# Christchurch City Council
# ATTACHMENTS UNDER SEPARATE COVER

**Date:** Thursday 12 December 2019
**Time:** 9.30am
**Venue:** Council Chambers, Civic Offices,
53 Hereford Street, Christchurch

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# 18. Canterbury Multi-Use Arena Investment Case

**Reference / Te Tohutoro:** 19/1367623

**Presenter(s) / Te kaipāhō:** Mark Noonan, Project Director
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## 1. Purpose of Report / Te Pūtake Pūrongo

1.1 The purpose of this report is for the Council to:

- Endorse the Canterbury Multi-Use Arena Investment Case and support its recommendations to proceed with a covered arena with an ethylene tetra fluoro ethylene (ETFE) roof, permanent in-situ turf and a 25,000 capacity; and
- Recommend to the Minister for Greater Christchurch Regeneration that Cabinet release the Christchurch Regeneration Acceleration Facility (CRAF) funding of $220m for the project.

## 2. Executive Summary / Te Whakarāpopoto Matua

2.1 The Investment Case identified that to be competitive and attract international and national content a multi-use arena in Christchurch would ideally include the following fundamental design elements:

2.1.1 Covered arena - that allows for year-round events

2.1.2 Minimum 25,000 person capacity - to attract national and international content

2.1.3 Acoustic quality - a key to providing a viable facility. It must host premium events on a regular basis and must be designed to manage the acoustic quality.

2.2 The Investment Case recommends a covered arena with an ETFE roof, permanent in-situ turf and a capacity of 25,000 permanent seats.

2.3 It identifies that the recommended option will meet the critical success factors for an arena in the Central CBD and can be delivered within the $473m budget.

2.4 The Investment Case recommends that Council be the agency responsible for the delivery of the Project and therefore it has control over project governance and project design and scope decisions.

2.5 It identifies that Council should establish a Project Board to provide independent governance and financial control over the delivery of the CMUA. Appropriate project governance for a project of this scale is critical.

2.6 Council needs to refer the Investment Case to the Minister for Greater Christchurch Regeneration and request that the Crown release the $220 million CRAF funding for the project.

## 3. Staff Recommendations / Ngā Tūtohu

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That the Council:

1. Receive the Investment Case.
2. Note that the recommended affordable option is a covered arena with an ethylene tetra fluoro ethylene (ETFE) roof, permanent in-situ turf and a 25,000 capacity, which is projected to be delivered within the $473m budget.
3. Confirm that its Long Term Plan funding of $253m allocated for the project remains the Council's capital funding cap.
4. Agree that Council take on responsibility for the delivery of the Canterbury Multi-Use Arena as outlined in the Investment Case, conditional on the negotiation of a satisfactory Funding Agreement with the Crown.
5. Agree to establish a Project Board to provide independent governance and financial control over the delivery of the Canterbury Multi-Use Arena.
6. Refer the Investment Case to the Minister for Greater Christchurch Regeneration and request that the Crown release the $220 million CRAF funding for the project.
7. Note that the Crown has identified that its contribution is capped at whatever money is sought through the Christchurch Regeneration Acceleration Facility (excluding land, and the other funding agreed through the global settlement) and not take on additional risk.
8. Delegate to the Chief Executive Officer to appoint a team to negotiate a Funding Agreement with the Crown, to be brought back to the Council for approval.
9. Instruct staff to activate one of the Council's shelf companies to act as the delivery company for the Canterbury Multi-Use Arena.
10. Request that in accordance with the Council's policy on the Appointment and Remuneration of CCO Directors, the Chief Executive write to CHL requesting advice on:
    a. the form and composition of the Board; and
    b. fees payable to the Directors (pursuant to the Council Policy)
    c. the recommended candidates for the Board
11. Agree that enabling works be progressed to better define and de-risk the main construction scope and reduce the overall project timeline.
12. Instruct staff to request the early release of Christchurch Regeneration Acceleration Facility to enable the procurement of early and enabling works for the Canterbury Multi-Use Arena.

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## 4. Context/Background / Te Horopaki

4.1 The Canterbury Earthquake Sequence in 2010-2011 caused significant damage to the Stadium at Lancaster Park, and the structures are currently being demolished. A temporary Stadium has been in use since 2012, however this has many constraints.

4.2 The 2012 Christchurch Central Recovery Plan, Te Mahere 'Maraka Ōtautahi' (CCRP), identified a new multi-purpose sports and entertainment venue with a fixed, transparent roof (to allow natural turf to remain within the venue) and enable multiple uses, as a replacement to the earthquake damaged AMI Stadium at Lancaster Park.

4.3 The CCRP identified a six hectare site (the three blocks bounded by Hereford, Barbadoes, Tuam and Madras Streets) as the location for a new permanent facility within the vision for a new city central business district (CBD). On 31 July 2012 the site was designated by the Earthquake Recovery Minister, explicitly permitting the use of the site for sports, concerts, and other events. The site is designated under the CCRP and Christchurch District Plan for the purpose of a Stadium. The Canterbury Earthquake Recovery Minister/Minister for Christchurch Regeneration has 10 years (as of July 2012) to give effect to the designation or it will lapse.

4.4 The required process under the relevant sections of the Resource Management Act 1991 that relate to designations must be followed. The effect of the Designation is that normal planning rules do not apply – no Resource Consent is required, though an Outline Plan must still be submitted to the Territory Authority (in this case the Council). Land Use related Consents and Land Use related approvals will still be required prior to proceeding with enabling or construction works for the CMUA. If there is a requirement to alter the site boundary, or an alternative CMUA site is sought, legal input will be required.

### Background Studies on a Multi-use Arena

4.5 There have been a number of studies carried out regarding options for a new city stadium.

4.6 In August 2017, Council received the Canterbury Multi Use Arena Pre-Feasibility Study, completed by the Christchurch Stadium Trust. The study promoted a preferred option which included a capacity of 25,000 seats expandable to 30,000 with temporary seats, a solid acoustically treated roof and a concrete floor with a retractable natural turf and rectangular configuration.

4.7 In October 2017, a strategic assessment was carried out on the preferred development models identified within the Pre-Feasibility Study. The study explored the opportunities and risks associated with the retractable turf, acoustics, roof technologies and updated land geotechnical analysis and spatial planning of a potential facility on the subject site.

4.8 A Scope and Affordability Review completed later in 2017 utilising the recommended capacity provided cost estimates for three possible design schemes based on an accelerated programme. During this review, the earlier preferred solid roof and retractable pitch option was found to significantly exceed the available funding at an estimated cost of $561.4m. A scheme for a fully covered stadium with an ETFE roof and permanent turf, estimated at a cost of $470.3m was assessed as best meeting the Mayor and Minister's direction and stakeholders' requirements (as identified in the Pre-Feasibility Study and the Strategic Assessment).

4.9 In 2018, the Canterbury Earthquake Recovery Authority (CERA) commissioned an independent review of whether the Metro Sports Facility (MSF) and the CMUA/stadium projects achieved the best outcomes for Christchurch and the Canterbury region. The report identified that the

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preferred option was the development of standalone MSF and CMUA projects on their currently designated sites, in line with the proposed scope of facilities and within an affordable budget envelope.

### Funding Background

4.10 Both the 2015 and the 2018 Council Long Term Plans allocated $253 million to the project, to meet the maximum obligation referred to in the 2013 Cost Sharing Agreement.

4.11 The Government announced the $300 million Christchurch Regeneration Acceleration Facility (CRAF) in Budget 2018 to progress key regeneration activities in the city, as part of work towards transitioning projects and decision-making back to local leadership.

4.12 The Council submitted in September 2018 a Proposal for $220m from the Christchurch Regeneration Acceleration Facility (CRAF) to provide total funding of $473m for a full ETFE roof and permanent turf option. In October 2018, this was approved by the Crown subject to the successful submission of a single stage Investment Case. A single stage Investment Case was adopted in order to accelerate the project. The Crown is separately funding the land acquisition and any land remediation arising from contamination has been included in the global settlement agreed with Council.

### Previous Decisions by Council

4.13 In 2013 the Crown and Council adopted a Cost Share Agreement recognising the Stadium as an anchor project and capping the Council's contribution at $253m.

4.14 As identified, Council allocated $253 million to the project in its 2015 and the 2018 Council Long Term Plans.

4.15 At the 24 August 2017 Council meeting (**CNCL/2017/00215**) the Council resolved that it:

1. Receives the Multi-Use Arena Prefeasibility Report prepared by the Stadium Trust.
2. Notes that the preferred option is a full solid roof, a retractable pitch and proposed seating capacity of 25,000 permanent plus 5,000 temporary seating and a concert capacity, utilising the field of play, of 35,000-40,000.
3. Notes that Council in budgeting $253 million in its Long Term Plan has allocated sufficient funding to meet its 50% share of the proposed Multi-Use Arena under the Cost Share Agreement.
4. Notes that without additional funding the $253 million would only cover the cost of a modest provincial venue of 17,500 seats with 60% roof coverage of seating bowl.
5. Requests that officials work with the Crown to identify funding options for meeting the potential funding gap.
6. Notes that officials will report back on the ongoing work including development of a detailed business case in time for consideration for the Long-term Plan 2018-2028.

