling capability that has broken world records and spoiler tunnels to remove waste;
- International recognition and profile such as winning an international tunnelling award in 2013;
- Enhanced interest and capability of Australia infrastructure players with two international firms from Spain and Italy partnering with a mid-tier Australian firm BMD.

Case Study Two: The Victorian Comprehensive Cancer Centre (VCCC) Project

The State Government of Victoria contracted the Plenary Health Consortium to design, build, operate and maintain the AUD1.27b VCCC in Melbourne. This facility unites three health care service providers under one roof and links cancer services at the Royal Women's Hospital, Royal Children's Hospital, and Royal Melbourne Hospital, which is also adding five new floors. Project completion is planned for late 2015. The Plenary Health Consortium comprised of:

- Construction services - Grocon (Australia) and PCL (Canada);
- Facilities management - Honeywell (USA);
- Equity finance - Plenary Group (Australia), Partners Group (Switzerland) & Unisuper (Australia);
- Debt financing by National Australia Bank (Australia), Export Development Canada (Canada), Mizuho Corporate Bank (Japan), Bank of Tokyo-Mitsubishi (Japan), United Overseas Bank (Singapore), and BOS International (UK), CARE Super (Australia), Health Employees Superannuation Trust Australia (Australia), and Industry Funds Management (Australia).

Other bidding consortiums were:

- Aptus Health (comprising Brookfield Multiplex, Acciona Spain and Macquarie Bank); and
- Nexus Partnership (Bilfinger Berger- Lend Lease, Bovis Lend Lease and Royal Bank of Scotland).

VCCC represents the first time PCL has worked in Australia and stems from PCL delivering PPP projects with Plenary in Canada. Plenary advised "This strong business relationship established the framework to tackle this Australian venture. " PCL advises the PPP model used on VCCC transfers risk from government to private sector, resulting in significant opportunity for innovation in design, construction, financing, asset management, and delivery of construction services. The risks of operating, maintaining, designing, financing, and delivering the project have almost completely shifted to their consortium. As a result, the project will be brought in with a high level of certainty for cost, quality, program, and service over the 25-year concession. Additionally, PCL and Grocon have committed to achieving a target of 92% local content for the building and construction.

A state government official informed Austrade they welcomed PCL's entry to the market due to lack of local competition and capability vis-a-vis the emerging pipeline of health infrastructure projects.

The project is also receiving international recognition as the below states:

VCCC Project wins award (10 July 2013) www.vcccproject.vic.gov.au/News
The VCCC Project has recently been awarded 'Best International Health Care Project - Infrastructure Investment' at the World Finance Magazine awards in London. The World Finance Magazine awards recognise industry leaders and projects that represent the benchmark of achievement and best practice. As peer nominated and voted awards, the recognition of the project is an outstanding achievement to all who have been involved and contributed to its development.

The VCCC Project highlights the:

- Innovation and global best practice driven by combining local and international experience (as seen in other markets like the PCL and Plenary partnership in Canada);
- International profile through peer recognition at the 2013 World Finance Awards; and
- Enhanced interest and capability of Australia players in Australian infrastructure finance by multiple Australian superannuation funds partnering with international players.

Case Study Three: 99 Year Lease of Ports Kembla and Botany

The New South Wales' (NSW) Government sold a 99 year lease for Ports Botany and Kembla in 2013 with a large proportion of the capital raised to be recycled back into NSW greenfield infrastructure projects. The final sale price of AUD5.07b exceeded market and government expectations of AUD3.5b. This was primarily due to significant competition including an international bidding contingent partnering with local investors. International bidders included:

- Alberta Investment Management (Canada);
- Canada Pension Plan Investment Board (Canada);
- Ontario Teachers' Pension Plan (Canada);
- Borealis Infrastructure, a unit of the Ontario Municipal Employees Retirement System (Canada);
- Tawreed Investments Limited-subsidiary of the Abu Dhabi Investment Authority (Abu Dhabi);
- QSuper's investment - managed by Global Infrastructure Partners (USA); and
- Citi Infrastructure (USA).

Austrade has been working with infrastructure financiers in North America and the Middle East for a number of years. In part, the international participation above reflects Austrade and other efforts to profile the Australian infrastructure opportunity. News article extracts related to this deal follow:

The Wall Street Journal: GIP no longer leading ports consortium, Gillian Tan, March, 2013

GLOBAL Infrastructure Partners is no longer leading a consortium bidding in a $US3 billion ($2.9bn) auction of state-owned Australian ports, in a move that may raise questions about its long-term commitment to a deal. The Wall Street Journal reported in December that shortlisted parties for leases attached to Port Botany and Port Kembla in NSW included four Canadian pension funds. One consortium includes Alberta Investment Management, Canada Pension Plan Investment Board and Australia's QIC. Another comprises Ontario Teachers' Pension Plan, Borealis Infrastructure, a unit of the Ontario Municipal Employees Retirement System and Australia's Hastings Funds Management. A third group, which includes Australia's Industry Funds Management and GIP, also aims to lodge a final bid by early next month. That's despite GIP's reduced commitment to the consortium.

NSW Treasurer Mike Baird has estimated that leasing the ports will raise about $2.8bn to fund Australian infrastructure such as highways and rail lines. Port Botany -- the main gateway for sea freight to Sydney -- is tipped by the government to fetch $2.3bn and Port Kembla, which handles large volumes of coal, could sell for about $500 million. Morgan Stanley is managing the sale process for the government. GIP manages more than $US15bn on behalf of its investors and focuses on infrastructure assets in the energy, transport, waste and water sectors across developed and emerging markets.

Last month Industry Funds Management announced it had raised $US2bn for a global infrastructure fund from notable North American pension funds, including Massachusetts Mutual Life Insurance, California State Teachers Retirement System, Florida State Board of Administration, Maine Public Employees Retirement System, Nav Canada Pension Plan and the Virginia Retirement System.

Sydney Morning Herald: Port leases garner $5 billion windfall for state government, Sean Nicholls April 2013

The privatisation of Port Botany and Port Kembla will deliver $5.07 billion to the NSW government, to be spent on infrastructure projects including the planned WestConnex motorway and an upgrade to the Pacific Highway.

Treasurer Mike Baird announced on Friday that consortium NSW Ports had agreed to pay $4.31 billion for Port Botany and $760 million for Port Kembla for a 99-year lease. NSW Ports is comprised of three Australian firms, Industry Funds Management, Australian Super and QSuper, and Tawreed Investments, a wholly-owned subsidiary of the Abu Dhabi Investment Authority. After debt is repaid, net proceeds are $4.3 billion, which will be funnelled into the state government's investment fund, Restart NSW. There will also be an annual lease payment of around $5 million.

The result is significantly more than the $3 billion previously anticipated from the sale, which was announced in last year's budget. Mr Baird said the price was 25 times annual earnings from the ports and ''comfortably exceeds'' their retention value. He said the transaction meant that the government's $1.8 billion commitment to the $10 billion WestConnex motorway between the M4 and Port Botany was funded. In addition it would provide $400 million for the Berry bypass on the Princes Highway, $170 million to the Princes Highway, $135 million for the ''Bridges for the Bush'' program and a further $100 million to projects in the Illawarra region.

''It's the largest ever NSW government asset transaction in terms of net proceeds,'' Mr Baird said…………………The chief executive of Industry Funds Management, Brett Himbury, said local investors made up 80 per cent of the consortium, including the superannuation funds representing five million Australians. ''This is a fair outcome for everybody,'' he said. ''Clearly the state has benefited with that $5.07 billion. We are nonetheless confident that with a 99-year lease and, as long-term investors, there will be good long-term returns.''

The 99 year lease of Ports Kembla and Botany highlights the:

- Competition and increased returns to government that international investors can assist in delivering. (In this case, there were 4 Canadian, 2 American and 1 Middle Eastern firm(s) in the bidding consortia);
- Availability and interest in Australia from significant international pools of capital;
- Potential for bidding consortia with both local and international players to help facilitate a transfer of global knowledge and capability;
- Important role that can be played by international players to deliver and share the risk of historically significant deals -*"It is the largest ever NSW government transaction, in terms of net proceeds,"* noted NSW Treasurer Mike Baird (April 2013).

Case Study Four: Australian Infrastructure Capability Globally

Austrade posts widely report the presence of Australians and or Australian educated professionals throughout the international infrastructure industry. Australian nationals are particularly prevalent in the infrastructure finance industry in part due to the relatively high regard with which Australia is held:

> *A key factor underpinning its (Australia's) attractive operating market is the strong platform it provides for Public Private Partnerships (PPP). Australia has one of the world's most mature PPP markets and over the last two decades has pioneered the delivery of complex PPP projects, developing a model that other countries, notably Canada, have sought to emulate.*
> *Business Monitor International- Australian Infrastructure Report 2012*

Australian tertiary and vocational institutes are well regarded globally in major infrastructure related fields like engineering with two major ranking studies listing six institutions in their global top 100 lists.

