

A discussion on procurement of public infrastructure works

1. The Australian market

A bias towards the 'Australian' duopoly in the construction of public infrastructure, despite maintenance of business practices driving up costs and against currently public policy (including enterprise bargaining agreements with unions), ensures a sustained increase in the cost of construction and reduction in the amount of public infrastructure able to be built.

This bias, combined with flaws in procurement systems (against international comparisons) 'lock in' higher prices and exclude international players notwithstanding their track record of delivering to cost and specification internationally. To the extent international players are included, it seems in practice this is merely an attempt to keep the Australian 'duopoly' honest, though given their track record of dealing with government and negotiating favourable contractual terms on a consistent basis, the conclusion must be that they have and are able to realise every advantage in dealing with government.

In the interests of Australian taxpayers, something must be done.

a. Current players

The Australian public infrastructure construction market is dominated by the two major local groups, Leighton Holding and Lend Lease.

Approximately two years ago Land Lease acquired Boulderstone and Abigroup, merging the two companies recently into one entity called Land Lease Engineering, and Leighton Holding (including John Holland, Thiess and Leighton Contractors) has recently consolidated the participation of group companies in major tenders whereby only one bid is submitted each large project.

Although providing some clarity and avoiding the dubious situation that had existed before, where there appeared to be competition among companies of the same group, it has left the market with only two major local players, as the construction arm of McMahon Holdings was absorbed by Leighton approximately 6 months ago.

There are few international contractors established in Australia for any significant period of time, though these include Bouygues/VSL (France), Laing O'Rourke/Barclay Mowlem (UK), Aveng Group/McConnell Dowell (South Africa) and Obayashi (Japan) struggling to gain a significant and stable place in the Australian market.

As these companies have been around for 10-20 years and their presence in the local market is somewhat established though relatively weak, they often join consortia with

the two Australian groups or less frequently, with each other, in an attempt to create a viable alternative to the duopoly.

Additionally, there are a number of international contractors that have sought to enter the market much more recently, including Salini/Impregilo (Italy), Ferrovial/Cintra (Spain), OHL (Spain), Acciona (Spain), Ghella (Italy) and Rizzani de Eccher (Italy). With the exception of Rizzani de Eccher who is a specialist provider in the field of viaducts construction providing technical support, these contractors are generally unable to team up with the local groups described above as they are considered direct competitors to the Australian duopoly and therefore unable to maintain the value expected by them, therefore they have been observed to 'team up' with each other, nominating tier two local Australian subcontractors.

All the other players are medium sized local Australian companies, the so called 'tier two' contractors without the necessary size, scale and/or the will to bid for major public infrastructure projects with a value of over \$200 million, including companies such as Fulton Hogan, BMD and Daracon.

b. Current procurement process

Typically, an Australian procurement process generally starts with a general prequalification obtained by applying to the relevant government agencies in charge of develop the projects. There is one agency for each state administrating the prequalification process and once prequalified, this can be transferred to other states.

However, prequalification doesn't preclude participation in public tenders, nor guarantee an opportunity to participate, as the agency procuring the project usually runs the process through a special purpose entity established to develop the entire project (for example North West Rail Link in New South Wales), often disregarding the entire prequalification system and prospective bidders.

Further, all projects go through a shortlisting process, meaning prequalification doesn't ensure participation in the actual tender. Together, these factors have made prequalification ineffective in most cases. Further, shortlisting is often a murky process, where despite efforts at a scientific approach, there is little transparency, which is largely reserved for the final assessment of the final bidders. However, shortlisting often leads to exclusion of companies meeting all the necessary criteria but are excluded from being able to offer innovation and competition in the process, as they are removed from the process at this stage just because they exceed the predetermined number of tenderers allowed to bid.

The shortlisting process itself generally leads to two or three companies being invited to participate in the final stage of a tender. In practice, Australian duopoly is always both shortlisted for obvious reasons including their strong capabilities and proven experience, as well as consolidated lobbying at all levels.