4.16 Note that this current Report recommends an option that does not meet the objectives of Resolution #2. A retractable pitch option has been investigated but is not the recommended design solution.

4.17 At the 22 June 2018 **LTP Adoption Meeting** (22 June 2018) the Council resolved:

1. To bring forward funding in the LTP by two years to 2020/21-2023/24 (from 2022/23-2024/25) to hasten building a multi-use Stadium.
2. To work collaboratively with the Crown on the development of the business case to provide clarity about the form, size and function of a roofed facility.

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4.18 At the 13 September 2018 Council meeting (**CNCL/2018/00195 )** the Council resolved inter alia to:

5. Approve the investment proposals (stage one) for the following projects being submitted to the Crown (for funding from the Capital Acceleration Facility), along with indicative funding envelopes;

   a) Canterbury multi-use arena/stadium, $220m

   b) Transport network horizontal infrastructure, $40m

   c) Residential red zone seed funding, $40m (approximately)

6. Delegate to the General Manager Strategy and Transformation the ability to make non-significant changes and to finalise the attached investment proposals prior to submitting these to the Crown.

8. Note that the exact and final allocation or apportionment (within the $300m) will be determined as part of the final investment cases that are developed.

## 5. Investment Case

5.1 The single stage Investment Case has been completed by Ernst Young (EY).

### Rationale and Strategic Context

5.2 The Investment Case identifies that the lack of an arena, and the continued delay in providing certainty to the market is partially or wholly responsible for four problems that a new arena can address:

5.2.1 A gap in Canterbury's events profile for large scale events is driving low levels of tourism and economic activity

5.2.2 The lack of frequent, larger events in the CBD adversely affects the vibrancy and viability of the CBD.

5.2.3 Private investment in the CBD is being deferred due to uncertainty over the delivery of planned regeneration projects

5.2.4 Christchurch's long-held identity as a sporting and cultural capital is diminished by its inability to host major events.

5.3 It confirms that the current venue is not fit-for-purpose and has multiple inadequacies, including:

5.3.1 Insufficient capacity in comparison to other venues in New Zealand cities

5.3.2 Insufficient capacity and quality to meet the expectations of what a second-tier Australasian city should offer, undermining Christchurch's competitiveness as a city of choice for talent, business and investment

5.3.3 Insufficient supporting infrastructure that negatively impacts on the visitor experience

5.3.4 A poor user and performance experience compared to other venues across New Zealand

5.3.5 The longer the delay in replacing the arena continues, the greater impact its absence will have on Christchurch's competitiveness as a second-tier city in Australasia. In addition, maintaining the temporary facility is estimated to cost more than $11 million in real terms over the next 10 years with the arena once again reaching the end of its useful life during the proposed construction timeframe of the CMUA.

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5.4 The four key benefits highlighted within the Investment Case include:

5.4.1 Additional Investment and economic growth in the region.

5.4.2 Promoting Christchurch as an attractive place to work, study, live and visit.

5.4.3 Providing Christchurch with more major entertainment events accessible to families and other residents.

5.4.4 Accelerated levels of investment, and relocation of businesses into the CBD.

5.5 The Investment Case considers a range of options for each of the following:

5.5.1 CMUA scope, configuration, seating capacity and design

5.5.2 Procurement method

5.5.3 Delivery Structure .

5.6 Each of these aspects have been assessed in the Investment Case.

**Scope, configuration, seating capacity and design Options**

5.7 The Investment Case provides a description of a long list of options to deliver an arena that can address the problem statements. It evaluates these options against strategic factors, investment objectives, and critical success factors to arrive at a short list of options. This short list was then evaluated further using cost-benefit and qualitative analysis to arrive at a recommended option.

5.8 The following reasonably practicable options were considered and are assessed in the Investment Case:

5.8.1 ETFE Roof Option: a fully covered arena with an ETFE Roof, Permanent Turf, permanent seating for 25,000 and a terrace for 500 standing (with future capability to replace 500 standing with 5,000 temporary seats).

5.8.2 Hard Roof Option: a fully covered arena with a Hard Roof, Retractable Turf and 25,000 permanent seats plus 5,000 temporary seats.

5.8.3 Base Case Option: Base Case – utilise Christchurch's existing sports and cultural facilities.

5.9 A full summary of all the ruled out longlist options and their analysis against the Investment Objectives and Critical Success Factors are outlined in the Investment Case. The Longlist options that were ruled out due to the analyses comprised:

| Roof Type | Permanent Seating | Temporary Seating | Premium Seating |
|---|---|---|---|
| Fully Covered | 30,000 | 0 | 3,000 |
| Fully Covered | 25,000 | 5,000 | 2,500 |
| Fully Covered | 25,000 | 0 | 2,500 |
| Fully Covered | 20,000 | 5,000 | 2,000 |
| Fully Covered | 20,000 | 0 | 2,000 |
| Dripline Roof | 25,000 | 5,000 | 2,500 |

5.10 It is important to recognise (for all options) that it is the quantum of permanent seats that drives the size of the facility; circulation space, toilet facilities, food and beverage amenities etc. are based on this number. When temporary seats are added, there will be a requirement

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to 'bump-in' additional amenities and facilities to cater for the additional patrons, so it is not just a question of adding seats and the stand structure to support them. Therefore there is a significant cost difference between providing 30,000 permanent versus 25,000 + 5,000 seats

5.11 The initial options assessment prepared for the draft investment case identified a preferred option of a covered arena with an ETFE roof, permanent in-situ turf and a capacity of 25,000 permanent seats plus a terrace for 500 safe standing.

5.12 Consideration of the draft investment case in August 2019 found that the estimated cost to deliver the preferred option exceeded the $473m available budget when the cost estimate was subjected to a quantitative risk assessment (QRA).

5.12.1 The Estimate at Completion (EAC), based on the fundamental design elements, was $483.8m ($10.8m or 2% over budget).

5.12.2 A Quantitative Risk Analysis (QRA) at a P85 level (considered 85% likely that the actual project costs will be delivered at or below this value) was also completed by WT Partnership and peer reviewed by Rawlinsons Quantity Surveyors/Cost Consultants. The P85 estimate increased the estimated cost to an unacceptable $505m.

5.13 This necessitated an affordability review of the preferred option to identify potential saving opportunities to present an on-budget scenario for the CMUA.

5.14 A number of potential opportunities to decrease this cost were then identified and the project team proceeded to identify an affordable option for the CMUA which could be constructed within the $473m available budget using a QRA at a P85 affordability threshold level.

5.15 An amended option was developed which included 25,000 permanent seats, no terraced standing area and no temporary seating. This option does not preclude the purchase and use of temporary seats should further capital funding become available, or if the need for additional capacity becomes apparent.

5.16 This option falls within the affordability threshold using a P85 quantitative risk analysis threshold, approximately $266,000 less than the $473m available budget.

5.17 The recommended option includes 'shrouding' with a partially acoustic roof to the east, south and west to mitigate noise break-out, however the overhead and north sections must be ETFE to maximise natural sunlight for turf growth. In addition, for turf health, some low level ventilation 'slots' must be provided, though these can be 'closed off' for short periods of time. This will mean noise spill to the north in particular.

5.18 As part of the 'Proof of Concept' design work, Marshall Day Acoustics (MDA) were engaged to assess likely noise spill from the concept design (as well as internal acoustic quality). MDA have modelled the 'worst case' scenario - a full size concert, with the stage at the north end, which the event schedule currently forecasts to occur 3-6 times per year – and the break-out noise is significant, if infrequent. Smaller concerts, with the stage moved further south, are also anticipated 3-6 times per year. The noise spill effect will be similar to that experienced from events currently held at Hagley Park or the temporary Stadium.

5.19 There is some legal risk in respect of S16 and S17 of the RMA – these are essentially 'good neighbour' clauses that address adverse effects. These are covered in the risk section of the Investment Case

**Procurement Options**

5.20 The Investment Case involved identifying the project's characteristics and the market profile, determining a shortlist of procurement models and evaluating and scoring the shortlist procurement models.

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5.21 The following option were considered:

5.21.1 Construct Only

5.21.2 Design and Build (D&B)

5.21.3 Alliancing

5.21.4 Design, Build and Maintain (DBM)

5.21.5 Public Private Partnership (PPP)

5.21.6 Build, Own, Operate and Transfer (BOOT).

5.22 Market engagement was completed as part of the Investment Case to understand the capability and capacity of the construction market to deliver the CMUA.

5.23 The engagement found that Design and Build (D&B) was the procurement method that would provide the greatest competitive price tension in the market and also the best opportunity for early procurement of key materials and is therefore the recommended procurement method for project delivery.

5.24 The D&B model offers a number of key advantages over the other procurement models. These include:

5.24.1 The best chance for a competitive tender process

5.24.2 A single procurement process that covers the design and build of the facility, which will include a response from the private sector consortia comprising the skill sets to perform the required services

5.24.3 Reduced interface risk with the integration of the design and build mitigating some client interface risk

5.24.4 Potential programme savings from a faster and better-understood procurement process

5.24.5 Enhanced control of the project delivery from the client-side

5.24.6 Greater flexibility during the design development phase and options for innovation.

5.25 It is also recommends that an Operator and Maintenance Provider are confirmed as early as possible to maximise the value of their inputs in developing the design requirements of the CMUA.