Times Higher Education World University- Engineering Related Discipline Global Ranking 2013-14		**QS World University Global Rankings by Faculty 2013 - Engineering and Technology**	
Rank	Institute	Rank	Institute
32	University of Melbourne	32	University of Melbourne
43	University of Queensland Australia	34	University of New South Wales
49	Monash University	47	The University of Queensland
50	University of Sydney	50	University of Sydney
68	University of New South Wales	51	Monash University
99	University of South Australia	64	Australia National University

Australia's well regarded educational reputation translates into a significant number of engineering and related studies course completions by international students as the below demonstrates:

Engineering and Related Technologies - Course Completions for International Students in Australia						
Level of Course	% Total International Student Course Completions(all disciplines)	2012	2011	2010	2009	2008
Bachelor's Pass	6%	3095	2,948	2,596	2431	2439
Master's by Coursework	7%	2259	2,785	2,660	2346	2188
Doctorate by Research	20%	457	385	317	226	184
Bachelor's Honours	24%	371	373	316	158	145
Diploma (AQF)	5%	360	404	295	236	316
Associate Degree	23%	124	31	52	30	32
Master's by Research	33%	112	121	97	86	101
Grad.(Post) Dip. - new area	3%	75	86	74	62	71
Graduate Certificate	3%	72	113	87	71	69
Grad.(Post) Dip. - ext area	8%	70	133	117	108	101
Advanced Diploma (AQF)	6%	21	26	np	61	39
Higher Doctorate	0%	0	0	0	0	0
Doctorate by Coursework	0%	0	0	< 10	0	0
Postgrad. Qual/Prelim.	0%	0	0	< 10	0	0
Bachelor's Graduate Entry	0%	0	0	0	0	0
Other undergrad. award courses	0%	0	0	0	18	16
TOTAL	**7%**	**7016**	**7,405**	**6,655**	**5833**	**5701**

Source: Department of Industry [Higher Education Statistics]

Aspects of particular note are:

- The long term growth of engineering and related technology disciplines in international students completing studies in Australia of 23% over the 5 years to 2012;
- 7% of all international student course completions are in engineering and related technology disciplines; and
- The areas of higher studies in engineering related fields such as Doctorates and Honours degrees are leading areas of both growth and course completions.

Australia's infrastructure industry is also an important export earner achieving over AUD1.5b for Australian businesses in 2012-13 as the below table shows. However, it should be noted that, the "design and engineering sector" is the major contributor and growth in exports for this sector has been limited over the last 5 years due to a range of factors including:

- Significant domestic infrastructure opportunity over the same period drawing attention back to the domestic market;
- The global financial crisis muting global demand and increasing global competition for projects; and
- A relatively high Australian dollar curtailing Australian competitiveness.

Australian Bureau of Statistics

5368055003 - International Trade in Services by Country, by State and by Detailed Services Category, Financial Year, 2012-13

Table 5.5 International Trade in Services, Credits, Financial Year by Country & Service, $m

All Countries	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**
Total all countries **Construction**	22	103	128	68	79	31
Total all countries **Architectural, engineering, scientific and other technical services**	1,626	1,678	1,931	1,953	1,832	1,626

(refer attachment 3 for a fuller listing of ABS statistics on these services exports)

Recommendations

As each of the four case studies highlight, encouraging international participation increases Australian governments' return on investment and is typically done alongside and in conjunction with, local capability. Austrade has also worked with the companies and institutes profiled in these case studies over a number of years. As a result Austrade recommends consideration be given to:

- The continuation of the "promotion and attraction inward investment strategy" for international infrastructure capability as it is delivering outcomes for Australia in the form of international practices being introduced to the local market;
- Australia continuing to assist Australian infrastructure related companies and educational institutes with dedicated trade and educational promotional streams to give these organisations exposure to international markets, customers, players and global practices; and
- the formation of an "Australian infrastructure alumni" targeting international students (from infrastructure related professions that studied in Australia) and Australians that have taken their infrastructure expertise abroad so Australia can access this "home-developed" expertise.

ISSUES

In implementing the "Major Infrastructure Investment Priority", Austrade deals with international infrastructure players across Western Europe, North America, Asia and the Middle East. Based on widespread feedback from these international infrastructure companies to Austrade, the issues constraining Australia benefiting from greater international participation in the Australian infrastructure sector are:

- The relatively high cost of tendering in Australia;
- The transparency and coverage of the Australian pipeline;
- A perception of institutionalised "status quo" bias in Australia; and
- Some sovereign risk considerations.

These will be explored in more detail on the following pages.

Before doing so, it is worth noting that:

- Austrade approached a number of international infrastructure companies to raise awareness of the Productivity Commission Inquiry and to encourage their input;
- The international infrastructure companies approached were largely reluctant to make public submissions to the Productivity Commission. The reasons cited included:
    - the consortium driven nature of the industry (i.e. international players typically need to work with the local industry) and did not wish to jeopardise future relationships.
    - the potential for a major customer (i.e. the government awarding the contracts) to be criticised in the submission process.
    - the relatively short lead time given for submissions combined with a relatively large amount of business development work to be completed before the Christmas shut down.

  Importantly, those Austrade spoke to stressed the above does not mean implicit support of the current system but simply reflects commercial realities; and
- As with any subject, there are divergent views on some topics. In such cases, the submission by Austrade has endeavoured to reflect the most commonly held views.

The relatively high cost of tendering in Australia

Austrade deals primarily with the larger infrastructure constructors and financiers in each Tier 1 market. These companies generally have exposure and experience in multiple countries' infrastructure markets.

Without exception, international constructors advise Austrade that tendering in Australia is expensive with a number of these constructors claiming Australia is the most expensive jurisdiction to tender in globally. Austrade has been advised by those same companies that this is in part (but far from fully) explained by the relatively large size of Australian contracts awarded.

For example, a European company (with operations in over 20 countries and that is undertaking work in Australia currently) advised Austrade in 2013 that Australian bid costs are double the second most expensive country they operate in.

International constructors advise Austrade their head offices view these high bidding costs as an opportunity cost vis-a-vis forming bid teams for other jurisdictions' projects. This reflects that these head offices are ultimately taking a global view and comparing opportunities in multiple countries. For example a state government official informed Austrade in 2013 that an international construction firm, despite having well suited capability, declined to submit a bid for a state based project due to the significant resources this single project would divert from other bids they were working on currently in other markets. Apparently, this firm's decision was in part informed by the significant resources this company had devoted to another Australian project bid in the same state earlier in 2013 that had been ultimately unsuccessful.

The issue of high bid costs relative to international companies' Australian office budgets is exacerbated by international players typically establishing representative offices in the first instance in Australia. This is done before committing more substantial resources to the market without a contract. This is a standard market entry model driven by commercial considerations however it results in Australian representative offices often being largely dependent on head office budget allocations to cover tender costs.

International players advise Austrade they believe the causes behind the relatively high cost of bidding in Australia are:

- Australian tenders are quite prescriptive and process rather than outcome-focussed;
- A high level of detail at the early bidding stages is required relative to other markets. This typically involves substantial input at an early stage from local consultants and local technical expertise providers which drives up the costs of tendering. International constructors advise Austrade this technical expertise is typically 30% more expensive than their home markets and this is reflected in their bid costs;
- The relatively high Australian dollar and domestic labour costs; and
- Construction/engineering companies and government departments are in competition with the resources sector for skilled labour which is making construction skills more expensive.

Austrade notes that some of the lodged submissions to the Productivity Commission advise high tender costs are exacerbated by poorly developed projects by government agencies prior to tender. This view is supported by a number of international players including by senior executive of a North American company who advised Austrade in 2012 that there is a preference by project directors in Australia to push design onto each bidding consortium. In their view a more cost effective option is to provide a base set of designs and ask consortiums to bid on these and/or make suggested improvements to the design rather than transfer a significant share of the initial design risk onto bidders. The current approach, in their view, elevated design costs in Australian tender processes.

Linked to this, international constructors, especially from Europe, have advised Austrade they find the "expression of interest" stage of tendering relatively intensive compared to other markets and that they do not always understand the level of complexity and response required by Australia.

A number of international construction firms have also advised Austrade of a shortage of technical skills, labour and union influence as being a cost barrier to entry in Australia.

Findings:

- International companies advise Australia is a relatively expensive jurisdiction to tender in, compared to other markets, due to:
    - relatively prescriptive approach taken by Australian governments running tenders;
    - the relatively high level of detail expected early in the tender process;
    - a significant share of the design burden being placed on tenderers compared to other markets; and
    - the relatively expensive cost of inputs by local skilled service providers such as consultants.
- International constructors are dependent on head offices for allocation of budget to bid and these same head offices are often considering the opportunity cost of a single Australian tender vis-a-vis multiple other tender submissions; and
- Early stages of tendering, such as the "Expression of Interest" stage, are less familiar and more intense than other markets.

Recommendations:

- Australian Government considers benchmarking* tender processes and costs in Australia against international best practice with a view to exploring ways of:
    - "removing red tape" and streamlining the process
    - making Australian tenders less prescriptive and more outcomes based.
    - reducing the amount of detail required especially in the early stages of tendering.
- Australian Government considers promoting to international infrastructure company head offices the size of the Australian infrastructure opportunity and specific project opportunities, with a view to garner head office support for their local bid teams to tender for Australian projects; and
- Australian Government considers providing tendering master classes for international infrastructure companies to more fully understand and appreciate the tender processes in Australia.

**Austrade have provided examples of a range of road, rail and social infrastructure projects from North America, The United Kingdom and Republic of Korea at attachment 3. The examples have been randomly selected and do not necessarily represent best practice or a standardised average in terms of length of procurement process or numbers of bidders. The attachment is intended to assist the Productivity Commission by providing a snap-shot of international practices to establish a global context in which to consider the Australian processes in the infrastructure sector.*

The transparency and coverage of the Australian pipeline

Whilst estimates of Australia's infrastructure pipeline vary, international infrastructure players advise Austrade the Australian pipeline is significant by global standards, especially compared to other OECD countries. The relatively large pipeline represents the long-term growth for infrastructure projects in Australia despite a tapering off from all-time highs in the last 3 years. This tapering off is led by a recent decline in private sector (resources led) infrastructure opportunities. That said the current pipeline remains well above historical long term trends.

Additionally, momentum is building for Australian public asset sales to recycle capital into new "greenfield" infrastructure which is generating international infrastructure financier interest. International companies advise Austrade that ultimately any international interest in Australia is driven by the sustained business opportunity for their company in Australia. In a meeting with Austrade in 2013, a European infrastructure operator advised there were a number of projects to bid on currently, however beyond the short term project pipeline, the medium to long term pipeline was opaque.