This leaves room for, at best, one other player to participate in a tender when and if such an opportunity is made available. The selection criteria for choosing the one last possible place available on the shortlist is heavily influenced by the heavily scored

prerogative of having 'local experience', though this is not officially declared as a selection criterion.

It is obvious that a newcomer with no local experience has little or no room to be able to participate in the market. Nominating local subcontractors as part of a team is of little or no help, while joint ventures extended to the tier two local contractors are rare since these companies tend to avoid the joint and several liabilities required for major projects.

While this situation is typical, it is not the absolute rule and exceptions occur from time to time, such as the Acciona/Ghella/BMD consortia that won the Legacy Way road tunnel project in Brisbane (BMD is a local Tier 2 contractor who accepted to be part of the JV and Acciona had already a strong presence in the renewable energy field in Australia). Once an exception such as this happens, the 'lucky one' gains a significant advantage compared to others, closing the small space available for other players in the market, though hardly impacting the local duopoly whatsoever.

For all of the reasons stated above, a situation exists where many potential strong bidders are consistently excluded from the tendering process.

Shortlists of three, where the two local groups take the first two places and the third one is taken by one of the few with some local experience, regardless to the worldwide experience and capabilities of other competitors is so frequent as to be typical, for those cases where a third participant is even shortlisted at all. Given the number of major projects opportunities is fairly limited in number, it may take a long time before a rare situation opens up a door for a newcomer without local experience.

This all gives rise to a situation whereby the procurement process seems almost designed to protect the Australian duopoly, and the significant potential value provided by strong and reliable major international contractors ready to participate in competitive tenders is 'thrown away' in order to protect the local established players.

Said that, at a time where there are major questions as to the reasons why infrastructure costs are so high in Australia compared to the rest of the world. Recognizing this and in an attempt to address this, some in Government (for example, Campbell Newman as Lord Mayor of Brisbane) invited international contractors to establish themselves in Australia to improve competition, but they largely failed to adjust the procurement process to all them to genuinely participate.

As it stands, the Australian market is not a real open market despite claims to the contrary: while anyone can establish a subsidiary or a branch office in Australia, get prequalified and participate in Expressions of Interest, this is as far as it goes in most of the cases regardless of the capability and experience of the company.

c. Proposed adjustments to the procurement process

An international contractor is exposed to many different procurement processes around the world that can provide examples and guidance to achieve a better, more open way for the Australian market to improve competitiveness, reduce project costs and create a more dynamic marketplace.

The first anomaly that should be fixed is the ineffectiveness of the prequalification system, whereby it has no practical usefulness in the way tenders are run (by organizations including Roads and Maritime Services in New South Wales, the Department of Transport and Main Roads in Queensland, VicRoads in Victoria, the South Australian government and Department of Main Roads in Western Australia).

Once a company is assessed and scored according to its capability it should gain the ability to participate in all relevant tenders for its prequalification. This is a simple, open approach used in many developed countries with robust probity systems around the world.

The tender may be anticipated by a registration of interest process, open to all prequalified contractors and where the composition of consortia is declared in a way that the project proponent knows in advance how many entities will participate in the procurement process.

The tender may require inclusion of specific additional information related to experience, capability, availability of resources, financial conditions at the time but it should be up to the tenderer at its own risk to assess his compliance and then decide to participate in the tender (as opposed to shortlisting).

This approach would lead in Australia to a much larger number of tenderers, likely between five and ten depending from the type of infrastructure, size of the project and location. Obviously not all the prequalified companies will generate one tender since, for major project, they will tend to group in consortia, each with two or three companies.

Another possible approach is to run an expression of interest aimed to assess whether the prequalified interested parties are capable of carrying out the work required, excluding those who for some reason are clearly unfit to participate in the tender process. While this may be the intention of the current shortlisting process, this proposed approach leads not to a shortlist of two or three predetermined bidders, but to the exclusion of the unfit leaving the number of bidders open.