5.26 It is intended for the relationship between the venue operator and key users (such as Crusaders/Canterbury Rugby Football Union (CRFU)) to be that of a partnership where possible. It is acknowledged that it is mutually beneficial for all parties to work together in the best interests of the city, the region, the sports and the CMUA.

5.27 The Investment Case notes that there are aspects of this project – the high upfront capital cost, the need to closely integrate design, maintenance, operations, and construction, and the long maintenance tail – that suggest a Public Private Partnership (PPP) delivery model would be a strong candidate to manage the interface risk and deliver innovation to reduce whole-of-life costs. The challenge is the lack of contractor interest in delivering under a PPP model, and the time and effort required for procurement of a PPP and to build contractor and client capability while maintaining the preferred in-service date.

**Project Delivery Options**

5.28 The Investment Case considers three structures for the project delivery of the CMUA:

5.28.1 Option 1: Joint governance and delivery

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5.28.2 Option 2: Council governance and delivery

5.28.3 Option 3: Joint Crown and Council sponsorship, Council governance and delivery entity (proposed option).

5.29 Each of these options involves a different risk allocation:

| | | Option 1<br>Joint governance and delivery | Option 2<br>Council governance and delivery | Option 3<br>Joint sponsorship, Council governance and independent delivery |
|---|---|---|---|---|
| Asset owner | | Council | Council | Council |
| Delivery Responsibility | | SPV | Council | SPV |
| Funding source | | Council / Crown | Council / Crown | Council / Crown |
| Appointment of governance members (Board or PSG) | | Council / Crown | Council | Council |
| Risk | Design | Council / D&B Consortia | Council / D&B Consortia | Council / D&B Consortia |
| | Ground Contamination | Council/Crown | Council/Crown | Council/Crown |
| | Ground (Geotechnical) Conditions | Council / D&B Consortia | Council / D&B Consortia | Council / Crown / D&B Consortia |
| | Utilities | Council | Council | Council |
| | Functionality | D&B Consortia | D&B Consortia | D&B Consortia |
| | Procurement | SPV | Council | Council/SPV |
| | Construction | D&B Consortia | D&B Consortia | D&B Consortia |
| | Cost Escalation | D&B Consortia | D&B Consortia | D&B Consortia |
| | Unavoidable Cost Overrun | Council /Crown | Council | Council |
| | Cost Overruns Due to Council Requested Scope Change | Council | Council | Council |
| | Asset Management / Facilities Maintenance | Council | Council | Council |
| | Operations | Council | Council | Council |
| | Operating costs | Council | Council | Council |

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| | | | | |
|---|---|---|---|---|
| Responsibility | Delivery phase | • Joint project delivery between Council and Crown through the SPV<br>• SPV agrees on preferred procurement model<br>• SPV agrees on preferred operator<br>• Cost overruns are shared between Council and Crown during delivery phase. | • Council responsible for all decision making during the delivery phase e.g. selection of procurement model and operator<br>• Council may consult with the Crown, local iwi and other stakeholders to inform decisions<br>• Council is solely responsible for cost-overruns as it is the entity responsible and accountable for delivery. The Crown provides only its fixed contribution, plus any contamination remediation funding agreed. | • Council responsible for all decision making during the delivery phase e.g. selection of procurement model and operator<br>• Council may consult with the Crown, local iwi and other stakeholders to inform decisions.<br>• Council is solely responsible for cost-overruns as it is the entity responsible and accountable for delivery. The Crown provides only its fixed contribution, plus any contamination remediation funding agreed. |
| | Operations phase | • All responsibility resides with Council as the asset owner, following delivery. | • All responsibility resides with Council as the asset owner, following delivery. | • All responsibility resides with Council as the asset owner, following delivery. |
| Ease of implementation | | • Will require the recruitment of a project team with capability in delivering vertical assets of the CMUA scale and managing / overseeing significant design integration.<br>• Slower to setup than option 2, but the project timeline risk can be partially mitigated through moving forward with the existing Council structure to engage with contractors early on the procurement process and creating a functional brief<br>• Requires Director costs from the project budget, which is currently unallocated<br>• Establishment would require agreement on funding agreement. | • Will require the recruitment of a project team with capability in delivering vertical assets of the CMUA scale and managing / overseeing significant design integration<br>• Quickest to stand up, but wouldn't allow joint project ownership between Crown and Council<br>• Establishment would require agreement on funding agreement. | • Will require the recruitment of a project team with capability in delivering vertical assets of the CMUA scale and managing / overseeing significant design integration.<br>• Slower to setup than option 2, but the project timeline risk can be partially mitigated through moving forward with an interim Project Director.<br>• Requires Director costs from the project budget, which is currently unallocated.<br>• Establishment would require agreement on funding agreement. |

5.30 The Investment Case recognises that Council should be the agency responsible for the delivery of the Project and should have control over project governance and project design and scope decisions as it has long-term financial interest in the CMUA's operations.

5.31 It identifies that Council should establish a Project Board to provide independent governance and financial control over the delivery of the CMUA. Appropriate project governance for a project of this scale is critical. The ability to attract and retain the appropriate skill-sets for the project delivery is an important factor in establishment of the governance and organisational structure. A skills matrix is provided in Appendix D of the Investment Case.

5.32 The Crown would:

5.32.1 act as a joint sponsor for the Project, supporting the successful planning, design and delivery of the Project;

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5.32.2 cap its contribution at whatever money is sought through the CRAF (excluding land, and the other funding agreed with Council through the global settlement) and not take on additional risk.

5.33 The Council would:

5.33.1 act as joint sponsor, owner and accountable agency for the delivery of the Project, responsible for securing the funding for the project, specifying the project outcomes and design requirements, ensuring that the project remains strategically aligned and viable, and that benefits are on track to be realised

5.33.2 establish a Project Board to manage, deliver and complete the Project

5.33.3 provide the Crown with the information required to satisfy its funding criteria and meet accountability requirements for expenditure of public monies.

5.34 The Board would have responsibility for ensuring the project is:

5.34.1 successfully delivered on time and within budget and scope

5.34.2 able to achieve all the project objectives, as defined by Council. This includes responsibility for optimising value, managing risk, ensuring timely delivery, meeting project performance requirements and determining remedial action if required.

5.35 A Funding Agreement between Crown and Council would be developed to reflect the funding relationship.

**Programme**

5.36 The Investment Case identifies a very ambitious programme:

| CMUA Activity Periods | Start | Finish |
|---|---|---|
| Enabling Works - Design & Procurement | Q1 2020 | Q2 2020 |
| Enabling Works on site - service diversions etc. | Q2 2020 | Q4 2020 |
| Produce & Approve Brief for new facility | Q1 2020 | Q3 2020 |
| Procure Design & Build Contractor | Q3 2020 | Q1 2021 |
| Early Works | Q2 2021 | Q4 2021 |
| Construct new facility on site | Q1 2022 | Q2 2024 |
| New Facility Operational | Q3 2024 | |

5.37 This programme is contingent on a number of factors:

5.37.1 the ability to develop a Funding Agreement and establish a Project Board

5.37.2 market conditions, impacting on ability to procure core services and a delivery consortia

5.37.3 unanticipated adverse ground conditions

5.37.4 minimising any scope changes during construction

5.37.5 inclement weather impacting on key construction activities

5.37.6 delivery of key components to site, particularly imported materials from overseas

5.37.7 any industrial action e.g. strikes.

5.38 The Investment Case suggests that the early procurement of enabling/early works be considered to mitigate site risks prior to the procurement of main works. These include:

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5.38.1 Site clearance

5.38.2 Utilities relocation (and consequential offsite infrastructure changes)

5.38.3 Consequential (external to site) roading changes

5.38.4 Geotechnical (ground improvement), if appropriate, given the ideal scenario that ground improvement. foundations and structure are designed as a complete system

5.38.5 Site contamination and remediation.

## 6. Financial Implications

6.1 Council has committed $253m in its Long-Term Plan (LTP) for the Arena's development, along with some $4.1m in annual funding to cover operations. This is in addition to the $220m the Crown has agreed to contribute from the Christchurch Regeneration Acceleration Facility (it is currently assumed that this $220m will be drawn down first in line with the CRAF proposal submitted September 2018, with Council's LTP funding allocated from FY21/22). These amounts were based on initial high-level estimates of the cost of the facility and its operation.

6.2 To determine the financial implications of the Arena with more accuracy, a Finance Model has been prepared. This was constructed based on cost, revenue and funding assumptions and estimates obtained from Council, WT Partnership (WTP) and domestic and international events and arena experts. These costs and revenue assumptions have been further reviewed by Vbase and have been supplemented with other publicly available information.

6.3 This Model calculated in more detail the estimated construction cost and 'whole of life' cost of the recommended option for the facility, being covered with a 25,000 permanent capacity.