An Australian based infrastructure contact advised Austrade the middle size project pipeline (the AUD200-800m range) is very small. They advised these mid-tier projects are an important "stepping stone" for international players to establish local credibility before moving onto larger projects and without these it is often difficult for international companies to break into the market.

Advice to Austrade, from infrastructure players in all tier 1 markets, is that the introduction of the National Infrastructure Construction Schedule (NICS www.nics.gov.au) by the Australian Government to profile the public infrastructure opportunity has been highly regarded and a world first. For example, a key player in the Canadian market (in its own right is regarded as a sophisticated and innovative infrastructure delivery market) said in 2012 Canada was looking to emulate Australia's work in this space.

Administration, in terms of adding project detail to the NICS, is largely performed by state government line agencies. However, there have been instances, especially where there has been no federal funding attached to a project, where projects have not been listed or where the listing was delayed. In other cases, there has simply been a lack of commitment or lack of oversight to ensure all projects are loaded in a timely manner. A recent example included a multi-billion dollar public project currently taking place in Australia where months elapsed before the project was listed on the NICS despite it being promoted internationally by that state government.

Advice from the international infrastructure community, to Austrade, is that the NICS is valued while it remains the definitive and timely single source of public infrastructure opportunities regardless of whether the funds provided are state / federal or both.

Austrade has also received feedback from multiple international infrastructure finance companies that the NICS tends to be greenfield constructor focussed with limited financing opportunities. Nor does it profile approved infrastructure asset sales. All Austrade offices in tier 1 markets have advised this addition would be highly regarded by international infrastructure companies and a useful tool to better profile the Australian opportunity.

A "single source" for the private sector major projects infrastructure pipeline does not exist. International firms advise Austrade this would be valued as international infrastructure players are interested in the whole infrastructure pipeline, not just the public sector component. Austrade acknowledges however this would present significant challenges to compile. International players advise Austrade this part of the pipeline is important as it is often a stepping stone to credential their

Australian capability. International firms also advise that private sector project owners are generally less risk adverse and more willing to consider international capability.

Findings:

- International firms advise Austrade that Australia has a significant infrastructure pipeline by global and historical standards;
- Increasingly, the greenfield and brownfield infrastructure opportunity in Australia is linked as governments are increasingly looking to privatise existing infrastructure assets and recycle the capital raised into greenfield infrastructure projects; and
- International investors advise Austrade their interest in Australia is determined by the business opportunity they can see and ultimately the profitable business they can win relative to the return and opportunity in other markets. A long term, transparent, comprehensive, holistic and real pipeline is an important tool to generate initial and sustained interest in the Australian market. The NICS is well regarded but only partially fulfils this role currently.

Recommendations:

- Consideration be given to cross jurisdictional (federal and state governments) commitment to ensuring the National Infrastructure Construction Schedule (NICS) is the public sector's single source infrastructure pipeline profiling tool;
- Consideration be given to approved government asset sales (privatisations) being similarly profiled whether via the NICS or a linked web based pipeline tool; and
- Consideration be given to profile the major projects component of the private sector infrastructure pipeline.

A perception by international firms of institutionalised "status quo" bias in Australia

International companies advise Austrade that the difficulties facing new entrants to the Australian market can be summed up by the phrase "status quo bias". These companies advise Austrade In a consortium based industry like infrastructure, institutionalised processes and relationships mean established and entrenched players enjoy considerable advantage over new entrants. They advise this is to the detriment of a truly level playing field.

International infrastructure companies advise Austrade the main causes for this 'status quo bias' are as follows:

- Perceived predisposition by project teams to shortlist companies proven only in their jurisdiction, regardless of international capability/expertise/experience;
- Relative difficulty for international players in finding suitable local consortium partners and sub-contractors; and
- Accreditations, enabling companies to be qualified to bid for public projects (such as Federal Safety Commission Accreditation) are perceived by international firms to be skewed towards companies with an Australian project history.

Perceived predisposition to shortlist locally proven companies

Austrade notes some of the submissions lodged with the Productivity Commission advise there is a bias towards government contracting the large Australian incumbents in construction which is driving up costs for government. A number of international constructors have made similar claims to Austrade. For example, an Asian domiciled constructor advised Austrade it was confident it could have delivered a previously contracted tunnelling project in Australia for less than half the cost that was tendered by the winning consortium but believe they were not awarded the contract because of lack of a local partner.

A number of international constructors have also advised Austrade that they consider there has been positive political will at a federal government level that recognises and values their global capabilities. These same companies advise the challenge though is ensuring this recognition is replicated at a "Project Assessment Team" level as currently this is not the case and the majority of projects are awarded and run at a state level.

International constructors advise Austrade that Australian project teams typically have a predetermined number of bidders. Whilst this predictability is welcomed by business it generally means two to three shortlisted consortiums. This typically means one from Leighton, one from the Lend Lease and sometimes an international bid.

Austrade notes some of the submissions lodged with the Productivity Commission advise there is a tendency by government project teams to shortlist two or three companies to proceed to final tender stage typically resulting in:

- Companies meeting selection criteria being excluded due to the exceeding the predetermined number of tenderers allowed to bid; and
- The major Australian contractors dominating the allocated shortlisting places available.

One of these submissions goes on to recommend more places should be opened up for shortlisted companies. The advice Austrade has received from the international infrastructure companies is mixed with:

- More established players in the Australian market generally tending to favour a smaller short list to avoid incurring relatively expensive tender costs where the chances of success are less due to more competitors being still in contention to win the project; and
- Less established players in the Australian market generally favouring a broader shortlisted field to enable these companies to profile their capabilities.

Findings:

- International constructors consider that whilst at a federal government level there is recognition of the global capabilities they can introduce to Australia, this is not replicated at a project team level; and
- International firms have differing views on whether the number of shortlisted consortiums for infrastructure projects should be increased or kept to two or three which is the Australian industry current practice.

Recommendations:

- Consideration be given to undertaking global benchmarking of what is the optimal number of firms to shortlist and if undertaken this should be shared with the states; and
- Consideration be given to an outreach programme being undertaken across state and federal governments to demonstrate the benefits of international competition and capability to the local infrastructure scene by profiling successful projects such as Legacy Way.

Relative difficulty finding suitable local consortium partners and subcontractors

Existing business relationships, the extent of business available and the depth of capabilities in any market, shape the potential partner list for international players in infrastructure. Australia is no different. Industry contacts advise Austrade this is particularly the case in a “group deal”/consortium based industry like infrastructure where the size and complexity of the projects encourage risk sharing and delivery across multiple partners. It is also worth noting that generally speaking industry contacts advise Austrade that Australian infrastructure deals are perceived as larger than other jurisdictions.

Austrade has been informed by international infrastructure players that incumbents with proven track records and existing relationships in Australia use these relationships to preclude possible competitors from their dominant market segment. International infrastructure companies have informed Austrade these relationships in Australia span, but are not limited to:

- Customers;
- Sub-contractors;
- Unions; and
- Banks and other financiers, be they debt or equity.

Several international constructors have advised Austrade that their possible consortium partners are typically restricted to mid-tier: local constructors, subcontractors, and financiers; all of which are limited in number and which can weaken the strength of the overall consortium’s bid.

These views are also reflected by state governments with a state government official advising Austrade that in the operator sector, Australia has insufficient capability and skills to deal with the emerging pipeline and that they had seen instances of the same subcontractors appearing in multiple shortlisted consortiums.

The same concerns arise from the financier space, where a European infrastructure firm, a Middle Eastern Sovereign Wealth Fund and an Asian Bank have advised Austrade that it is difficult to partner with Australian banks due to their existing relationships with the major Australian infrastructure constructors and operators.

Findings:

- It is relatively difficult for international players to identify and partner with suitable local consortium partners; and
- International firms consider that the local mid-tier constructor, technical and sub-contractor base is limited in size and capability.

Recommendations:

- Consideration be given to identifying and mapping potential partners for international players; and
- Consideration be given to targeting broader international expertise into Australian infrastructure such as international players suppliers in their global supply chains.

Perceived preclusion of international capability by accreditation and prequalification processes

International firms advise Austrade that Australia has a number of prequalification and accreditation processes which in some cases have the consequence of limiting international participation.

The major area of concern raised by international constructors, with Austrade, is the Federal Safety Commissioner Accreditation. International constructors advise Austrade this accreditation is required to lead bids on projects with federal funding attached. A number of international companies have advised Austrade the process is cumbersome and tends to eliminate the possibility for international firms (without recognised experience in Australia) to lead public project consortiums in Australia. This is regardless of the depth and breadth of their international business.

This in turn makes the international major constructors dependent on mid-tier Australian constructors (who hold this accreditation) as consortium lead contractors. This forces the international players to use those same mid-tier Australian constructors' systems and processes thus reducing the ability for cost savings and innovation in delivery.

For example, a state government official advised Austrade in 2013 that a European company advised it was preferable to run their own cost structure and project management systems as they feel their Australian partners' systems do not compare favourably and restrict the European company's ability to deliver projects.

In another example, a European constructor advised Austrade in 2013 that it has been partnering with mid-tier local firms to access local knowledge, Federal Safety Commissioner Accreditation and experience in delivering Australian tender documentation in a format that the project teams want. However, they advised that finding competent local companies that wish to partner remains an issue as the international player is at times viewed as a potential competitor despite the significant global expertise it can bring to a consortium. Also they consider that, as the international firms do not lead the consortium, their ability to lead the process is limited in turn limiting their ability to introduce real competition and innovation.

