



Australian  
Institute of  
Architects



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Dear Jon,

### **STEM Program Feedback**

Further to our recent email we asked for a meeting to discuss a number of issues raised by our members relating to issues they see in the administration of the capital works program, with many of them being unique to the STEM rollout.

We have previously had a number of discussions regarding issues of procurement, and it is fair to say that many of the decisions taken are water under the bridge, but we hope that the feedback noted below will assist in the smooth rollout of this and future capital programs.

As the Lead PSCs on the STEM projects, we tend to be the eyes and ears on the ground, and it is in our interests that the projects run smoothly, schools are happy and the program is viewed as a success.

### **OBJECTIVES**

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The publicly stated objectives of the STEM program were to provide new facilities to schools and to provide a stimulus to the construction industry. There was an emphasis on getting projects going as quickly as possible. Tendering to architects for the feasibility study was done quite quickly and with minimal input from secondary consultants.

The underlying objective, which was to upgrade existing school buildings, was not clearly communicated to schools, or adequately considered within the establishment of the budget. Many have identified the requirement for significant expenditure on scope including asbestos removal, earthquake upgrades and services upgrades. This led to unrealistic expectations regarding the STEM focused outcomes able to be achieved within the available funds.

Value for money was also impacted by the compressed construction program, which appears to have resulted in inflated construction costs as predicted in the early stages of the program.

### **DESIGN AND CONSTRUCT**

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The arguments for going to Design and Construct for most of the program were:

- Speed to get projects under way
- Single point of responsibility and payment
- Builder input into construction detailing and programming of the project

- Reduced project management costs

Experiences on projects to date suggest these objectives have often not been met. The project value and unique nature of each project, which resulted from differing site conditions, building condition and understanding of STEM, meant each project was unique and required the traditional workflow of design, consultation, detailed design, and documentation prior to starting on site.

Earlier surveys of the STEM program suggest there were many delays resulting from:

- Limited access to school principals and other key staff due to workload and holidays
- Changeover in key school staff
- Varying levels of understanding of STEM within schools
- Insufficient staff within DPTI and DECD to manage the workload within the program
- Delays in project review and approvals
- Lack of resolution with respect to key briefing decisions and procurement methodology

Design and Construct works best when the Principal's Project Requirements can be clearly outlined prior to commencement, consultation with multiple stakeholders is not required and there is sufficient information to competitively tender the works early in the life of the project.

## **DESIGN AND CONSTRUCT: NOVATION OF ARCHITECTS**

As we had earlier noted, we believe D&C was not suited for these projects because:

- Builders chosen were not suitable or had no experience of D&C
- Most smaller builders had serious misunderstanding of 60% documentation, assuming that they did not have to price the risk of change between 60% and 100%
- The novation point and the selection of builders used meant there was little opportunity for builders to add value to programming or construction detailing
- Single tender offers or only two tenderers reduced value for money
- There have been many instances where the Builder made subsequent claims against architects for scope changes after novation
- LPSCs were required to undertake work for which they cannot insure – such as asbestos
- Bundling of tenders didn't work – it caused delays and no advantage in either price or administration of contracts as generally two different architects were involved
- Delays of up to 7 months between tender and start on site, with builders having trouble retaining subcontractors who had moved onto other things from the tender
- Payment terms were not honoured after novation: architects at tender time factored in 30 day payment - this seems to vary often to 60-90 days, and non-payment of architects has been reported with some builders signing off in their Statutory Declaration to DPTI that all subcontractors had been paid, when the novated architect had not been paid.
- Travel costs were often disputed – expectations that site inspections and meeting could be coordinated to occur on a single date were not realised due to the limited time available and the availability of key staff.
- Architects were required to take on the risks of delays in terms of fees and travel costs.

## **FEE TENDERING**

Many architects have reported significant and at times overbearing pressure to re-tender at the transition from indicative to fixed fees. "Benchmarking" was cited on many projects as the trigger for fee reduction on subsequent stages to below the indicative fee originally tendered, with no evidence provided of how this benchmark was established.