- Note the 'whole of life' cost was calculated over a 30 year assessment period - this timeframe was chosen on the basis that making operating assumptions beyond this are difficult (due to likely changes to market conditions) and it is aligned with Council's infrastructure strategy (prepared using 30 years - consistent with the provisions of the Local Government Act).
- Additionally, note that the lifecycle costs (asset replacement and renewals etc.) over this 30 year period have been adjusted to reflect the estimated lifecycle costs that will be incurred in the long term.

6.4 A summary of these costs is below. Note as a comparison a Hard Roof Option would require an additional c. $120m on a P85 basis.

*Table 1: Summary of Financial Implications*

| | **ETFE Roof Option (Recommended Option)** |
|---|---|
| Capex (EAC) | $439.4m |
| Capex (P85) | $472.7m |
| Annual Average Operating Expenditure (PV) | $11.3m |
| Annual Average Lifecycle Costs (PV) | $2.0m |
| Annual Average Operating Revenue (PV) | $9.1m |
| Annual Average deficit (PV - net inc. lifecycle costs) | ($4.2m) |

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| | |
|---|---|
| Current Annual Opex provided in LTP to offset annual deficit (PV) | $4.1m |

*'PV' = Present-value. This denotes that figures are adjusted to remove the impact of annual inflation. This essentially means they are stated in present-value dollars.*

6.5 Comparing the above figures to the amounts committed by Council in its Long-Term plan, it can be seen that:

- From a Capex perspective, based on a total Capex budget of $473m, both the EAC and P85 figures for the recommended ETFE option are materially aligned to budget. The original budget of $473m was set based on the EAC performed at due diligence undertaken in early 2018.
- Note that the EAC (Estimate at Completion) methodology forecasts the capital cost of a project based on WTP's calculations, with provision made for contingency (unforeseen costs) and escalation (cost inflation over the life of the project). P85 is calculated using a QRA (Quantitative Risk Analysis) methodology. This takes WTP's cost calculations and adjusts the figures to reflect the project's risks (based on the likelihood of, and financial impact from, these risks eventuating). P85 denotes that it is considered 85% likely that the actual project costs will be at or below the estimated value.
- From an Opex perspective, the forecasted operational deficit ($4.2m) will be largely offset by the $4.1m of annual funding allowed for in the Council's LTP. Note the operational costs of the CMUA do not include any incentive payments that may be necessary to attract major events to Christchurch.

## 7. Risks / Ngā tūraru

7.1 The key risks related to the delivery of the Recommended Option (ETFE Option) are identified in the following points. Refer to the Investment Case for the complete Risk Register.

### Cost Risks

7.2 **Escalation Costs causing Scope Reduction** –Material delays to the project will reduce the budget available for physical works (cause scope reduction). To address this an accelerated programme has been adopted during the Investment Case phase (single stage instead of a traditional two stage process). This impetus needs to be maintained during the delivery phase, meaning in particular that approvals and decision making must be prompt. To mitigate the risk of escalation and scope reduction a clear and efficient governance structure is required, also a comprehensive Risk Management process will be in place at the outset of the delivery phase to proactively manage items that could cause potential delays.

7.3 **Delivery Budget** – insufficient budget to deliver expected scope with Concept Design not meeting Stakeholder expectations. This is mitigated by the 'Proof of Concept' design that has confirmed the general scope of the arena and informed cost estimates that are affordable.

7.4 **Contractor Capability and Capacity affecting Project Costs** – given the large scale of this project there is concern that there is a limited pool of Contractors capable of delivery, this could reduce the competitive price tension during procurement and lead to increased delivery costs. This risk has been mitigated by engagement with the contractor market to determine the best procurement option for the project.

### Design Risks

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7.5 **Turf** – Ability to control climate within the Arena to promote sustainable turf growing and playing conditions. This is mitigated by the engagement of experienced turf consultants and engineers who have undertaken modelling of daylight, ventilation and temperature for the proposed schemes. Achieving the appropriate turf environment is the number one design consideration.

7.6 **Break out noise** – Noise spill issues may potentially limit the number of concerts able to be hosted in the Arena, reducing the operational availability and revenue generation of the facility. This will be mitigated with the use of engineering solutions where possible. Engagement with residents will also be ongoing. A noise management plan will be an essential part of the event management plans.

7.7 Amendment to the Christchurch Central Recovery Plan (CCRP) to change the District Plan to mitigate the noise risk and support the use of the CMUA is currently being investigated, particularly with the possible early repeal of the Greater Christchurch Regeneration (GCR) Act.

7.8 The project team will also engage with the local residents/community to use non-regulatory planning tools to assist implementation of the CMUA Designation and achieve "buy-in" to the project.

7.9 **Seismic Hazard** – varying ground conditions can lead to differential settlement after a seismic event. This is mitigated by site specific investigations, and engineering design that will include 'readily repairable' options that can be adopted over and above basic compliant 'life safety' engineering solutions.

**Political Risks**

7.10 **Engagement** – lack, or perceived lack, of engagement with key stakeholders and the public. To mitigate this a detailed Communications Strategy and Plan has been developed and engagement with stakeholders has been taking place, this will continue during delivery phase.

7.11 **Governance** – a complicated governance structure (one with multiple Sponsors and potentially competing interests) may delay decision making and add cost to administer. Clear terms of reference and establishing a simplified structure early in the delivery process will mitigate this risk to an extent.

## 8. Strategic Alignment / Te Rautaki Tīaroaro

8.1 This report supports the Council's Long Term Plan (2018 - 2028):

8.1.1 Activity: Recreation, Sport, Community Arts & Events

- Level of Service: 7.0.1.3 Provide citizens access to fit-for-purpose recreation and sporting facilities. - 5 stadia are available for use 364 days p.a.

8.2 The presented options are consistent with Council's Strategic Framework and the Local Government (Community Well-being) Amendment Bill 2019 promotes the social, economic, environmental, and cultural wellbeing of communities. In particular:

8.2.1 The overarching principle of the Council's Strategic Framework is partnership – to work together to create a city that uses peoples' skills and talents, where everyone can participate and be valued, to improve the economic, cultural, environmental and social wellbeing for all. The active citizenship priority is achieved by the partnership approach to developing the concepts for the Arena with key stakeholders, which will carry over into the design phase and ultimately the use of the stadium.

8.2.2 The Council's desired Community Outcomes;

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- Strong Communities: celebration of our identity through arts, culture, heritage and sport.
- Liveable City: Vibrant and thriving central city.
- Prosperous economy: Modern and robust city infrastructure and community facilities.

8.3 The design stage of the project will provide opportunities to further investigate and demonstrate climate change leadership and resilience.

8.4 This is consistent with Council's Plans and Policies. In particular:

8.4.1 Council's 30 year Infrastructure Strategy

- The CMUA will improve the provision of civic facilities within the city.

8.4.2 Christchurch Visitor Strategy 2016 (reference the Strategic Case)

- The CMUA will help Christchurch reclaim its pre-earthquake role in national tourism by increasing shoulder and off-peak visitor numbers.

8.4.3 Christchurch Economic Development Strategy 2017 (reference the Strategic Case)

- The CMUA will enhance city amenities, attracting people, business, investment and visitors to the city and accelerating the regeneration of the CBD.

8.4.4 Christchurch Major Events Strategy 2018 (reference the Strategic Case)

- The CMUA will attract high-quality events that are recognised worldwide and make a positive contribution to the community's perception of their quality of life (civic pride).

**Assessment of Significance and Engagement / Te Aromatawai Whakahirahira**

8.5 A decision to proceed with the development of a multi-use arena in the central city area is significant, in relation to the Council's significance and engagement policy. This has been reflected in the level of engagement with the community and in decisions made by the Council over the last six years.

8.6 As a result of submissions received during the 2018-28 Long Term Plan process, the Council resolved to bring forward the already agreed funding for the facility ($253 million). At the time the Mayor noted that the Council had heard from many submitters about the importance and value to the city's economy, vibrancy and identity that a multi-use arena hosting major events could bring.

8.7 It was also noted that the Council was keen to work collaboratively on the development of the business case, which will provide clarity about the form, size and function of the arena, but also that there was already general support for it having a roof.

8.8 As noted elsewhere in this report, in 2018 the Government established the Christchurch Regeneration Acceleration Facility for the purpose of providing certainty (in the form of funding) to "develop the red zone, contribute towards a new stadium and deal with the gaps in the horizontal infrastructure programme". In September 2018 the Council resolved that $220 million of the fund would be allocated to the development of the multi-use arena. This decision was confirmed in the Council's 2019-20 Annual Plan, which was the subject of a public consultation process.

8.9 In its September 2018 decision the Council noted that more detailed investment cases for each of the projects to be funded by the Fund were to be developed and reported back to the

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Council before being submitted to the Crown for final approval. That is the purpose of this report.

8.10 It is the view of the Legal Services Unit that it is open to the Council to determine it is sufficiently aware of the community's views in respect of the multi-use arena, and that a decision to approve the investment case for the facility does not require further engagement. There are likely to be future opportunities for including the public as more detailed design options for a covered arena are developed.

## 9. Community Views and Preferences

9.1 Stakeholder engagement activities have been ongoing throughout the development of the Investment Case, and were underway prior to this phase from the outset of planning for the Arena and during pre-feasibility studies and other work to pave the way for the development.