The most common objections to widening the shortlist are:

i. *The significant cost of participating in and assessing tenders:*

It is well known that bidding in Australia is very expensive for the following reasons:

- Cost of design:

In Australia there is the uncommon practice to impose the nomination of one or more "local" Design Consultants as early as at the expression of interest stage. This requirement prevents the contractors to obtain and negotiate a price from the designers for the tender design with the consequence that the designers are not facing any competition in case of shortlisting.

This is one of the two main reasons why the tender design is so expensive in Australia for major projects. Once a Designer is nominated as partner in the

shortlisting procedure it has the privilege to dictate its price without facing any risk and competition.

In other countries where the requirement is not imposed at the time of the EOI the contractors can ask quotations to the designers prior and during the tender phase obtaining much more reasonable prices from the design consultant that often work only on success fee basis.

The other main reason for high tender design costs is that projects are poorly developed by government agencies prior to tender. It is worldwide practice that most of the design is developed by the Employer prior to tender, leaving verification and assessment of possible improvement to the tender stage, which is far less expensive for the bidders. It might be suggested that this approach is driven by the design consultants, fuelling their own business, since they are the one that develop the design for two or three of the contractors during the tender phase. The number, detail and quality of the design required to be submitted with the tender exceeds what would ordinarily be produced by the Contractor to support a Design and Construct Lump Sum proposal.

- Cost of consultants: it is common to be required to submit 20-30 high quality and detailed project plans with the tender. Such plans are generally outsourced to local specialists and they do not necessarily demonstrate the capabilities of the tenderer. Most of the plans are not considered necessary to reach a proper assessment of the various tenders and as matter of fact, are not usually required in other developed countries. The same consultants that on one project operate client side promoting such high requirement and reviewing the bids on behalf of the clients, in another project it works for the bidders contributing to increase the cost of tenders, and indirectly contributing to limit the number of bidders and so reducing competition.
- The quality of the submission considered acceptable by government departments is so high that always requires the support of graphic designers and very expensive hardware.

ii. Bid assessment:

The tenders are so complex and demanding from any point of view that their assessment is a mammoth task for the client itself, as the assessment of a reasonable number of tenders becomes unsustainable. Based on our own experience, the excessive complexity and effort that tenders require in Australia from both sides has no equal in the world.

This situation has been developing during the past decade for a number of reasons:

- Most government departments rely on consultants to run the tender process on their behalf and the consultants have been increasing the complexity to fuel their own business.

- The sophistication of various management systems in Australia has grown exponentially with the aim of controlling risks and limiting liabilities, but it has not been kept in check by financial constraints due to a booming economy.
- The Australian duopoly have not resisted because it has created a significant barrier to market entry by international companies facing significant hurdles, including these high tendering costs and excessive, unfamiliar and intimidating requirements.

In the mind of the bureaucrats, limiting the number of bidders serves the following purposes:

If the chance of winning is one in two or three, the bidders more willingly spend this larger-than-necessary amount of money. The reality behind this is that the Australian duopoly has threatened government project owners that if they are forced to compete in an open market, they won't participate. This is obviously the excuse that the developers and local groups are using to resist to the change since it is obvious that they will participate anyway given the limited number of major projects opportunities in the market and the fact that they will never let the field open to the international contractors to establish in Australia.

To facilitate changes to the procurement process and open up the market to increase competition:

i. Prequalification scheme

Use the existing prequalification scheme as selection tool for determining the contractors entitled to participate to a tender.

ii. Open tenders

Allow all prequalified and suitable interested contractors to bid.

iii. Cost of Tender:

Cost of tendering for the industry in general shouldn't concern the developer especially because the number of local tenderers has been reduced to the Australian duopoly by the process of mergers mentioned above. The costs sustained by international bidders represent an injection of cash into the Australian economy coming from overseas and therefore has a positive effect.