Approval of fixed fees was also delayed until after the LPSC was instructed to commence documentation in many cases. This meant that fee negotiations were occurring after the LPSC had completed a significant proportion of the scope of work, placing them at a considerable risk.

The exclusion of secondary consultants from the initial stage of the STEM program also generated fee pressure. Once engineering consultants were engaged and the full nature of the essential safety upgrade scope as understood the indicative fees for these consultancy services was found to be inadequate in many cases.

## **CONFUSION OF ROLES**

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Traditionally the Lead PSC has been Superintendent's Representative and can assist the client school, DPTI and project managers to achieve the briefed goals.

With the LPSC novated to the Builder, there was a degree of confusion about roles:

- Schools thought they had direct access to the architects and could get independent advice from them during construction
- Schools assumed LPSCs had a role in program and in particular practical completion, so delays in completion of certificates and Maintenance manuals were seen as the LPSC's fault
- Project managers often approached the LPSCs direct with requests which should have been communicated via the builder
- LPSCs not involved in tender assessment, which resulted in some sub-optimal outcomes
- Project managers assumed the document scopes were complete at 60% or 80% when novation occurred
- LPSCs who over-documented to above the minimum required to avoid future conflict generally had to wait months for payment until novation completion
- Monthly inspection reports were requested from architects as per the DPTI fixed price tender procurement methodology. This was not appropriate following the novation of the architect to the builder, with critical reporting potentially impacting on payment of consultant fees by the builder.
- Arguments about latent conditions have been common, with widely varying interpretations of allowability of variations between project managers.

We believe it would be useful to have a set of guidelines for LPSCs and DPTI project managers to follow to avoid this confusion over roles.

## **DECD AND DPTI CONFUSION RE STANDARDS**

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There have been a number of inconsistencies between DPTI and DECD standards, which have resulted in delays in the finalisation of the projects, rework and additional expenditure. Key examples are:

- requests by DPTI representatives to change laboratory bench tops despite them complying with DECD standards
- Confusion over DECD benchtop height standards
- Maximum heights of shelving where DECD have overruled DPTI
- As BPIMS is not set up for D&C workflows, many processes which the Builders should manage, such as variation claims, have to be initiated and "approved" by the LPSC when technically they have no involvement in the process.

Many of these issues have only been identified at the Practical Completion inspection. Identification during the DPTI and DECD review of documents would have enabled effective resolution prior to commencement of construction, thereby minimising the impact on cost and program.

## **CHANGES TO CONTRACTUAL CONDITIONS**

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There have been a number of instances where contractual conditions have been amended during contracts without consultation with the contracted party. These include proposed changes to the novation deed and certificates of compliance, which can obviously only occur with the consent of both contracting parties.

## LEARNINGS

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The STEM program is aspirational and provides valued opportunities for the education and construction sectors. It also provides an important opportunity to review procurement processes with the aim of achieving improved value for money and more effective management of risk.

### Key learnings from this program are:

- The importance of clear definition and communication of project objectives to manage stakeholder expectations and enable consultants to provide accurate fee submissions
- The value of thorough and timely review processes to deliver the project within program and to minimise abortive work.
- The value in achieving alignment between the client and project management departments with regards to quality, safety, functional and construction standards.
- The need to clearly inform all stakeholders of the procurement methodology so that they fully understanding the relationships between the parties and the protocols for communication and decision making.

### Suggested actions:

- Involve architects in the project feasibility phase to benchmark brief, risk, program and cost parameters
- Develop collective feedback mechanisms for large programs such as STEM where similar issues are likely to be identified across different projects
- Improve management of stakeholders by the client department to maximise opportunities for coordination of site visits.
- Allocate the same Cost Consultant to all projects being undertaken by each LPSC
- Define of the procurement methodology prior to the engagement of consultants
- Ensure contractual conditions are consistent and suitable for the projects involved

We trust these comments will be of assistance in ensuring the best possible outcomes for this and future programs.

Yours sincerely,



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cc James Macdonald, DPTI