9.2 Engagement to date includes the development of the CERA-led Christchurch Central Recovery Plan "Blueprint" in 2012 that built on the Christchurch City Council's draft Central City Plan to which the community submitted over 106,000 ideas. In addition, a stakeholder engagement exercise was carried out during the Arena Pre-Feasibility Study, which drew 120 participants to five workshops in late 2017. Public consultation was also carried out through the Council's Long Term Plan 2018-28 process.

9.3 Council staff have consulted Matapopore about the Investment Case and work will continue through the design process to involve mana whenua. A Cultural Design Framework has been prepared by Matapopore to help inform the design principles for the arena.

9.4 Project updates issued through the Council's Newsline site and social media, a regular e-newsletter which members of the public can sign-up to receive, and information prepared for local media have been tools used to communicate with the public about progress on the project.

9.5 Submissions from the public about the CMUA received during the 2018-2028 LTP consultation showed the following support for the project;

| | Support | Oppose | Alternative | Total |
|---|---|---|---|---|
| **Multi-Use Arena** | **113 (63%)** | **62 (34%)** | **5 (3%)** | **180** |
| Metro Sports Facility | 31 (51%) | 17 (28%) | 13 (21%) | 61 |
| Community Facilities | 161 (37%) | 57 (14%) | 213 (49%) | 431 |
| Parks | 28 (29%) | 9 (10%) | 58 (61%) | 95 |

9.6 Those supporting the Multi-Use Arena saw it as a vital and necessary capital expenditure to return sporting and entertainment events to the City, whereas those who were opposed thought there were other environmental and/or social priorities. Some sought a renegotiation of the Cost Sharing Agreement.

9.7 For the Investment Case phase of the project, focus has been directed to technical experts and facility user stakeholders to help establish the Baseline Concept and provide information to develop the Investment Case (for example establishing an event schedule, estimating operating costs of various technical solutions).

9.8 Stakeholders range from sporting groups, businesses, residents' associations, event organisations, hospitality representatives, developers, education and youth representatives.

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9.9 Three external stakeholder forums were held (one in December 2018 and a further two in February 2019) to offer a formal update on progress and gather feedback and ideas. Of the approximate 200 invited stakeholders, 55 people attended the three forums.

9.10 There was general support for the Arena development, with most stakeholders eager to see progress on the project. Stakeholders also generally supported the concept being explored in the Investment Case, being a covered, 25,000 permanent plus 5,000 temporary capacity Arena with multi-use capability.

9.11 A Project Reference Group formed of key stakeholders was set up to provide input, information and feedback on the Investment Case and review and comment on certain components of the draft. The Group met in May and June 2019 to consider the draft Investment Case and provide feedback.

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## Attachments / Ngā Tāpirihanga

There are no attachments to this report.

## Confirmation of Statutory Compliance / Te Whakatūturutanga ā-Ture

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).

(a) This report contains:
  (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
  (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.

(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

## Signatories / Ngā Kaiwaitohu

| | |
|---|---|
| **Authors** | Mark Noonan - Project Director<br>Alistair Pearson - Manager Capital Delivery Major Facilities |
| **Approved By** | Michael Down - Finance Business Partner<br>Mary Richardson - General Manager Citizens & Community |

Christchurch City Council



# Canterbury Multi-Use Arena Investment Case

Christchurch City Council

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# Executive Summary

# 1. Introduction and Strategic Rationale

## Why a Canterbury Multi-Use Arena is important for the city, region and country

Christchurch is New Zealand's second largest city and the major population and economic base in the South Island. With significant assets (tertiary institutions, international ports, research, and industries) and high amenity and lifestyle offerings in a desirable natural environment, Christchurch is well-positioned to deliver greater prosperity to its residents and make a more significant contribution to New Zealand's prosperity, consistent with the country's Living Standards Framework.

The level of ambition for prosperity within the city is guided by the ambitions of Te Rūnanga o Ngāi Tahu to deliver intergenerational impact, articulated as "For us and our children after us", and is consistent with the priority areas outlined by the UN Sustainable Development Goals.

Christchurch is unique among large urban centres in New Zealand in having significant capacity for growth and capability to grow without incurring significant additional infrastructure costs.

To fully realise the potential of the city for its residents and New Zealand, Christchurch needs a competitive offering for people and talent compared with other Australasian cities. A multi-use arena appropriate to the city's size and role as the second largest city in New Zealand is a necessary part of this offering to existing and potential residents and visitors.

A strong second city provides New Zealand with a strong, more diversified economic base and maximises the return from the significant investment to date by the Crown, Christchurch City Council, and private sector. Christchurch aspires to increase its contribution to the New Zealand economy over the next 10 years to represent 9% of the national economy. This will only be achieved by attracting significantly more people (visitors and residents) to support the ongoing regeneration of the city and to realise the full value of the significant economic assets and infrastructure of the city. The Multi-Use Arena, appropriate to Christchurch's size and position in New Zealand, is necessary to support these aims.

## History

Following the Canterbury Earthquakes, Christchurch lost many of its key social, cultural, and sporting venues. In response, the Crown and the Council prepared several recovery plans to support the regeneration of the city and region. The Christchurch Central Recovery Plan (CCRP) identified an arena as a key component of central city regeneration.

The Canterbury earthquake sequence that began in September 2010 cost 185 lives and caused an estimated $40 billion of damage ($42 billion in 2019 dollars). The scale of damage was second only to the 1931 Napier earthquake in New Zealand's post-European settlement history, and was the second-most costly insured event in the world at the time. Amongst the built losses from the earthquakes were much of Christchurch's network of performance, cultural, and sporting venues including the Convention Centre, Court Theatre, The Arts Centre, Isaac Theatre Royal, the Town Hall, The Civic, and Lancaster Park Stadium. These venues were either demolished or required significant repair.

Following the earthquakes, an assessment was undertaken of the existing Lancaster Park stadium. Assessments indicated that the repair of the stadium was not economically viable. Without that venue, Christchurch did not have a venue suitable for hosting large scale concerts, professional Rugby Union, Cricket, Rugby League, or Football matches.

## The Temporary Christchurch Stadium

To address the gap in the events market, a temporary stadium with a permanent capacity of 18,000 was delivered on a site in Addington – some 5km from the CBD – in March 2012 at a cost of $30 million[1]. This went some way toward re-establishing a sense of normalcy, and providing residents with a way to reengage in civic life. Seven years on, it continues to provide space for sport (primarily rugby), large scale events, and concerts in Christchurch.

The current facility lacks key features and facilities that would make it appealing to promoters and content providers. As this Investment Case will demonstrate, the current venue is not fit-for-purpose and has multiple inadequacies, including:

- Insufficient capacity in comparison to other venues in New Zealand cities.
- Insufficient capacity and quality to meet the expectations of what a second-tier Australasian city should offer, undermining Christchurch's competitiveness as a city of choice for talent, business and investment.
- Insufficient supporting infrastructure that negatively impacts on the visitor experience.
- A poor user and performance experience compared to other venues across New Zealand.

The longer the delay in replacing the arena continues, the greater impact its absence will have on Christchurch's competitiveness as a second-tier city in Australasia. In addition, maintaining the temporary facility is estimated to cost more than $11 million in real terms over the next 10 years with the arena once again reaching the end of its useful life during the proposed construction timeframe of the CMUA. Continued repairs, upgrades, and stop-gap measures will not deliver on the expectations held by the community, stakeholders, and the business community and investors to see a new major cultural and sporting facility in the heart of the City. This will undermine the city's competitiveness and capacity to attract and retain critical talent.

### Accelerating the recovery

The arena was originally scheduled to be completed by mid-2017. Delays to regeneration following a major disaster are common, but in the interest of ensuring that those delays are reduced, the government made $300 million available for the purposes of accelerating recovery in Canterbury and Christchurch through the Christchurch Regeneration Acceleration Facility (CRAF), subject to investment case approvals.

In September 2018, the Council resolved to use $220 million of that facility for the purposes of accelerating the development of the arena, and lodged an investment proposal with Treasury formalising that request. In seeking funding, the arena was expected to meet the objectives of the CRAF. Separately, the Council has committed $253m in its Long-Term Plan (LTP) for the arena's development, along with some $4.1m in annual funding to cover operations. This is in addition to the [redacted] forecast to be spent by the Crown on the land for the CMUA.

Accelerating the recovery matters, particularly now. The balance of this case will discuss the need for this specific investment, considering the context in which it is being developed. The funding is available, the site is known, and the commitment has already been made.

### Problem statements

The lack of an arena, and the continued delay in providing certainty to the market is partially or wholly responsible for four problems that a new arena can address. The following problem statements and causes of

[1] Inovo Projects, 2018

these problems were discussed, confirmed and subsequently endorsed by the officials group. Table 1 summarises the problem, the underlying cause and effect.