The following information was derived from a meeting with a major Spanish company in 2013. This company is over 100 years old and is one of the largest international concession and construction groups and ranking in top 100 largest international contractors (Engineering News Record Top 225 Lists). It has operations in over 20 countries and it employs over 10,000 staff. The company has operated in Australia for over 3 years, initially as a joint venture. The Australian office serves as the regional headquarters. Austrade has been assisting this company since 2009 including providing advice and assistance with the establishment of their Australian operations. At the point of establishment the company had not won a project in Australia but took a long term view and decided to commit to the market with a small representative office in Australia to bid on projects. Today they employ hundreds of Australian staff and are currently delivering two smaller projects (each less than AUD100m):

The company has advised Austrade it values the opportunity to partner with Australian contractors and is now actively looking at other opportunities in Asia Pacific where they can bring in Australian contractors/partners. They advised Austrade there has been positive political will at a federal government level that recognises and values their global capabilities. The challenge in their view is ensuring this recognition is replicated at a Project Assessment Team level.

A key aspect of their Australian business has been partnering with mid-tier local firms enabling it to access local knowledge, Federal Safety Commissioner Accreditation and experience in delivering Australian tender documentation in a format that the projects teams want. However finding competent local companies that wish to partner remains an issue with their company at times viewed as a potential competitor despite the significant global expertise it can bring to a consortium. That said they remain committed to the Australian infrastructure market.

Specifically on the issue of Federal Safety Commissioner (FSC) Accreditation the company has advised Austrade as follows:

"As you are aware new legislation allows contractors to participate in projects requiring FSCA, when at least one member of the JV has such accreditation. This new situation, at least allows us to participate with a local partner. Obviously this is not ideal because we need to rely on a local partner to invite us to participate meaning we follow rather than lead the process limiting our ability to introduce real competition and innovation. We initiated our application with FSC in early 2012. As per FSC personnel´s indications, the company's systems documentation is ready to be implemented in a project to pass the practical audit to obtain such accreditation.

To implement our system we need to be awarded a project in our own right. All our projects on the ground today have been with local partners and obviously as they have the accreditation they want to use their systems instead to secure the project when tendering. On the other hand, most projects of certain size require FSC accreditation, therefore we are precluded to participate. We have tried to tender small projects, where this accreditation is not requested, finding great difficulty to explain to local or council authorities procuring these projects, why our company (being an major international company) is tendering for such small projects. We also notice local relationships at this level are very important favouring small local contractors to deliver these jobs.

At this point, we haven't been able to secure a project that does not require FSC to implement our systems so they can be audited by FSC. Another option offered to us is to audit another project overseas. This option offers a range of difficulties as follows:

- *Language barriers in documentation being written in other language than English.*
- *Countries, even if documentation is in English, have other local system requirements, therefore documentation has been tailored to deal with such local requirements, that in most cases are quite different than Australian. This option is valid if the company is operating in Commonwealth countries were legislation is similar than Australian and generating similar type of documents. Our company is present in many countries, but most of them are not Commonwealth based countries, so we find difficulties finding the right project that could generate similar documentation to pass the FSC audit"*

These views were also reflected by an Australian based infrastructure consultant. In a 2013 meeting with Austrade they advised international companies entering the market essentially have their global pricing and expertise "diluted" when they are forced to partner with Australian firms. In addition, the need to show references of work completed in Australia makes it difficult for the international firms to compete using their global expertise.

In addition to the above concerns, a European Bank advised Austrade in 2013 that despite being a globally significant institution, its credit rating effectively precluded it during prequalification from offering finance solutions to Australian projects regardless of how small the project was.

Finding:

- International firms consider that Australia's accreditation and prequalification processes preclude international players from introducing competition and innovation into the Australian infrastructure market.

Recommendation:

- Consideration be given to the requirements for, and the way in which the Federal Safety Commission Accreditation is administered to be reviewed with a view to recognising globally significant constructors' experience in similar international markets to Australia.

Sovereign risk considerations

International investors advise Austrade they place a high value on predictability, be that at an enterprise or a sovereign level, as it enables them to plan and assess opportunities and risks accordingly. These firms advise Austrade that international infrastructure investors factor sovereign risk into their planning, especially given the exposed nature of public infrastructure to political factors. These same investors inform Austrade that developed countries like Australia are not immune from these considerations. For example Norway has attracted recent widespread criticism from infrastructure investors when the Norwegian Government decided to revise downwards the tariff rate payable to the owners of recently privatised gas pipelines across Norway.
http://www.bloomberg.com/news/2013-03-15/norway-gas-tariff-cuts-to-lower-income-by-7-billion-funds-say.html
http://www.reuters.com/article/2013/06/27/norway-gastariff-idUSL5N0F30TZ20130627

A number of international infrastructure investors have cited sovereign risk considerations to Austrade when considering investing in Australia. Once again this is due to the exposed nature of infrastructure to sovereign risk. Typically, they advise Austrade that, Australia is still very highly regarded as a stable and transparent investment proposition however actions at a state or federal level may mean an additional return on investment is required by these investors to offset perceived risks from Australia.

Specifically:

- Changes to Australia's with-holding tax regime where the federal government elected to re-raise the with-holding tax rate to 15% from July 1, 2012 has drawn criticism from affected investors including those fund managers that invest in infrastructure; and

- Whilst most recognise it is a country's right to review its tax policies and rates, they advise Austrade that they object to increases that are unexpected (due to being introduced with limited consultation and do not grandfather investments made under the previous regime). The below quote from Jones Lang La Salle sums up the view of most infrastructure investors Austrade deals with:

> *Many global groups today rate Australia as one of the most attractive (real estate) investment destinations because of a robust economy, transparent regulations, high yields, conservative values and a benign supply/demand equation. The recent unexpected increase in the withholding tax rate has jolted offshore investors, but lack of certainty is of greater concern. Goalposts, once shifted, can easily be shifted again. Australia is likely to remain an attractive destination for global capital in the foreseeable future. The notion of taxing foreign investors seems attractive. But policymakers should remember that cross-border investors can walk if they don't like the referee's decisions*
>
> *JOHN TALBOT*
> *MANAGING DIRECTOR, INVESTMENT AND ADVISORY, JONES LANG La SALLE*
> *The Australian* July 07, 2012 12:00AM

Investors advise Austrade they do not differentiate sovereign risk between state and federal levels. This is exacerbated as these same investors are often from jurisdictions without a federated government structure and are unfamiliar with three levels of government that play in the infrastructure space. Austrade has been asked by international infrastructure investors to explain how the operations of three tiers of government work and how should they engage with each level. This included, most recently, two European firms who have been in Australia for a number of years.

Also investors advise Austrade that the actions by one level of government have the potential to impact on how Australia more broadly is perceived. For example: "The NSW Government Sydney CBD Metro", a railway track project running from Rozelle to Central, was announced in 2008. At the time of the cancellation of the project in 2010 there were 5 tenderers who were ultimately partially reimbursed their tendering costs. Despite this reimbursement, Austrade has received numerous comments from international infrastructure constructors on the impact to Australia from a sovereign risk perspective of the cancellation of this project at an advanced stage of tendering.

Findings:

- Investors advise Austrade that the concept of sovereign risk is not confined to developing countries, rather it applies to all countries including Australia. Countries that lack policy and project predictability increase the rates of return investors need to invest in those countries; and
- Sovereign risk considerations are broadly applied to all levels of government be that at a national, state or local level.

Recommendations:

- Consideration be given to consultation with potentially affected international players in infrastructure before policy decisions are made (especially around taxation) to limit unintended consequences and foreshadow possible changes;
- Consideration be given, where possible, to grandfathering provisions being used when changes are implemented; and
- Consideration be given to making state and federal governments aware that policy and project decisions at their level of government can impact on other governments in Australia and the perceived level of sovereign risk.

ATTACHMENTS

Attachment 1/. Engineering News Records Top 250* Global Contractors

*top 100 are listed for brevity - for full list refer to http://enr.construction.com/

THE TOP 250* GLOBAL CONTRACTORS			
RANK		FIRM	2012 REVENUE $ MIL. TOTAL
2013	2012		
1	2	China Railway Construction Corp. Ltd., Beijing, China	84,642.0
2	1	China Railway Group Ltd., Beijing, China	81,805.7
3	3	China State Construction Eng'g Corp., Beijing, China	81,366.8
4	6	Grupo ACS, Madrid, Spain	50,654.6
5	4	VINCI, Rueil-Malmaison, France	50,338.7
6	5	China Communications Construction Group Ltd., Beijing, China	47,327.3
7	7	HOCHTIEF AG, Essen, Germany	36,452.7
8	8	BOUYGUES, Paris, France	33,885.0
9	9	China Metallurgical Group Corp., Beijing, China	31,522.6
10	10	Bechtel, San Francisco, Calif., U.S.A.	29,436.0
11	11	**Leighton Holdings Ltd., St. Leonards, New South Wales, Australia**	23,483.0
12	13	Fluor Corp., Irving, Texas, U.S.A.	22,352.8
13	16	Shanghai Construction Group, Shanghai, China	20,822.4
14	14	Sinohydro Group Ltd., Beijing, China	20,120.1
15	12	STRABAG SE, Vienna, Austria	18,557.0
16	18	Skanska AB, Solna, Sweden	17,217.0
17	19	Obayashi Corp., Tokyo, Japan	15,598.0
18	24	Construtora Norberto Odebrecht, São Paulo, Brazil	14,922.1
19	17	FCC, Fomento de Constr. y Contratas SA, Madrid, Spain	14,869.6
20	15	Kajima Corp., Tokyo, Japan	14,156.4
21	22	Saipem, San Donato Milanese (Milan), Italy	14,039.1
22	20	Shimizu Corp., Tokyo, Japan	13,507.4
23	21	Taisei Corp., Tokyo, Japan	13,336.0
24	23	Balfour Beatty plc, London, U.K.	13,277.0
25	31	Hyundai Engineering & Construction Co. Ltd., Seoul, S. Korea	12,535.1
26	36	**Lend Lease Group, Millers Point, New South Wales, Australia**	11,645.4
27	25	Bilfinger SE, Mannheim, Germany	11,101.3
28	27	Larsen & Toubro Ltd., Mumbai, India	11,091.3
29	33	Samsung Engineering Co. Ltd., Seoul, S. Korea	10,680.8
30	30	Stroygazconsulting LLC, Moscow, Russia	10,601.2