In terms of the need to reduce the cost the following measures can be implemented:

- Do not impose the nomination of the design consultants and any other specialist consultants and do not reward such nomination at the EOI stage.
- The pre-tender design could be developed to a greater level of detail by the government agencies than is currently the case, reducing the necessity to develop the same design by each bidder during the tender phase. In most cases, this greater level of design is completed by the developer already, but not disclosed, both to avoid responsibility for design flaws and consequential claims. This potential downside is simply

addressed around the world by requiring bidders to accept and own the client's design or propose changes as variations in their response to the tender.

- Reduction to the tender requirements to levels more aligned to international norms and limiting other information and unnecessary documentation, such as the number and detail of the project plans required. These add no value to the process, as currently, notwithstanding excessive documentation requirements, a very high number of major projects have failed resulting in considerable additional cost and time. Further, they are easily (though expensively) able to be provided by any bidder that achieves prequalification and should therefore only be required by the successful tenderer.

iv. Bids assessment:

Reduce the documentation required to levels comparable with international developed country benchmarks/norms to reduce the workload generated by reviewing the bids, enabling a larger number of tenderers to participate in the process. A benchmarking study/comparative assessment of the quantity and level of detail required for tenders in Australia, North America and Europe should be carried out in order to verify whether and how the Australian procurement system can be made more efficient and allow more bidders to participate in a competitive process.

Assessment shall also be made to the method used for comparative evaluations of bids that in most cases take too long and too many resources (consultants) regardless of the amount of information contained in the proposal. The interest of the consultants working on the client side is to burn as many hours as possible and make the process as detailed and laborious as possible to maximize their business. This not only has a cost implications on its own, but also it has a greater indirect cost, because of the loss of competition from limiting the number of bids, driving up project costs – all because the assessment of more bids is too hard. Even if the assessment process were greater, it would likely still cost far less with a more competitive public infrastructure construction market.

Conclusion

There is no doubt that more competition and transparency provides for a more efficient procurement process, reducing project costs and driving greater outcomes. There are many recent local examples of troubled projects where the preferred contractor selected using the existing procurement process has failed to properly evaluate the works and the government agency has failed to identify the issues through the evaluation process, resulting in project delays, cost increases and negative publicity.

It is much more difficult to recognise an inadequate proposal when comparing only two bids, whereas a more competitive market would ensure assessment of five or more bids, against the background of which a poor proposal would be more likely to stand out. Lack of benchmarking is, in most cases, the reason for the misjudgement.

Moreover, the failure of these many projects demonstrates that the amount of documentation and information required at present does not provide any protection against misjudgements. The best way to ensure that the work is awarded to the best bidder is to get as many bids as possible in an open, fair and competitive environment. If one has to choose between having more details and more options the last one is surely the most effective choice.

Opening the market to more competition from a greater number of bidders is the choice made by many developed countries with modern and efficient procurements systems and there is no reason why Australians shouldn't be able to do the same. Better management of an efficient procurement process will ultimately reduce infrastructure costs and drive improvements in innovation.

The following table lists some of the international projects we have been involved in and shows that the procurement processes for major projects allows all suitable contractors and consortia to participate in the tender without necessarily restricting to two or three bidders:

Project	A\$ (m)	Description	Tenderers
North Speed Tangent, Bulgaria	210	Highway	10
Toronto –York Spadina Subway Extension (Tunnel/ Station/ Sem), Canada	3682	Subway	8/15/6
Follo Line, Norway	3820	Railway	12
Al Wakrah By Pass, Qatar	490	Highway	4
Highway Bucharest-Brasov, Section Comarnic-Brasov, Romania	1680	Highway	5
Craiova-Pitesti Express Road/ Motorway, Romania	1820	Highway	5
Lugoj - Deva Motorway lotto, Romania	282.8	Highway	16
Kempinski Hotel, Saudi Arabia	280	Hotel	4
ETIHAD RAIL_Contract C303 - Package A, UAE	560	Railway	12
Long Beach Bridge, USA	910	Bridge	4
SR 99 Bored Tunnel_Seattle, USA	2260	Highway	4
Portland ESCSO Tunnel, USA	110	Hydro	5
Allegheny River Tunnel, USA	575	Railway	9
METRO SEATTLE_ Northgate Link Ext., USA	581	Subway	6
CRENSHAW, USA	1400	Subway	4
A380 GUZAR-BEYNEU, UZBEKISTAN	210	Highway	5

2. PROCUREMENT OF MAJOR INFRASTRUCTURE PROJECTS IN EUROPE

The European Commission "EC" has regulated the way the member states carry out their procurement processes in order to avoid protectionism of national market and ensure equal opportunities for all contractors to participate freely in any tendering process the wish to provided they satisfy certain requisites. The regulation is covered under "Directive 2004/18/EC of the European Parliament and of the Council" dated 31st March 2004 and provides 3 categories for tenders as follows:

- a. **Open procedure** - It is generally applied to construction only projects and normally awarded on the basis of the lowest price.
- b. **Restricted procedure** – Generally applied to large D&C projects where the criteria are not only based on the lowest price but the best value for money. The authority will invite to tender a sufficient number of suitable candidates, with a minimum number of five
- c. **Competitive dialogue** - limited to specialists where the competition is limited to a few providers or in case of particular urgency. The member state must justify the use of this procedure to the EC when selected.

Australian system can be compared with the European "Restricted Procedure" with the exception that by having a minimum of five tenderers the European Commission enforces the value of competition and open market unlike Australia where a shortlisting of two or three as common.

A comprehensive study titled "Public procurement in Europe - Cost and effectiveness" was carried out by PWC for the European Commission in March 2011. The aim of the study was to improve the understanding of the impact and effectiveness of the EU public procurement directives. The analysis covers all 27 EU Member States and the 3 EEA countries. The study was prepared in the context of a comprehensive evaluation of the procurement directives currently being undertaken by the European Commission and to help inform decisions about future policy. Key findings of the study include:

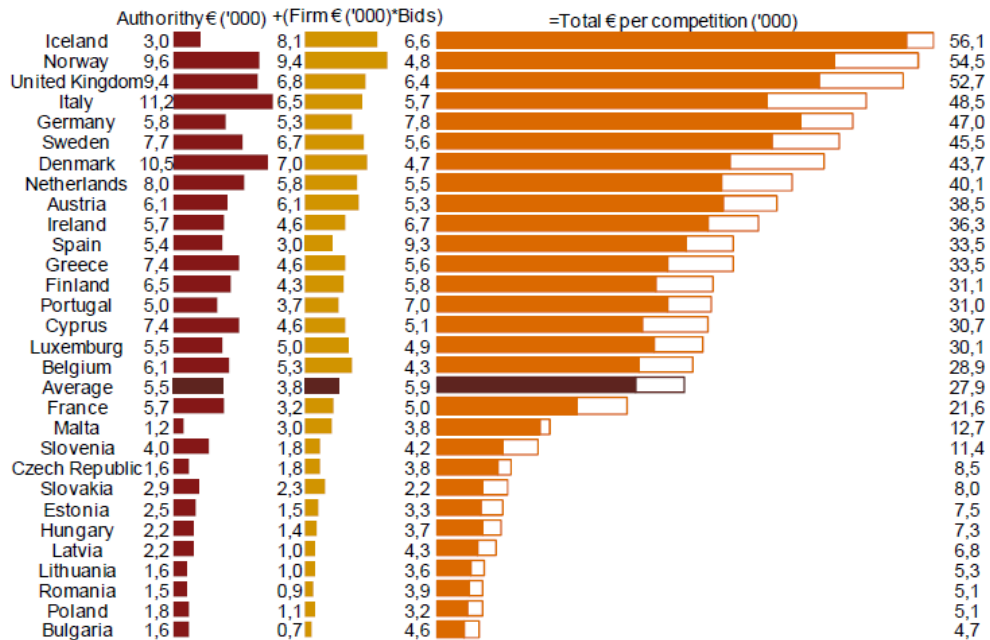
- i. **Proportion of procedures used** - 80% of Civil Infrastructure was contracted using either the open or the restricted procedure which, in terms of value, 70% were awarded based on MEAT (most economical advantageous tender = best value for money) and 30% at the lowest price.
- ii. **Cost of Procurement** - Total cost of public procurement in Europe is estimated at about 1.4 percent of purchasing volume.