Table 1: Problem Statements

| Problem | Cause | Effect |
|---|---|---|
| 1. Problem Statement 1: A gap in Canterbury's events profile for large scale events is driving low levels of tourism and economic activity.<br>(35%) | • Current venues in Canterbury are not suitable for hosting large scale events.<br>• Christchurch is less able to attract major concerts, cultural events and exhibitions relative other centres its size.<br>• Christchurch is less able to attract major sporting events, relative to centres its size. | • Lost opportunity to stimulate the region's visitor economy<br>• Lost opportunity to attract unique domestic and international visitors<br>• Lost expenditure from those who leave Canterbury and travel to attend events elsewhere<br>• Inability to host large events makes Christchurch less vibrant for residents, affecting quality of life, and consequently the ability of employers to attract new talent to the city at a time when competition for talent is intensifying<br>• Christchurch's leisure offering as a Tier 2 city in Australasia is not competitive with other Tier 2 cities<br>• Lack of events throughout the year amplifies visitor seasonality issues |
| 2. Problem Statement 2: The lack of frequent, larger events in the CBD adversely affects the vibrancy and viability of the CBD<br>(25%) | • Christchurch does not provide a "full product offering" for those who visit, live and work in the region<br>• Greater Christchurch is not perceived as the event and cultural experience expected of a city of its scale and relative importance.. | • Christchurch does not generate the same level of economic benefits from sporting and cultural events as other regions<br>• Greater Christchurch will fail to share in economic revitalisation without strong investment in core civic assets at its core<br>• Without investment in regeneration projects in the CBD, the population density needed for a vibrant and attractive central city will not be achieved.<br>• Insufficient activity within the city's CBD has flow on effects for the entire city's economy and wellbeing |
| 3. Problem Statement 3: Private investment in the CBD is being deferred due to uncertainty over the delivery of planned regeneration projects .<br>(30%) | • Uncertainty of investment in regeneration projects is delaying private investment in the CBD. | • Lost opportunity to revitalise the eastern part of the CBD<br>• Delays create uncertainty for first mover investors, and reduce confidence for future investment<br>• Delayed investment has an indirect effect on the functioning of the CBD, undermining the multi-nodal development approach and agglomeration benefits envisioned in the Christchurch Central Recovery Plan (CCRP)<br>• Businesses and residents are taking a "wait and see" approach to investment in the area, resulting in insufficient demand for developers to proceed with confidence |
| 4. Problem Statement 4: Christchurch's long-held identity as a sporting and cultural capital is diminished by its inability to host major events .<br>(10%) | • Christchurch's identity as a sporting and cultural capital of New Zealand is declining. | • Christchurch is less well-known and promoted externally in a positive way. The city becomes less relevant nationally and internationally<br>• New patterns of event activity centred around other destinations risk becoming entrenched and permanent, decreasing Christchurch's capacity to reclaim market share |

The key drivers for each problem are summarised below.

## Problem 1: A gap in Canterbury's events profile for large scale events is driving low levels of tourism and economic activity (35%)

Christchurch has a noticeable gap in its event facility hierarchy, particularly when considering the temporary nature of the Christchurch Stadium. For a city of Christchurch's size and prominence, the lack of a high-quality, medium-high capacity arena is noticeable. This has several consequent impacts.

## Christchurch is less able to attract major concerts, cultural events and exhibitions relative other centres its size

There is an observable gap between the potential Christchurch has to attract events with the right facilities, and the level of event activity that has been occurring. Large scale non-sporting events (15,000+ attendees) only infrequently come to Christchurch due to the lack of an appropriate venue. This is demonstrated by the fact that since 2015, Christchurch has only managed to attract three large scale concerts (Phil Collins, Bruce Springsteen and the Foo Fighters).

## Christchurch is less able to attract major sporting events, relative to centres its size

Christchurch also struggles to attract and cater for major sporting events. Christchurch is increasingly falling behind other cities and venues in its ability to attract All Blacks tests. Since Forsyth Barr and Christchurch Stadium opened in 2011 and 2012 respectively, there has been a discrepancy in the number of All Blacks Tests held at each venue:

- Since the opening in 2012, Forsyth Barr has been the preferred venue for international rugby tests on the South Island, hosting six All Blacks tests to four in Christchurch.
- Forsyth Barr is seen as the premiere venue to host blockbuster fixtures against Australia, England and the British and Irish Lions.
- Christchurch Stadium has not hosted an All Blacks test since 2016 and is not scheduled to do so in 2019.
- Since 2016, the NZRU has hosted All Blacks tests at regional venues on the North and South Island at venues including Yarrow Stadium (Taranaki) and Trafalgar Park (Nelson) at the expense of Christchurch. Second-tier All Blacks test have been historically held at regional centres, although this may change as NZRU re-examines its operating model.

Christchurch is also not well positioned to attract major future events, such as NRL, HSBC Rugby Sevens, and Football World Cup qualifiers. This is a consequence of several factors:

- Christchurch Stadium, with a capacity of 18,000, faces strong competition from Dunedin with a covered stadium with maximum seating capacity of 30,800 (includes temporary seating).
- Christchurch Stadium is too small and does not represent a strong commercial proposition for NZ Rugby.
- The quality of the Christchurch facility is poor. The facility itself is aging, the seats are small compared with international standard facilities. There is limited premium seating and food and beverage space, and the stadium is uncovered resulting in poor patronage and performer experience.
- The hospitality offering surrounding the existing stadium is poor and dispersed, leading to a poor pre-and-post-game experience.

Failing a change in facility investment and incentives payments, Christchurch appears likely to continue to lose out on major sporting events, with Auckland, Wellington and Dunedin all being viewed as more attractive venues.

## Lost opportunity to stimulate the region's visitor economy

The confluence of these issues is a contributing factor to Canterbury's underperformance as a regional tourism market. Engagement with the sector suggests that more tourists will come to the Canterbury region because of the enhanced event profile of the arena, the events it holds, and its increased capacity. Modelling undertaken for

this Investment Case conservatively estimates that stays in Christchurch will increase by nearly 100,000 bed-nights per-annum because of the domestic and international tourism driven by the new arena.

Hosting large events is one way to encourage a strong tourism market. Tourism expenditure leads to higher incomes and consumption and increases in employment. Larger events such as concerts and entertainment activities are also likely to increase the subjective well-being of the region's residents by providing entertainment that is not currently available in Canterbury.

### Lack of experience opportunities and vibrancy affects quality of life and ability to retain and attract talent

Inability to host large events makes Christchurch less vibrant for residents, affecting quality of life and consequently the ability of employers to attract new talent to the city at a time when competition for talent is intensifying. An inability to retain and attract people with the capabilities and skills the city requires impacts its long-term economic performance and competitiveness. It also limits the extent to which Christchurch can contribute effectively to the national economy.

### Visitation to Christchurch is highly seasonal

Large differences between peak (summer) visitation and visitor numbers to the city in the colder months leads to poor asset utilisation for accommodation, visitor attraction and hospitality providers, particularly in the CBD. This makes investment in additional accommodation or visitor attraction hard to justify. It also leads to workforce instability in the hospitality and accommodation industries. Hosting large events assists during quieter months to attract greater visitor numbers and help address this issue, improving investor confidence for other private sector visitor facilities.

## 2. Problem Statement 2: The lack of frequent, larger events in the CBD adversely affects the vibrancy and viability of the CBD (25%)

### Christchurch does not provide a "full product offering" for those who visit, live and work in the region

Christchurch has made significant progress towards recovery relative to the levels of activity in the period immediately after the Canterbury earthquakes. Overall functionality has been restored to the city, the business community is returning to the CBD and a new spatial framework within the four avenues of the CBD is starting to emerge.

However, the objectives of the CCRP were not just intended to restore what was lost. It also sought to take the opportunity to create a new city form that would drive social and economic growth for the region and country. Despite the progress that has been made, the CBD is still well short of achieving those aspirations across most metrics assessed. As a result, the potential upside from the combined investment across the public, private and community sectors has not yet been fully realised.

To meet the needs and expectations of residents and tourists in New Zealand's second largest city and a large and growing South Island capital, Christchurch must provide a 'full product offering'. This includes an expectation that Christchurch can hold large and varied events across multiple venues.

Extensive stakeholder consultation with over 50 groups and organisations was undertaken as part of the Draft Multi-Use Arena Pre-Feasibility Study developed by the Christchurch Stadium Trust. Stakeholders identified the key issues that must be resolved if Christchurch is to strengthen its appeal as a vibrant city:

- The liveability of Christchurch and its reputation as a 21st century city with "things to do".
- Ability to compete with other cities in attracting major events and concerts.
- Keeping expenditure in the city and within the Canterbury region.
- The return of private sector investment confidence to the city.
- The attraction and retention of young people to the city who are currently choosing to work and study elsewhere.
- Return of city and regional pride.

This means that **Christchurch does not capture its share of economic benefit from cultural and sporting** events. Large events contribute to a bustling and exciting CBD on event days as people come from overseas, out-of-town and from the suburbs to attend events. This is an important part of the event experience, as people go to bars and restaurants both before and after the concert/match. It also supports investment, with locals spending an average of $100 per-night before and after an event, and overnight tourists spending an average of $200[2]. This further supports hospitality, retail, and accommodation investment leading to a city with more choice for locals.