31	26	Takenaka Corp., Osaka, Japan	10,588.0
32	29	Technip, Paris, France	10,547.0
33	28	Royal BAM Group nv, Bunnik, The Netherlands	9,785.0
34	32	Kiewit Corp., Omaha, Neb., U.S.A.	9,600.7
35	**	LLC Stroygazmontazh, Moscow, Russia	8,784.5
36	38	China Nat'l Chemical Engineering Group Corp., Beijing, China	8,725.8
37	39	Daelim Industrial Co. Ltd., Seoul, S. Korea	8,677.0
38	34	GS Engineering & Construction Corp., Seoul, S. Korea	8,470.9
39	41	Samsung C&T Corp., Seoul, S. Korea	8,345.0
40	43	Daewoo E&C Co. Ltd., Seoul, S. Korea	7,639.3
41	**	Shengli Petroleum Admin. Bureau, Sinopec, Dongying, China	7,537.6
42	42	China Gezhouba Group Co. Ltd., Wuhan City, Hubei, China	7,507.3
43	40	OHL SA (Obrascon Huarte Lain SA), Madrid, Spain	6,863.5
44	48	PCL Construction Enterprises Inc., Denver, Colo., U.S.A.	6,841.5
45	35	Dongfang Electric Corp., Chengdu, Sichuan, China	6,836.8
46	47	SK Engineering & Construction Co. Ltd., Seoul, S. Korea	6,718.2
47	52	POSCO Engineering & Construction, Incheon, S. Korea	6,684.5
48	45	Zhejiang Constr. Investment Group Co. Ltd., Hangzhou, China	6,682.9
49	50	Beijing Construction Eng'g Group Co. Ltd., Beijing, China	6,537.5
50	37	KBR, Houston, Texas, U.S.A.	6,070.0
51	70	China Yunan Construction Engineering Group, Kunming, China	5,778.5
52	56	Qingjian Group Co. Ltd., Qingdao, Shandong, China	5,754.0
53	55	Petrofac Ltd., Jersey, Channel Islands, U.K.	5,684.8
54	65	Anhui Construction Engineering Group Co. Ltd., Hefei, China	5,665.1
55	53	China National Machinery Industry Corp., Beijing, China	5,533.2
56	44	Abeinsa SA, Seville, Spain	5,506.3
57	79	Jiangsu Nantong No. 3 Construction Grp. Co. Ltd., Haimen, China	5,402.8
58	51	Consolidated Contractors Group, Athens, Greece	5,378.9
59	128	Salini SpA, Rome, Italy	5,360.3
60	46	Toda Corp., Tokyo, Japan	5,160.0
61	134	Sinopec Engineering (Group) Co. Ltd., Beijing, China	5,122.2
62	49	Kinden Corp., Tokyo, Japan	5,063.0
63	54	Sacyr Vallehermoso, Madrid, Spain	4,722.8
64	57	JGC Corp., Yokohama, Japan	4,602.0
65	74	CB&I, The Woodlands, Texas, U.S.A.	4,415.2
66	60	Acciona Infraestructuras, Madrid, Spain	4,271.6
67	81	China General Technology (Group) Holding Ltd., Beijing, China	4,268.0

68	66	The Shaw Group Inc., Baton Rouge, La., U.S.A.	4,129.8
69	77	Jacobs, Pasadena, Calif., U.S.A.	4,104.2
70	59	Tutor Perini Corp., Sylmar, Calif., U.S.A.	4,095.9
71	62	Clark Group, Bethesda, Md., U.S.A.	4,074.0
72	63	Construtora Andrade Gutierrez SA, Belo Horizonte, MG, Brazil	4,062.5
73	76	Ed. ZÜblin AG, Stuttgart, Germany	4,058.7
74	75	The Walsh Group Ltd., Chicago, Ill., U.S.A.	4,049.0
75	72	China Petroleum Pipeline Bureau (CPP), Langfang City, China	4,035.9
76	86	OAS SA, São Paulo, Brazil	3,892.1
77	71	PORR AG, Vienna, Austria	3,816.5
78	64	Grupo Isolux Corsan SA, Madrid, Spain	3,814.2
79	67	Penta-Ocean Construction Co. Ltd., Tokyo, Japan	3,788.3
80	68	The Whiting-Turner Contracting Co., Baltimore, Md., U.S.A.	3,781.5
81	**	Lotte Engineering & Construction Co. Ltd., Seoul, S. Korea	3,643.1
82	73	Tecnicas Reunidas, Madrid, Spain	3,474.6
83	58	Foster Wheeler AG, Hampton, N.J., U.S.A.	3,414.6
84	108	URS Corp., San Francisco, Calif., U.S.A.	3,309.6
85	**	Maeda Corp., Tokyo, Japan	3,295.1
86	101	Hanwha Engineering & Construction Corp., Seoul, S. Korea	3,147.7
87	82	Construcoes e Comercio Camargo Correa SA, São Paulo, Brazil	3,108.9
88	100	EllisDon Corp., Mississauga, Ontario, Canada	3,105.0
89	84	McDermott International Inc., Houston, Texas, U.S.A.	3,083.7
90	105	Structure Tone, New York, N.Y., U.S.A.	3,079.4
91	61	SEPCO Electric Power Construction Corp., Jinan City, China	3,056.0
92	163	First Solar Inc., Tempe, Ariz., U.S.A.	3,043.1
93	89	Astaldi SpA, Rome, Italy	3,028.2
94	83	Gilbane Building Co., Providence, R.I., U.S.A.	3,026.0
95	91	China HuanQiu Contracting & Engineering Corp., Beijing, China	3,024.6
96	92	SNC-Lavalin Inc., Montreal, Quebec, Canada	3,021.6
97	**	Empresas ICA SAB de CV, Mexico City, Mexico	3,009.0
98	106	McCarthy Holdings Inc., St. Louis, Mo., U.S.A.	3,008.0
99	**	Daqing Oilfield Constr. Group Co. Ltd., Daqing City, China	2,997.0
100	97	CITIC Construction Co. Ltd., Beijing, China	2,964.0

Attachment 2/. A Global View of Tier 1 Markets Provided by Austrade

Europe Snapshot

Europe is well represented by significant players in the global constructor space, with seven European firms in the global top 20 by revenue in 2012, according to Engineering News Records current “Top 250 Global Contractor List” http://enr.construction.com/toplists/Top-Global-Contractors/001-100.asp. Four of these players are in Australia already. The active internationalisation by these top contractors continues to be driven by limited opportunities in markets closer to home.

On the financing side, low interest rates have stalled yields and hindered returns in the Euro zone, prompting institutional investors there to look beyond their own borders to alternative asset classes offshore. Meanwhile, Western Europe’s capital pool is an estimated US$48 trillion, second only to the United States, representing a significant opportunity for Australia to achieve private-sector financing for infrastructure. Spain, in particular, provides active government support for their infrastructure sector with EXIM type bank (Cofides)and The Spanish Trade Commission (ICEX) including Australia as a priority country in their outwards investment support strategy.

United Kingdom Snapshot

In a bid to pump prime the United Kingdom (UK) economy the UK Government has announced the next phase of the “National Infrastructure Plan” including priorities for long-term investment in infrastructure. According to the Treasury, the plan has the following elements:

- A pipeline of public investment in infrastructure worth over £100bn to 2020. The program of capital spending will include £70bn in transport, £20bn in schools and £10bn in science, housing and flood defences;
- Policy reforms to attract new private sector investment in infrastructure including an extension of the UK Guarantees scheme by two years to 2016. The component related to infrastructure is a co-lending scheme (badged by Treasury as the “temporary lending programme”) provides for Government finance to be invested alongside private finance where there is insufficient commercial lending appetite; and
- Improvements in public sector delivery of major projects and programmes by the government will be injecting greater commercial capability into the management of nationally significant projects by the creation special delivery units with commercial expertise in government to drive project management and the establishment of a new Major Infrastructure Tracking Team within Infrastructure UK to improve the monitoring and tracking of performance of major infrastructure projects.

The United Kingdom has a number of constructors interested in the Australian market as well as infrastructure financiers although the financier interest is primarily as indirect investors.

Japan Snapshot:

On the back of Prime Minister Abe's plan, dubbed "Abenomics," Japan is rebounding after decades of little growth. “Abenomics” takes a three-pronged approach to reflate the economy through monetary, fiscal, and structural policies. It includes a large stimulus package worth 20.2 trillion yen ($210 billion) of which 10.3 trillion ($116 billion) would be government spending with a focus on infrastructure. An infrastructure spending stimulus package of ¥10.3 trillion ($104 billion) was passed by the Japanese parliament earlier this year and the government is planning a fresh ¥5 trillion spending package for next year as well. The 2020 Tokyo Olympics is also looming large and tsunami reconstruction work continues. Other government announcements in relation to infrastructure include:

- Promotion of private sector investment in infrastructure (domestic) through use of the concession system under the Public Finance Initiative (PFI) Law;
- Reduction in the cost of servicing infrastructure (domestic) through better management and new technologies; and
- Targets for the export of ¥20 trillion of infrastructure by 2020, through "economic diplomacy" often with significant incentives from the Japanese government.

So whilst the Japanese home market is increasingly attractive for Japanese infrastructure companies, specialist capabilities from Japan such as tunnelling, rail in particular remain of interest to Australia.

In addition, Japan has a substantial private sector savings pool and significant banks active in project financing. The low returns on offer in Japan mean international investment opportunities especially for Australia infrastructure to tap Japanese funds remain significant. Japan also has an active "EXIM bank"(Japan Bank for International Cooperation) looking to take provide concessional finance and support to projects with Japanese supply capability attached.

