

## 1. TEMPLETON COMMUNITY FACILITY PROJECT

<b>Officer responsible</b> Property Manager	<b>Author</b> Andrew Brown – City Solutions, DDI 371 1996
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The purpose of this report is to recommend the preferred method of tendering, either a design/build or design/tender/construct process, to complete the Templeton Community Facility project.

### BACKGROUND

In the early 1990s the Riccarton/Wigram Community Board initiated a series of community and recreational strategy plans, one of which was for the Templeton area. "The Recreation Strategy Plan for Templeton" highlighted the need for a community focal point, in order to deliver a wide range of recreational and community activities.

Subsequently, a community needs analysis was commissioned by the Riccarton/Wigram Community Board and was completed in 1998. The major outcome of this report was the need for a community facility in Templeton, which, it was recommended, should be sited on the Council owned reserve in Kirk Road.

Following the Board's acceptance of the needs analysis a working party was set up to progress building of a community facility on the Kirk Road reserve. The working party includes members of the Templeton Residents' Association, elected members of the Riccarton/Wigram Community wards and council officers.

Following extensive community consultation, a preferred layout for the Templeton Community Facility has been developed.

### DISCUSSION

The next step is to decide whether a design/build, or a design/tender/construction approach should be adopted to enable completion of this project.

The decision should be based on risk and cost. The following points relate to the expected risk and cost implications associated with either option, with specific regard to Templeton Community Facility. A summary of these issues precedes the conclusion.

1. Suitability/quality design: The suitability and quality of any design must be of primary concern to the client.
  - Design/Build - It is fair to assume that a greater proportion of the detailing is sorted out once the contract has been awarded, therefore, the CCC risks not knowing exactly what the final product will consist of when a contract is accepted. The potential for an unacceptable final design has been reduced by the production of a well-developed concept plan. This together with stringent contract documentation and comprehensive design review/approval mechanisms before a tender is accepted should mitigate the risk of the CCC receiving a poorly designed building.

The cost of these control measures should be factored into the overall cost of the design build process to get a valid cost comparison between the two options.
  - Design/Tender/Construction – The advantage of a design and tender construction approach is that the detailed design phase typically includes client review and approval stages as well as value management exercises. This approach enables the CCC to have greater control over the final design, and the Council is certainly aware of the final product they expect to receive before a tender is accepted. However, the consultant design fees may be greater than the design/build design fees, due to the inclusion of client control measures.
2. Construction Costs: Cost estimates have been sought from a Quantity Surveyor with a view to design/tender/constructing the project, and also from a design/build firm that have recently completed a similar project. The estimated construction cost for a design tender process was \$991,760 compared to the estimated cost for design build of \$834,563.

- Design/Build – There is a potential saving in the construction of the facility of about \$157,000 if the design/build method of construction is selected for this project. The saving could be attributed to the experience gained after completing a number of similar projects in the past. The contractor will have a good knowledge of the risks, the most efficient construction method, the exact cost of labour, materials etc required to complete the building. Essentially they are building a design that will be very similar to those they have completed in the past.

- Design/Tender/Construct – The fees for a consultant to produce a one-off design will be greater than for a design/build contractor to reuse elements of an existing design. It is also fair to assume that, while the consultant may endeavour to design the building to minimise construction costs, they will not be able to realise the same efficiencies of a design/build contractor who has completed similar projects in the past.

The construction costs will also be greater because the contractor will not have the same experience that comes with a familiar design.

3. Quality of construction and lifecycle costs: Quality of construction and lifecycle costs need to be addressed with a design/build approach in particular. Avoiding a short-term product that will later result in high maintenance costs is essential.

- Design/Build – In addition to specifying a lengthy maintenance period, within which the contractor is responsible for rectifying any problems that arise, mitigation measures (explained in 1 above) could be employed to reduce this risk to an acceptable level.

Construction quality could be maintained by engaging suitably qualified people to provide construction supervision.

- Design/Tender/Construct – The design consultant would be expected to address maintenance issues during design and ensure a high standard of construction.

4. Consultants fees: Part of the role (and fee) of the design consultant in the Design and Tender Construction process is to also undertake contract administration, act impartially in disputes and supervise construction. Under a Design and Build regime, suitably qualified people would need to be engaged to act on the Council's behalf to perform these roles.

- Design/Build – The risk to the client, with regard to the day-to-day running of the project, is potentially reduced to an acceptable level if suitably qualified people are engaged to represent the CCC under a Design and Build contract. This cost of the contract supervision and administration should be included in the overall project cost when comparing the relative cost of the two tendering methods.

- Design/Tender/Construct – The cost of contract administration and supervision will normally be performed by the design consultant and the cost for this work will be included in their overall fee.

5. Suitability of the project to design/build or design/tender/construct: If the project is not well suited to a particular process then costs will not be minimised and there is a risk of cost escalation once construction commences.

- Design/Build – To be effective there should be little design complication associated with the site and the tender specification. This will allow knowledge and experience from previous jobs to be applied to the project and will reap the greatest cost savings (see 2 above). The site for the Templeton Community Facility is bare land and the building will use standard construction methods, so a design build contractor will have a “clean slate” to work with.

- Design/Tender/Construct – A clear site means there will be few design and construction difficulties as opposed to, say, Parklands Community Facility, where the existing buildings and services needed to be accommodated in the design. Therefore there is not the same degree of design complication or risk of unforeseen design and construction problems escalating the cost of the project. Consequently, there is not the same need for the designer to be independent from the contractor.