## Problem 3: Private investment in the CBD is being deferred or undermined due to uncertainty over the delivery of planned regeneration projects (30%)

A core objective of the CCRP is to bring people and businesses back to the CBD. Multi-use arenas fulfil multiple roles in the urban fabric. They can act as anchors for regeneration, attractors of new activity, and as the Cathedrals of the modern age – serving as a gathering place of the community.[3] In doing this they provide vitality, community cohesion, and generate momentum for recovery.

The arena will provide an anchor and catalyst for CBD recovery and revitalisation, and provide a focal point and an attraction for local and international visitors. Critical to the success of this approach is the integration of the arena into the growth strategy for the city, and the location of the arena in the central city.

In line with this expectation, there has been private sector investment in the area surrounding the stadium's future site. Businesses, particularly those in the hospitality industry, have committed to sites in the area on the expectation that the new arena will be built there. Recently, however, private investment in the CBD has stalled predominantly due to uncertainty around the delivery of regeneration projects – uncertainty caused both by project delays and a lack of visible progress toward achieving investment goals. Developers and property reports have indicated that this uncertainty is a key cause. To recapture the momentum seen on the west of the city, and to replicate the catalytic effect that the announcement of Te Pae had on the centre of the Christchurch CBD, a commitment to the delivery of the CMUA is needed.

## Problem 4: Christchurch's long-held identity as a sporting and cultural capital is diminished by its inability to host major events (10%)

The Christchurch Visitor Strategy recognises that the earthquakes robbed Christchurch of three aspects to its external identity: A garden city, its English heritage and a sporting capital. For a region with such a proud sports record and culture, it is important to host major sporting events so that the sports-loving population continue to

[2] Estimates provided by ChristchurchNZ's major events team, and verified through external peer review
[3] Trumpbour, R. (2008). *The New Cathedrals: Politics and media in the history of Stadium Construction.* Syracuse, NY: Syracuse University Press.

identify with the region and its reputation as a sporting hub. The current shortfall in major sports events undermines Canterbury's reputation and identity as a sporting capital and risks reducing the pride Cantabrians feel as a sporting people, which links strongly to physical wellbeing.

An important part of a city's cultural identity is being able to host other cultures in the form of artists, exhibitions and concerts. Without the ability to host large cultural events such as regular concerts, Christchurch risks not being able to capitalise on the opportunity remain the cultural capital of the South Island, and take its place as a cultural capital within New Zealand.

# 2. Option Development and Assessment

The economic case provides a description of a long list of options to deliver an arena that can address the problem statements. It evaluates these options against strategic factors, investment objectives, and critical success factors to arrive at a short list of options. This short list was then evaluated further using cost-benefit and qualitative analysis to arrive at a recommended option.

## Context for options development

Options that contained less than 20,000 or greater than 30,000 seats were not considered to be viable options for the following reasons:

- Venues smaller than 20,000 would mean that Christchurch could not attract larger international concerts, and could not host major rugby tests. The venue would not be competitive with covered venues in the South Island for events, concerts, and sporting content. Event promoters have also reported that at this scale, Christchurch would not be attractive as a destination.
- Venues larger than 30,000 seats were not seen as feasible due to space constraints on the site. In addition, event demand projections undertaken by international events experts suggest that very few events (with the possible exception of large one-off events that occur approximately once every 3-6 years, and major rugby tests) would fill the arena. This would create a poor event experience, leaving the arena under-utilised for much of the time. The international trend toward smaller cultural and concert events also implies that an arena of this scale would be inappropriate, and an over-capacity arena would struggle to maintain high ticket yields.

## Development of the on-budget scenario

Consideration of the draft investment case in August 2019 found that the estimated cost to deliver the preferred option exceeded the $473m available budget when the cost estimate was subjected to a quantitative risk assessment (QRA). The initial quantitative risk assessment (QRA) of project delivery costs resulted in estimated delivery costs of $505.3m at a P85 affordability threshold level requested by the Crown. This necessitated an affordability review[4] of the preferred option to identify potential saving opportunities to present an on-budget scenario for the CMUA.

Approximately 30 saving opportunities were identified and discussed at workshops on 14 October 2019 and 8 November 2019 which were designed to rapidly identify an on-budget scenario. The Christchurch City Council agreed to apply the following five saving opportunities to the preferred option, Option 3, and develop an on-budget scenario. Henceforth the preferred on-budget scenario with saving opportunities applied is referred to as Option 3a (on-budget scenario). The applied saving opportunities and estimated savings are described in Table 2 below as per WT Partnership's estimates.

[4] Please refer to Appendix A for the complete Affordability Review

Table 2: Potential saving opportunities

| Saving opportunity | Estimated savings ($) |
|---|---|
| Reduction in façade area | $1.6m |
| Relocate raised concourse to ground level | $6.6m |
| Change mixed-use activation zone to soft landscaping | $4.7m |
| Alternative procurement option for the two replay screens and ribbon board control system | $6.6m |
| Reduce overall building footprint | $8.0m |
| **Total saving opportunities** | **$27.5m** |

The $27.5m saving has reduced the overall delivery costs at a P85 affordability threshold level to $472.7m, approximately $266,000 less than the $473m available budget. This includes approximately 17% contingency.

These savings opportunities were selected to decrease costs and minimise the impacts of changes to the preferred option already presented in the draft investment case. However, design compromises necessarily had to be made to meet the affordability threshold. This includes compromises to fan and performer experience, but it also includes future risks to the ownership of the digital data and the digital estate. This is due to a mooted arrangement with a technology provider that may enable capital cost savings in exchange for management of the arena's digital content.

The risks and implications of the selected savings opportunities include:

- Reduced patron flow around the arena due to removal of the second concourse which could affect patron experience at events e.g. entry and exit to venue, access to food and beverage outlets.
- Potentially reduced accessibility for disabled patrons due to removal of the second concourse.
- Reduced natural ventilation, which may necessitate a mechanical fan system to assist the ventilation of the pitch area.
- Additional capital investment may be required if a deal cannot be reached with a technology investor to deliver the two replay screens and ribbon board control system. It is acknowledged that the financial risk of any further investment would sit with the ultimate delivery agent.
- Modification of mixed-use activation zone to soft landscaping may incur additional ongoing maintenance costs and require longer to repair after a major event restricting access for the public.
- Removal of the terraced area reduces patron's ticket options and experiences inside the arena e.g. a sponsorship activation site or 'Fan Zone'.
- The cumulative effect of these changes will affect patron experience, and could create risks to event attendance.

As the affordability review was conducted following preparation of the draft investment case, Option 3a has not been fully assessed against the investment objectives and critical success factors as a formal option normally would. Strictly, Option 3a is not a 'new option' but rather represents an on-budget scenario of the preferred option (Option 3) presented in the draft business case.

It should also be noted that the potential saving opportunities identified at this stage may be unnecessary as detailed design will give further clarity and certainty of costs. This may mean some or all of these potential saving opportunities may not need to be implemented. Any saving opportunities will be validated by the Project Team and the effects of those savings will need to be tested through a robust quantitative and qualitative assessment. This may result in changes to the benefits realised and operational and financial feasibility of the CMUA.

## Description of long-list options

A summary of the configuration, seating capacity and design of each of the long-list project options is presented in Table 3 below.

Table 3 Long-list of options – Project description

| Option Name | Roof | Seating | Premium seating | Other information |
|---|---|---|---|---|
| **Base Case** | Uncovered | • Christchurch Stadium 18,000 permanent<br>• Horncastle Arena 8,888 (concerts), 7,200 (sporting events)<br>• Hagley Park (capacity constraints determined by set-up) | **Corporate only** | • The identified Base Case "Do Minimum" Option represents the existing scenario whereby sporting events, concerts and exhibitions are held at Christchurch Stadium, Horncastle Arena and Hagley Park. |
| **Covered Option 1** | Covered | 30,000 permanent, no temporary seating | 3,000 | • This design would require an increase in façade and roof areas relative to Option 2-8.<br>• This option would require a material increase to back-of-house areas, increasing the space required for hospitality, toilets and facilities.<br>• This option will hold more seats relative to other options. However, as the majority of seats will go in the East and South stands, the bowl will be less efficient due to the limited number of seats available in the North. |
| **Covered Option 2** | Covered | 25,000 permanent, 5,000 temporary seats | 2,500 | • Façade and roof areas 55,030 m2.<br>• Temporary seats incur an additional capital cost of $8.8m.<br>• Design allows for the use of temporary seats.<br>• Back-of-house capacity is designed for 25,000 necessitating temporary additional toilet/F&B facilities when capacity is increased to 30,000. |
| **Covered Option 3** | Covered | 25,500 permanent, includes terraced stands in the north (c. 500 pax), but no temporary seats | 2,500 | • No change in area relative to Option 2 .<br>• Potential for minor cost savings from a redesign of the bowl to the northern end.<br>• No temporary seats result in cost savings.<br>• Design allows for the use of temporary seats in the future. |
| **On-Budget Scenario 3a** | Covered | 25,000 permanent, no terraced standing area, no temporary seating | 2,500 | • Reduction to the total façade, footprint and roof area by around 1,000m2, relative to Option 2 .<br>• Minor cost savings from a redesign of the bowl to the northern end.<br>• Relocation of raised concourse to ground level.<br>• Soft landscaping of external activation zone.<br>• Option to fund technology infrastructure (replay screens and ribbon board control system) through design, build and operate procurement option.<br>• Design allows for the use of temporary seats in the future, but are not included at this stage. |
| **Covered Option 4** | Covered | 25,000 permanent, no terraced standing area, no temporary seating | 2,500 | • No change in the areas relative to Option 2.<br>• The northern concourse could be reduced in size if it does not need to allow for temporary seating. Detailed design would be required to quantify the cost reductions, but it is anticipated to be minor (circa $5-10m).<br>• This option does not allow for future expansion (e.g. temporary seating).. |
| **Covered Option 5** | Covered | 20,000 permanent, 5,000 temporary | 2,000 | • Smaller bowl with seat reduction in South and East bowls, plus a small reduction in the West.<br>• Reduced roof area with minimal façade reduction.<br>• Material impact to building form and overall area, potentially leading to a redesign of the arena as four independent stands. |