The Overseas Construction Association of Japan, Inc. (OCAJI) was approached for information for this submission. They advised Austrade that:

In terms of the overseas ratio of revenue for Japanese construction companies that is generated, it is concentrated in Asia where there are many Japanese firms operating.

On the one hand, separate from their work for Japanese firms, in Asia Japanese construction companies are also receiving contract work from local governments, however development of legislation is behind, and securing construction profits comes with a high risk.

On the other hand, Australia is an advanced country with a safe environment and a legislative system already in place so it can be a safe place in which to enter business. However there are fewer Japanese business customers and the Japanese construction companies that could enter the market are small in number.

In addition, we hear that the costs involved to bid for government construction projects are high (consultancy fees are high), the massive amount of documentation required to be submitted during the tender process plus level of fine details etc. means that it is not an easy process to bid.

In the future, if possible, we would definitely like to see the materialization of cooperation in third countries between Australian construction companies and construction-related related firms and Japanese constructors.

In particular, in third countries where Japanese firms penetration is still shallow, unforeseeable risks can eventuate. In circumstances where Australian construction companies have been active over a long period in those countries, we think it would be ideal if mutually complementary relationships for projects could be built with the Japanese construction companies that have advanced technologies in the area of environmental and earthquake-resistant technologies.

Additionally, as Australia has a well- developed international information network, we think that if that information could be shared, an even more cooperative relationship can be strengthened.

Republic of Korea Snapshot

Since the completion of Four Grand Rivers Project by the previous Korean government (late 2012), the current government's focus new is to revitalise Korean economy via creative industry sectors (like ICT, high tech manufacturing, and the service sector). Due to a generally slow economy, continued depressed property market and weakened public sector spending on infrastructure projects, the domestic construction market is experiencing a very competitive business environment. While Korea's GDP growth rate has showed positive growth in recent years (6.3% in 2010, 3.7% in 2011, 2.0% in 2012), construction investment has showed negative growth (-3.7% in 2011, -4.7% in 2011, -2.2% in 2012). Accordingly, the share of construction industry to total GDP has decreased (6.9% in 2005 to 5.3% in 2012).

The planned construction works (rail, roads and other infrastructure) for the 2018 Winter Olympics in Pyeongchang (total U$8.4 bn) and expansion of Incheon International Airport will likely commence in 2014. The domestic environment has seen Korean infrastructure firms looking to diversify initially to support internationally based Korean resources supply chain projects.

Korean financiers have shown some appetite to invest in brownfield Australian infrastructure and that is expected to continue.

United Arab Emirates Snapshot

With a push to diversity income streams by the Gulf States beyond energy and petroleum, the Gulf States have actively used sovereign wealth funds (SWFs) as vehicles for investment. In the infrastructure space a number of these SWFs are a growing source of direct infrastructure finance through direct investment, co-investment, and both unlisted and listed infrastructure funds. Ranked by size of assets under management, the Gulf States are home to seven of the global top 20 SWFs.

Australia faces strong competition for infrastructure investment and has a significant public infrastructure pipeline where private funding is increasingly sought. Other countries (such as the United Kingdom and India) are targeting Gulf investors, including leveraging visits by senior ministers and parliamentarians. Austrade Dubai has advised that Gulf States welcome ministerial visits and have highlighted their importance in enhancing commercial outcomes. Also recent successes such as Abu Dhabi Investment Authority (ADIA) being in the winning consortium for the 99 year lease of Ports Botany and Kembla has received widespread recognition across the region and ensured the Australian infrastructure opportunity remains of interest.

North American Snapshot

<u>USA</u>

With the resurgence of the USA as an energy producer, on the back of shale oil and gas developments, significant infrastructure opportunities in the private sector have re-emerged in the USA market. On the public infrastructure front a significant infrastructure deficit remains. The American Society of Civil Engineers' (ASCE) estimates that USD$2.2 trillion investment is needed to address deficient infrastructure in the USA. However the USA government's ability to finance these projects remains limited.

Significant USA investment in energy and resources in Australia in particular has drawn some USA constructor capability although this has been largely confined to the private sector pipeline. Professional design firms and technical service providers are expressing interest in the Australian market as well. International growth is important to the top 500 United States design firms (architects and engineers) which saw only a 1.6% gain in revenue for domestic projects versus 20% revenue from international markets in 2012 according to the Engineering News Record.

The USA, and specifically New York as the “capital of capital”, remain significant players in the funds side of infrastructure. 12 of the top 30 largest infrastructure investors in 2012 were headquartered in the USA with Global Infrastructure Partners ranking third behind Australian Macquarie Group (top ranked) and Brookfield Asset Management. Typically fund appetite though is not as a lead direct investor but rather indirect or behind another lead financier.

Canada

Canadian infrastructure players are relatively familiar with the Australian market due to a similar industry base, population, geographic size and commonwealth history / legal systems/ government structures. In particular, Canadian pensions funds, which are typically defined benefit, have built significant in-house capability to direct invest into infrastructure. Canadian pension funds have been very active in the Australian infrastructure market. In addition, Canadian constructors such as PCL, through their financier linkages, have started to win some work in the Australian public infrastructure market.

Attachment 3/. Australia's Services Export Statistics relating to Major Infrastructure

Australian Bureau of Statistics

5368055003 - International Trade in Services by Country, by State and by Detailed Services Category, Financial Year, 2012-13
Table 1.9 International Trade in Services, Credits, State by Financial Year, $m - Aust (a) Released at 11.30am 19 /11/ 2013

Australia	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Manufacturing services on physical inputs owned by others	**13**	**45**	**48**	**33**	**21**	**1**
Maintenance and repair services n.i.e.	**103**	**86**	**57**	**49**	**47**	**57**
Transport	**8,513**	**7,433**	**6,275**	**6,412**	**6,331**	**6,032**
Passenger Fares (b)	3,846	3,500	2,693	2,800	2,620	2,332
Freight	1,464	852	438	390	372	341
Other	2,263	2,127	2,188	2,253	2,278	2,305
Postal and courier services (c)	940	954	956	969	1,061	1,054
Travel	**27,189**	**29,824**	**31,124**	**30,582**	**30,439**	**31,233**
Business	2,717	2,687	2,808	3,294	3,864	4,189
Personal	24,472	27,137	28,316	27,288	26,575	27,044
Education-related	12,538	15,245	16,396	15,500	14,711	14,461
Other	11,934	11,892	11,920	11,788	11,864	12,583
Construction	**22**	**103**	**128**	**68**	**79**	**31**
Insurance and Pension services	**339**	**373**	**340**	**352**	**449**	**474**
Direct insurance	187	220	216	221	261	257
Reinsurance	45	50	18	6	16	8
Auxiliary services	85	82	83	100	147	178
Pension services	22	21	23	25	25	31
Financial Services	**1,991**	**1,585**	**1,058**	**1,023**	**1,417**	**2,023**
Charges for the use of intellectual property n.i.e	**817**	**928**	**1,038**	**1,000**	**848**	**807**
Licences to reproduce and/or distribute computer services	185	238	205	230	292	274
Licences to reproduce and/or distribute audiovisual	-	-	-	-	-	-
Outcomes of research and development	148	332	418	370	283	194
Franchise and trademarks licensing fees	24	43	42	45	15	53
Other charges for the use of intellectual property	460	315	373	355	258	286
Telecommunication, computer and information services	**1,871**	**2,079**	**1,745**	**1,713**	**1,638**	**1,799**
Telecommunication services	310	290	233	153	129	211
Computer and Information services	1,561	1,789	1,512	1,560	1,509	1,588
Computer services	1,381	1,497	1,228	1,310	1,264	1,250
Information services	32	36	41	80	66	81
Other services	148	256	243	170	179	257
Other business services	**7,499**	**7,785**	**6,932**	**7,377**	**7,496**	**8,182**
Research and development services	557	613	546	531	494	604
Professional and management consulting services	3,423	3,720	3,105	3,128	3,591	4,110
Legal, accounting, management consulting, PR, other	3,141	3,331	2,761	2,776	3,190	3,447
Advertising, market research and public opinion polling	282	389	344	352	401	663
Technical, trade-related and other business services	3,519	3,452	3,281	3,718	3,411	3,468
Architectural, engineering, scientific and other technical svs	1,785	1,626	1,678	1,931	1,953	1,832
Waste treatment and de-pollution, agricultural and mining svs	396	279	241	308	163	234
Operational leasing services	322	350	389	241	256	300
Trade-related commission services	687	731	529	807	691	665
Other business services n.i.e	329	466	444	431	348	437
Personal, cultural, and recreation services	**690**	**800**	**773**	**828**	**870**	**842**
Audiovisual and related services	215	162	140	167	189	170
Other personal, cultural and recreational services	475	638	633	661	681	672
Government goods and services n.i.e	**775**	**805**	**831**	**862**	**894**	**930**
Total Services	**49,822**	**51,846**	**50,349**	**50,299**	**50,529**	**52,411**

Australian Bureau of Statistics

5368055003 - International Trade in Services by Country, by State and by Detailed Services Category, Financial Year, 2012-13

Table 5.5 International Trade in Services, Credits, Financial Year by Country & Service, $m