6. Tendering: The cost of tendering can potentially be greater in a design/build contract, therefore it can be more difficult to encourage preferred tenderers to submit a price.

- Design/Build – Design/build contractors must allow for some preliminary design work to establish a fixed sum price. Consequently, preferred contractors may not be prepared to risk the design expense, with no guarantee of payment unless they are the successful tenderer.

On this project it is expected that minimal preliminary design will be required, since the project is straight forward, with little complication in design or construction (see 5 above). Therefore general cost and design information, which the contractor will have at his fingertips, can be broadly applied to this tender as well. This will reduce the apparent risk/reward ratio, which should encourage sufficient contractors to submit tenders, to obtain a competitive price.

- Design/Tender/Construct – In a design/tender/construct process, the scheduled (itemised) tenders provide reduced risk for the contractor as no design work is borne by the contractor. In essence, the design/tender/construction contractor has only to price a completed design that been itemised.

For this project it is expected that tenderers will already have priced similar work, therefore the preparation of a detailed schedule is an expense that can be bypassed if a design/build process is used.

7. Each process would involve tendering. As implied, a Design and Tender Construction contract involves the construction component of works to be tendered. A Design and Build contract would involve tendering the entire package of work. Tendering in each process enables the most appropriate candidate to be selected based on evaluation that compares all tenders impartially.

In addition to the issues identified above, the following will also apply to the project regardless of the process chosen to complete the project:

- The construction industry is competitive at present, therefore the tender price for the contractor's component of the work is expected to be competitive.
- The concept design has been completed by way of the extensive community consultation that has taken place.
- Under either process, it is appropriate to engage the independent quantity surveyor who has had an involvement in the project to date, to act on the CCC's behalf for the purpose of payment verification, financial reporting, tender evaluation and preparing estimates.

## **SUMMARY**

### **Design/Build Pros**

- There is a potential cost saving in the construction costs (refer item 2).
- Stringent contract documentation should reduce the risk of an unacceptable design (refer item 1).
- Professionals representing CCC could be engaged to deal with the day to day running of the contract to maintain a high standard of workmanship (refer item 4).
- An extended maintenance period could be adopted to further reduce the risk of a poor quality product and excessive CCC maintenance costs (refer item 3).
- The risk of contractor variations (design and construction related) is minimal because of site is clear and the building design and construction is straight forward (refer item 5).
- Tendering the entire contract allows for a comparison of contractors and enables an impartial evaluation/selection process (refer item 7).

### **Design/Build Cons**

- There is additional cost to CCC in preparing and implementing stringent contract documentation unique to this project, engaging professionals who represent CCC in the day-to-day running of the contract and imposing extended maintenance periods (refer items 1, 3 and 4).
- There is some risk to the contractor, who must bear the cost of a preliminary design if their bid is unsuccessful, consequently not all preferred contractors may be prepared to tender for the work (refer item 6).

### **Design/Tender/Construction Pros**

- CCC has the opportunity to modify the design to accommodate the budget (if necessary), prior to contractor involvement. CCC also has greater control over the final design due to design review/approval measures (refer item 1).
- There is less risk to the contractor as the consultant has completed the design, therefore only pricing of a completely designed product is required (refer item 6).

- All professional fees to carry out the day to day running of the contract are included in the consultant's fixed fee (refer item 1,3,4).

### **Design/Tender/Construction Cons**

- The construction cost is potentially greater than for design/build (refer item 2).
- Typically, the consultant design fees are generally higher when compared to design/build design fees, due to the inclusion of client control measures (refer item 1).
- The need for professional architectural designers is reduced because there should be little design complication and no design variations because of site conditions (refer item 5).

### **BUDGET**

<b>Estimated Project Costs:</b>	<b>Design/Build</b>	<b>Design/Tender/Construction</b>
Construction Costs	\$834,562	\$991,760
Consultants Fees	\$40,000	\$75,000
Furniture, Fittings and Equipment	\$25,000	\$25,000
Project Contingency	<u>\$50,000</u>	<u>\$50,000</u>
<b>Total</b>	<b>\$949,562</b>	<b>\$1,141,760</b>
Project Budget	\$950,000	

### **CONCLUSION**

Considering the effort involved in seeking funding for this project, particularly by the Templeton Residents Association, it is of primary concern that the funds available are spent wisely and the risk of unnecessary expenditure is minimised. It is also essential to choose a relevant process (design/build or design/tender/construction) to complete this particular project.

Based on the above evaluation, the appropriate process for this specific project is design/build.

The uncomplicated nature of the project lends itself well to design/build. This is reflected in the potential savings in both the construction and design fees of about \$180,000 if this method is adopted.

The tendering risk to the contractor is low, since they can reuse elements of previous designs to quickly arrive at a tender price. The small degree of preliminary design, and therefore low exposure to unrecoverable costs, should ensure a sufficient number of tenderers and a competitive price for the building.

If design/build is adopted then stringent contract documentation and design review/approval procedures should be employed to ensure that the CCC receives a quality design with low ongoing maintenance costs. CCC staff should also be involved in the day-to-day supervision and administration of the project to ensure a high standard of workmanship is maintained by the contractor. While these control measures add to the cost of the project, they will protect the CCC from the risk of a poorly designed building with ongoing defects and high maintenance costs.

The needs of this particular development are best met by a design/build process, which should result in lowest overall project cost, at an acceptable level of risk the client (CCC).

**Recommendation:** That a design/build process be adopted for the Templeton Community Facility project.