iii. **Competition** - Competition is considerable. Each public tender is estimated to receive 5.4 offers.

The following chart compares country by country the cost of procurement for the client and contractor considering the average number of bids received.

High cost countries have expensive procurement processes

Figure 2.12 Typical cost of a competition (weighted averages)



iv. **Authorities that choose open procedures give most importance to attracting foreign bidder**

The directive is translated in tendering procedures by the Members States Development Authorities in different ways but generally they are not too dissimilar one to another in order to maintain a certain degree of homogeneity within the EU.

3. Italian Implementation in Italy

For example in Italy the most common procedure is a Restricted Procedure where only contractors holding a certificate called SOA are admitted to tender.

The SOA certification works similarly to the prequalification list managed by RMS, TMR and any other Australian State. The companies have to demonstrate to comply with certain requisites related to financial, experience and capabilities criteria in order to be certified but once the certification is obtained it guarantees free access to all tender procedures without being subject to any further shortlisting.

The method is the MEAT (most economical advantageous tender = best value for money).

The design is developed by the client up to a point where it is full sized and dimensioned. The client provide the project as part of the tender documents together with a bill of quantities where standard rates are applied obtaining a total reference amount.

As part of the tender documents the client provides also the maximum design and construction time required as well as the project specifications, safety, environmental, community and logistic requirements.

The tender requires to provide the following deliverables:

- Discount on the reference amount filling the bill of quantities with rates and quantities applied to the project as provided by the client (the quantities provided by the client can be adjusted)
- The supporting justification of the proposed price including quotations received by suppliers, internal costs such as assets and manpower and detailed cost analysis (this information is placed on a separate envelope and opened only if the tender needs justification as explained in the assessment criteria)
- Duration of proposed design and construction with detailed program
- Improvements of the project and the methodology of construction proposed by the client. The client indicates which are the areas where improvements are welcomed. It is possible not to propose improvements.
- Detailed logistic and construction methodology, organization charts and resources to be deployed.

The assessment criteria is the following:

- The relative weight are declared upfront as part of the tender document and are very detailed, generally split as follows:
 - Price (score proportional to the discount) with a maximum cap.
 - Time (score proportional to the days of reduction) with a maximum cap.
 - Project improvements per category (structural, environment, community etc.). Each category is scored and weighted as per relative weights as disclosed in the tender documents.
 - Construction methodology proposed as well as logistic

- The discounts obtained from all tenders are averaged. All prices below the average require justification and the detailed support information provided in the separate envelope are assessed.
- The winner is the one that obtains the highest total score. All scores obtained by all participants in all categories are public.
- The second classified has the right to review the tender submission of the winner and eventually challenge the result.

This procedure guarantees a high level of competition and transparency without imposing on the reviewer an excessive workload.

The cost of tendering are limited to pricing, material take off, planning and construction methodology preparation while the tender design costs are limited to the assessment of the design provided by the client and the development of improvements. Most important the design partners are selected by the tendered during the tender phase creating competition among designers and not imposed as early as the expression of interest phase as common practice in Australia. Often the design consultants work on a success fee basis only.