Construction						
Countries	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**
Belgium and Luxembourg	-	2	3	-	-	-
Brunei Darussalam	-	-	-	-	-	-
Canada	6	3	-	-	-	-
Chile	4	-	-	-	-	-
China	-	-	7	3	9	-
Fiji	-	-	-	1	2	-
France	-	-	-	-	-	-
Germany	-	-	-	-	-	-
Greece	-	-	-	-	-	-
Hong Kong	-	2	-	-	-	-
India	-	-	-	1	-	-
Indonesia	-	6	np	9	9	-
Ireland	-	-	-	-	-	-
Italy	-	-	-	-	-	-
Japan	-	-	-	17	9	-
Korea	-	-	-	-	-	-
Malaysia	1	-	np	-	2	-
Mexico	-	-	-	-	-	-
Netherlands	-	2	-	3	-	-
New Zealand	-	38	23	5	14	-
Norway	-	-	-	-	-	-
Papua New Guinea	1	-	4	7	5	5
Peru	-	-	-	-	-	-
Philippines	-	-	np	7	5	5
Russian Federation	-	13	-	-	-	-
Singapore	-	16	np	-	-	-
South Africa	-	-	-	-	1	-
Sweden	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-
Taiwan	-	-	-	-	-	-
Thailand	-	-	-	1	-	-
United Kingdom	-	1	-	-	-	-
United States of America	-	5	2	2	1	-
Viet Nam	-	5	np	1	2	1
Africa nes	2	3	2	1	3	5
America nes	-	-	-	1	-	-
Asia nes	5	5	-	5	10	8
Central America and Caribbean	-	-	-	1	-	-
Europe nes	-	-	-	-	5	2
Oceania nes	3	-	2	4	2	6
Unallocated	1	2	4	2	-	-
Total all countries	22	103	128	68	79	31
APEC	11	88	117	50	56	11
ASEAN	2	27	83	18	20	6
EU	-	5	4	3	5	1
OECD	6	51	28	27	28	1

Australian Government
Austrade

Attachment 4 /. Comparison of International Markets Procurement Processes

United Kingdom

Road project in the last 12 months	Actual value of project	Number of initial bidding consortiums	Number of shortlisted consortiums	Time taken from commencement of EOI stage to final awarding of contract	Bid costs of one of the consortiums	Brief 3 point summary of project
Project value up to equivalent of USD100m	USD $68.9m	N/A	6	Date of initial notice unknown Awarded: 21 June 2013	N/A	**A14 at Kettering, Northamptonshire** - Design and build - Widen a 2.8 mile section providing an extra lane in each direction within the existing highway boundary
Project value up to the equivalent of USD500m	USD $476.3m	11	4	Total: 37 weeks	N/A	**A6 to Manchester Airport Relief Road** - 10 kilometres of new 2-lane dual carriageway - incorporates 7 new and 4 improved junctions, 4 railway crossings and a parallel shared cycle/pedestrian path
Project value of up to the equivalent of USD1b	USD $967.3m	6	3	Total: 72 weeks	N/A	**Mersey Gateway Bridge Project** - Design, build, finance and operate a new cable-stayed toll bridge - The new bridge will be designed to carry 3 lanes in each direction.

UK

Rail/light rail project in the last 12 months	Actual value of project	Number of initial bidding consortiums	Number of shortlisted consortiums	Time taken from commencement of EOI stage to final awarding of contract	Bid costs of one of the consortiums	Brief 3 point summary of project
Project value up to equivalent of USD100m	USD $105m	N/A	3	N/A – Awarded: Oct 2013	N/A	**<u>Crossrail Electrification</u>** - Electrification of a 12.5 mile section of the Great Western Main Line. - The contract covers the installation of new overhead line electrification equipment on all lines. - The project also includes supporting ancillary civil and power works.
Project value up to the equivalent of USD500m	USD $164m	5	3	Total: 52 weeks	N/A	**<u>Crossrail Station Upgrades</u>** - Design and upgrade 13 stations on the western section of Crossrail's Acton Main Line to Maidenhead.
Project value of up to the equivalent of USD1b	Initial contract $7.4 b (2012) Contract Extension $1.9b	N/A	3	Competition for project began early 2007 Contract signed: July 2012 Extension of contract: July 2013	N/A	**<u>Intercity Express Programme</u>** - Program to replace the intercity trains running on the rail network in mainland UK with new trains - Department of Transport announced that it will exercise an option to purchase another 270 carriages (representing approximately a further 1.9USD billion investment).

UK

Social Infrastructure project in the last 12 months	Actual value of project	Number of initial bidding consortiums	Number of shortlisted consortiums	Time taken from commencement of EOI stage to final awarding of contract	Bid costs of one of the consortiums	Brief 3 point summary of project
Project value up to equivalent of USD100m	USD $82.2m	Unknown	3	Total: 17 months	N/A	**Inverness College** - 13.3 acre development providing state-of-the-art facilities and modern learning environment for over 8,500 students.
Project value up to the equivalent of USD500m	USD $271.2m	6	3 – only 2 selected to final stage.	Total: 30 months	N/A	**Papworth Hospital** - Design, build and maintain - 310-bed, purpose-built hospital, with virtually 100% single rooms, and a research and education institute on the Cambridge Biomedical Campus. - Construction will commence in autumn 2014 expected completion 2017.
Project value of up to the equivalent of USD1b	USD $683.4m	Unknown	2	Total: 37 months	N/A	**New Royal Liverpool University Hospital** - Design, build, finance and operate a new hospital, under the Private Finance Initiative, to replace the Royal Liverpool University Hospital - The new hospital will be the largest in the country with 646 beds, including a 40-bed Critical Care Unit, 18 operating theatres and one of the largest emergency departments in the North West.

CANADA

Road project in the last 12 months	Actual value of project	Number of initial bidding consortiums	Number of shortlisted consortiums	Time taken from commencement of EOI stage to final awarding of contract	Bid costs of one of the consortiums	Brief 3 point summary of project
Project value up to equivalent of USD100m	CAD $110m	6	3	RFQ: 27 Feb 2009 RPF: Sep 2009	1%	**The Chief Peguis Trail Extension Project** - This new extension will run for a length of 3.7 kilometres in an east-west direction within a designated right-of-way, and will be a four lane, divided roadway.
Project value up to the equivalent of USD1b	CAD $1b	5	3	RFQ: 29 June 2009 RFP: 28 Dec 2009	1%	**The Rt. Hon. Herb Parkway** - Design/Build/Finance/Maintain model - The six-lane, 11 kilometre freeway and four-lane service road will have 11 covered tunnels
Project value of up to the equivalent of USD1b	CAD $1 b	5	3	RFQ: June 8, 2009 RFP: April, 2011	1%	**Highway 407 East Extension** - Phase one extends the highway by about 22 km, including a new 10 km link. - Design/Build/Finance/Maintain model - Phase two will extend Highway 407 East from Brock Road in Pickering all the way to Highway 35/115.

CANADA

Rail/light rail project in the last 12 months	Actual value of project	Number of initial bidding consortiums	Number of shortlisted consortiums	Time taken from commencement of EOI stage to final awarding of contract	Bid costs of one of the consortiums	Brief 3 point summary of project
Project value up to equivalent of USD100m	CAD $128.6m	N/A	1	RFQ: Nov 2010 RFP: Mar 2011	1%	**<u>Air Rail Link Extension – Toronto</u>** - The project will provide a three-kilometre rail line extension to the Air Rail Link and a new passenger station at Terminal 1 of Toronto Pearson International Airport - The ARL will provide an express rail service between Canada’s two busiest transportation hubs – Toronto Union Station and Toronto Pearson. - Design/Build/Finance model
Project value up to the equivalent of USD1b	CAD $1b	N/A	3	RFQ: Oct 2012 RFP: June 2013	1%	**<u>Ion Rapid Transit</u>** - A 19 km, 16 station light rail transit rapid transit system that will serve residents in Cambridge, Kitchener and Waterloo. - The rapid transit system will provide light rail transit (LRT) in two stages. - Design/Build/Finance/Operate/ Maintain
Project value of up to the equivalent of USD2b	CAD $2.1 b	N/A	3	RFQ: Sep 2011 RFP: July 2012	1%	**<u>Ottowa Rapid Transit</u>** - 12.5-kilometre line along the existing Bus Route System (BRT) corridor - Design/Build/Finance/Maintain - 13 stations, including three underground stations.

CANADA

Social Infrastructure project in the last 12 months	Actual value of project	Number of initial bidding consortiums	Number of shortlisted consortiums	Time taken from commencement EOI to final contract award	Bid costs of one of the consortiums	Brief 3 point summary of project
Project value up to equivalent of USD100m	CAD$84.5m	6	3	RFQ: 13 Mar 2012 RFP: 24 July 2012 Awarded: 26 Mar 2013	0.35-1.5%	**Humber College Education facility** - Construction a new facility to accommodate more than 2,200 new students and feature group and independent study space, an expanded library, enhanced student services and a student gallery and showcase - LEED Silver Design/Build/Finance
Project value up to the equivalent of USD500m	CAD $460m	7	3	RFQ: 1 Oct 2008 RFP:29 May 2009 Closed Feb 17, 2010 Awarded: 24 July 2010	0.35-1.5%	**Redevelopment of Women's College Hospital** - P3 project – construction underway with completion 2016 - 630,000 sq. ft. hospital - Consolidation of most hospital services into one location - Design/Build/Finance/Maintain
Project value of up to the equivalent of USD1b	CAD $698m	8	3	RFQ: 24 March 2009 RFP: 17 December 2009 Closed 30 June 2010 Awarded: October 2010	$C2.5-$C3 million Consortium bid	**Redevelopment of St Joseph's Healthcare facility** - Design/Build/Finance/Maintain - Approx.800,000 square feet of new construction, increased capacity of up to 305 inpatient beds and all associated support services; - Expand outpatient clinics for

Notes:

- Most of the rail and road infrastructure projects are large scale, often costing greater than $1 billion CAD. The majority of light rail projects under construction are Greenfield P3s with costs more than C$1 b.
- Bidding cost is roughly 1% of the project cost (as a rule of thumb), although this is highly contingent on project scope and number of players involved. Industry contacts have the perception that bidding costs in Australia is twice that of Canada. However, as Australia's bidding process is clear and defined, the higher bidding costs are justified. They do not say that the bidding process in Australia is difficult.
- Generally 3 companies are short listed.
- As a contrast, in Canada, after the contract has been signed, other issues often arise adding to unforeseen and unplanned project costs.

REPUBLIC OF SOUTH KOREA

Road project in the last 12 months	Actual value of project	Number of initial bidding consortiums	Number of shortlisted consortiums	Time taken from commencement of EOI stage to final awarding of contract	Bid costs of one of the consortiums	Brief 3 point summary of project
Project value up to equivalent of USD100m	Estimated USD 100 m	Unknown (under bidding process): Refer to **Note 2**	Unknown (under bidding process)	Estimated 3 months (from tender opening to bid success)	Please refer to **Note 1**	**<u>Namhansansung Outer Circle Express Way</u>** - Roadworks expanding outer circle road (4 lanes to 6) - Bid Close: December 2013 - Total length of the construction: 3km
Project value up to the equivalent of USD500m	Estimated USD 500 m	N/A (under bidding process): Refer to **Note 2**	N/A (under bidding process)	Estimated 3 months (from tender opening to bid success)	Please refer to **Note 1**	**<u>Daegu Outer Circle Express Way</u>** - Outer Circle Highway surrounding Daegu City (Public Tender) - Bid close - January 2014, tender is open to foreign companies - Total length: 22km
Project value of up to the equivalent of USD1b	KRW 1,061 b (USD 1 b)	270 pre-qualified consortiums and companies (18-36 consortiums per sections, consortiums bid for multiple sections)	9 Consortiums -Section 2: Hanwha -Sections 3 & 9: Samwhan -Section 4: Doosan Construction -Sections 5,6,7 & 10: Ssangyong	2 months (from tender opening to bid outcome)	Please refer to **Note 1**	**<u>Express Way Line no 14</u>**, - Milyang - Ulsan Construction (Turn-key: 9 sections up for separate tenders)Highway linking Milyang and Ulsan (Public Tender) - Project was up for tender in 8 different sections, estimated time of construction: 5 years - Tender was open to foreign companies - Total length of the construction: 45km

REPUBLIC OF SOUTH KOREA

Rail/light rail project in the last 12 months	Actual value of project	Number of initial bidding consortiums	Number of shortlisted consortiums	Time taken from commencement of EOI stage to final awarding of contract	Bid costs of one of the consortiums	Brief 3 point summary of project
Project value up to equivalent of USD100m	KRW 103.7 billion (USD 97 million)	13 Consortiums & individual companies passing pre-qualification	1 Consortium (KCC Construction)	2 months (from opening of tender to bid success)	Please refer to **Note 1**	**<u>Iksan-Daeya Double Track Railway (Phase II)</u>** - Railway linking Iksan and Daeya Cities (Public Tender) - Estimated time of completion: 2018 - Total length of railway: 14km
Project value up to the equivalent of USD500m	KRW 327.7 billion (USD 309 million)	128 (30-34 consortiums per section, consortiums bid for multiple sections)	4 Consortiums -Section 5: Dongbu -Section 6: Halla -Section 7: Jinheung -Section 8: POSCO	2 months (from opening of tender to bid success)	Please refer to **Note 1**	**<u>Busan-Ulsan Double Track Railway</u>** (Turn-key: 4 sections up for separate tenders) - High Speed Railway Construction linking Busan -Ulsan (Public Tender) - Intense competition seen among the domestic construction companies - Total length of rail: 72km
Project value of up to the equivalent of USD1b	KRW 937.5 billion (USD 884 million)	199 (27-34 Pre-qualified consortiums per section, consortiums bid for multiple sections)	7 Consortiums	3 months (from opening tender to bid success)	Please refer to **Note 1**	**<u>Wonju-Kangneung Rail Construction</u>** (Turn-key: 7 sections up for separate tender) - Total length of rail: 120km - High Speed Railway Construction in preparation of 2018 Pyongchang Winter Olympics - Intense competition in the initial bidding process (including international companies)

REPUBLIC OF SOUTH KOREA

Social Infrastructure project in the last 12 months	Actual value of project	Number of initial bidding consortiums	Number of shortlisted consortiums	Time taken from commencement of EOI stage to final awarding of contract	Bid costs of one of the consortiums	Brief 3 point summary of project
Project value up to equivalent of USD100m	KRW 47.2b (USD 44.5m)	73	1 Consortium	2 months (from opening tender to bid success)	Please refer to **Note 1**	**Seoul Dongbu District Court** - Construction of new court house - Estimated time of completion: 2017 - 12 floors, 45,000sqm
Project value up to the equivalent of USD500m	KRW 180.6b (USD 170.4 m)	67 (21-23 per section)	3 Consortiums -Sections 6: Daewoo -Section 8: Samho -Section 9: Hanyang	2 months (from opening tender to bid success)	Please refer to **Note 1**	**Busan New Port - International Industry Logistics City** -Phase I-2 (Sections 6, 8, 9) - International Logistics and Business Centre within Busan New Port -Part of USD443million Project
Project value of up to the equivalent of USD1b	N/A:					

Notes:

1. Bidding Cost: these numbers are not readily available. We estimate that companies would normally spend a range of 0.75%-1.5% of the entire projects cost (bid amount) during pre-bidding stages. These numbers were estimated from the Government's Bidding Loss Compensation Schemes, which would normally provide reimbursements (compensation) for the 2nd/3rd place bidders – that could range from 0.5% to 1%. As this compensation would normally be less than the actual loss incurred, we can deduce a range of 0.75% to 1.5% would be a safe estimate for the normal bidding cost for a construction company.

USA

Road project in the last 12 months	Actual value of project	Number of initial bidding consortiums	Number of shortlisted consortiums	Time taken from commencement of EOI stage to final awarding of contract	Bid costs of one of the consortiums	Brief 3 point summary of project
Project value up to equivalent of USD100m	USD$98.5m	7	5	26 weeks.	N/A	**<u>SR 79- Florida</u>** - Design/Build/Finance - Widens 20 miles of SR 79 from an existing 2-L rural roadway to a divided 4-L rural roadway. - Expected completion April 2017.
Project value up to the equivalent of USD500m	USD$312m	4	3	RFQ released: 21/02/2012 Shortlisted announced:31/5/2012 Awarded: 5/4/2013	N/A	**<u>US 36 Express Lanes Project – Colorado</u>** - Design and Build - adds an express lane in each direction of US 36, widens the highway to accommodate 12-foot-wide inside and outside shoulders. - The project is Colorado Department of Transports' first public-private partnership.
Project value of up to the equivalent of USD1b	USD$ 1.160b	12 (7 for design build/5 for toll concession)	5 for design build	RFP issued: 5/3/2012 Shortlist announced: 23/2/2012 Awarded 27/9/2012	N/A	**<u>SH 99 Grand Parkway project – Texas</u>** - Design/Build/Maintain - 38 mile, greenfield toll road in Houston - State Highway 99 is a proposed 180-mile highway -divided into 11 segments.

USA

Rail/light rail project in the last 12 months	Actual value of project	Number of initial bidding consortiums	Number of shortlisted consortiums	Time taken from commencement of EOI stage to final awarding of contract	Bid costs of one of the consortiums	Brief 3 point summary of project
Project value up to equivalent of USD100m	N/A					
Project value up to the equivalent of USD500m	USD$343m	4	4	GBBH approached with unsolicited proposal – Feb 2013 Request for Proposals issued: 28 Jun 2013 Awarded: 26 Nov 2013	N/A	**<u>North Metro Rail Line – Denver Colorado</u>** - Initially an unsolicited proposal - The North Metro Rail Line is a 13.5-mile electric commuter rail line part of Denver Regional Transportation District's FasTracks 120-mile commuter and light rail expansion programme.
Project value of up to the equivalent of USD1b	USD$1.4 - $1.6 b	Unsure – unofficial sources suggest 6.	5	RFQ Issued: 12/7/2012 Shortlisted: 17/10/2012 Awarded: 25/4/2013 Total: 37.5 weeks	Estimated between $5-6m to complete process. See note.	**<u>Dulles Corridor Metrorail Project – Phase 2</u>** - The design-build contractor for Phase 2 of the Dulles Corridor Metrorail Project. This is an important milestone for the project to extend Metrorail to Dulles Airport and Loudoun County. - Phase 2 is an 11.4-mile segment of the Silver Line, consisting of six stations.

USA

Social Infrastructure project in the last 12 months	Actual value of project	Number of initial bidding consortiums	Number of shortlisted consortiums	Time taken from commencement of EOI stage to final awarding of contract	Bid costs of one of the consortiums	Brief 3 point summary of project
Project value up to equivalent of USD100m	USD$1.8m	8	5	Advertised: 24 Sep 2012 Shortlist: 12 Nov 2012 Awarded: 3 Dec 2012	N/A	**Orange County North-West School Bus Depot** - Design and build a bus depot and fuelling station for Orange County Public Schools
Project value up to the equivalent of USD500m	USD$492m	N/A	3	RFQ released – 17 Nov 2007 Shortlist announced – 21 May 2009 Awarded - March 2010	N/A	**Long Beach Court Building California** - 31 courtrooms, commercial and retail space, the building includes below-grade secure inmate transfer facilities, detention facilities, and separate secure parking areas for judges. - opened for business on September 9, 2013
Project value of up to the equivalent of USD 500m	Estimated USD$170 – 200 m	7	3	RFQs issued- 1 May 2013 Shortlist announced: 31 Oct 2013 Expected award: early 2014	N/A	**Long Beach Civic Centre** - The 30-year design-build-finance-operate-maintain contract will include: a new City Hall, main library, park, port of Long Beach headquarters and commercial developments

Notes:
Many larger projects offer a stipend to shortlisted companies in acknowledgment of the costs associated with to completing procurement processes. For example the *Dulles Corridor Metrorail Project* – Phase 2 project provided each of the five shortlisted firms a $1.5 million stipend because it will cost between $5 million and $6 million for each firm to compete in the procurement process from start to finish. The Port of Miami project included a $2 million stipend for unsuccessful, shortlisted consortiums.
Similar stipends were available on large contracts in other states.