| Option Name | Roof | Seating | Premium seating | Other information |
|---|---|---|---|---|
| **Covered Option 6** | Covered | 20,000 permanent, no temporary seating | 2,000 | • Potential to redesign as four independent stands<br>• Single tier design with a concourse at the field level for the East, North and South stands<br>• Reduced roof and façade areas |
| **Dripline roof Option 7** | Dripline | 25,000 permanent, 5,000 temporary | 2,500 | • Reduced roof area<br>• Potential for increased turf maintenance requirement due to increased damage from events held when turf is wet |
| **Hard Roof, Retractable Turf Option 8** | Hard cover | 25,000 permanent, 5,000 temporary | 2,500 | • The retractable turf will use virtually all of the outside space to the North of the arena (loss of community space and activation zone).<br>• A hard roof will limit noise break-out but will require either synthetic, retractable, or palletised turf due to lack of sunlight. |

These options were assessed against the investment objectives and critical success factors for this case, and four options proceeded to the short-list for comparison against the base case, notably Options 2, 3, 4, and 8. The remaining options did not proceed for the following reasons:

- A 20,000-25,000 capacity would see the CMUA classified as a regional facility, not a national one. Event promoters and NZ Rugby have been explicit in stating they will not provide national content or major 'Tier 1' tests to an arena significantly below 25,000 patrons, particularly if it is uncovered and on the South Island.
- A 30,000-permanent seat arena offered no advantage to a 25,000 + 5,000 temporary seat option, but would be larger on the site, compromising the aesthetics of the area, and cost considerably more, as permanent amenities/facilities would be based on the larger number, rather than being 'bumped-in' as required when larger events were held. An arena with 30,000 permanent seats is inappropriate for Christchurch's events market. It would feel (and be) largely empty on many occasions, filling 'regularly' only for major events and All-Blacks Tests.
- Uncovered options (options with no roof) were considered in the long-list but did not proceed to short-list consideration. Event promoters have indicated that the weather risks mean that covered venues for major events (e.g. 20,000+) would be preferred for South Island locations. Generally, only one South Island location is selected for top-tier events, and promoters and NZ Rugby were clear that Forsyth Barr would be preferable to Christchurch if the arena is not covered.
- If the CMUA was uncovered it would have to compete with Westpac Stadium in Wellington for large events and have a capacity of at least 35,000. For the reasons detailed above, such a large capacity is not feasible or desirable.

Five short-listed options were then assessed using a cost-benefit analysis, and were also assessed qualitatively against several factors, notably:

- **Stakeholder expectations:** Alignment to stakeholder expectations (players, spectators and event promoters). This is particularly relevant given the expectations about a covered arena of 25,000+ seats that have been created by the CCRP and public statements from the Minister and Mayor.
- **Future capacity needs:** The ability to expand capacity to meet future demand for major events.

A balanced assessment was then undertaken, and Option 3 emerged as the preferred option for further evaluation in the commercial, financial and management cases.

Table 4: Base Case

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Community well-being** | • Enables Canterbury to continue to host some existing cultural and sporting events | • Christchurch and Canterbury are not perceived to be exciting places to visit.<br>• Civic pride and connection to the CBD decreases, reducing employment and cultural opportunities.<br>• The place of Christchurch within the national hierarchy of cities is seen to be at risk. |
| **Customer experience** | • None | • There is strong customer dissatisfaction with the Christchurch Stadium due to inadequate hospitality capacity and exposure to the elements. |
| **Performer / player experience** | • None | • There is strong dissatisfaction with the Christchurch Stadium with inadequate changing and team facilities. |
| **Event attraction** | • None | • Limited ability to increase capacity to meet demands of future events.<br>• Christchurch Stadium is not competitive with other New Zealand cities for large scale events.<br>• Canterbury has been overlooked as a place to host large scale sporting and arena-style events in New Zealand. |
| **Urban regeneration** | • Lower costs of making the temporary solutions permanent (relative to a new arena) (*circa* $10 – 15m excluding land) could free up capital to consider alternative investment in the CBD. | • Does not meet the expectations agreed in the CCRP.<br>• The east side of the central city would lack a key piece of infrastructure leaving a vacant site that is detrimental to developing the Christchurch CBD.<br>• Lack of investment in the arena will continue to undermine existing investment and deter future investment, especially in the east side of the city.<br>• Does not deliver the quality infrastructure necessary for Christchurch to compete effectively for talent with other Australasian cities, and contribute towards national prosperity. |

Table 5: Covered Option 2: 25,000 permanent & 5,000 temporary

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Community well-being** | • Capacity allows for major events (e.g. Edinburgh Tattoo, Te Matatini, Lions Tour, Rugby World Cup, various world championships) increasing the reputation of Canterbury and supporting community engagement and civic pride | • Scale of the multi-use arena and roof design will result in noise break-out to the Northern area beyond the site which includes residential areas. |
| **Customer experience** | • Capacity allows for increased flexibility to accommodate increased attendance for major one-off events<br>• Scale of the arena allows for a heightened patron experience during an event when at full capacity<br>• Design of the circular bowl seating arrangement allows for patrons to be closer to the centre of the arena which allows for an enhanced experience | • Complete circular bowl will not be set-up for all events as it requires the temporary seating<br>• Scale of the arena and roof design may adversely affect the acoustic quality in the arena, as the EFTE roof causes reverberation, but the impacts can be partially mitigated through design.<br>• Design of the arena does not allow for premium suites at the South end of the circular bowl for patrons during concert events |
| **Performer / player experience** | • The standard of the design will provide an enhanced experience for the performers / players | • None |
| **Event attraction** | • Capacity allows Canterbury to attract highly profitable major one-off and large-scale events<br>• The full roof creates a weather-proof arena which has greater appeal to event organisers and reduces event risk<br>• The design of the arena allows for the design to include flexible space, providing optionality to expand for larger events | • Temporary seating will increase capital costs of the facility's delivery and the operational costs of setting up for an event<br>• The setup / breakdown effort and cost for the temporary seats may limit the frequency that the capacity is increased in practice |

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Urban regeneration** | • Capacity allows for major one-off and large-scale events to be held in Canterbury giving investors greater confidence in their commitment to the city centre<br>• The scale of the arena is appropriate for Canterbury's event market<br>• The scale of the arena allows for the design to sit comfortably on the site and be less intrusive on the city centre | • Noise spill from the arena may affect sensitive activities, particularly residential uses north of the facility |

Table 6: Covered Option 3: 25,500 permanent (includes terraced safe standing area for 500)

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Community well-being** | • Capacity allows for large scale events (e.g. All Blacks games), enhances the reputation of Canterbury, and supports community engagement and Civic Pride. | • The arena's capacity does not allow for major one-off sporting events (e.g. Lions Tour) reducing the reputation, community engagement and civic pride of Canterbury. |
| **Customer experience** | • Scale of the multi-use arena allows for a heightened customer experience during an event when at capacity<br>• Design of the circular bowl seating arrangement allows for patrons to be closer to the centre of the arena which allows for an enhanced experience<br>• Terraced area offers patrons varied ticket options and arena experiences inside the arena (e.g. a sponsorship activation site or 'Fan Zone'). | • Terraced area means that there will not be a complete circular bowl for any events<br>• Scale of the arena and roof design may adversely affect the acoustic quality in the arena<br>• Design of the arena does not allow for premium suites at the South end of the circular bowl for patrons during concert events |
| **Performer / player experience** | • Capacity will provide an enhanced experience for the performers / players | • Terraced area means that there will not be a complete circular bowl reducing the experience for the performers / players |
| **Event attraction** | • Capacity allows Canterbury to attract highly profitable major one-off and large scale events<br>• The full roof creates a weather-proof arena which has greater appeal to event organisers and reduces event risk | • Capacity does not allow for major one-off sporting events (e.g. a Lions Tour)<br>• Lack of temporary seats does not allow the arena to flexibly expand, without further investment or one-off event costs |
| **Urban regeneration** | • The capacity allows for large scale events to be held in Canterbury giving investors greater confidence in their commitment to the city centre<br>• The scale of the arena is appropriate for Canterbury's event market<br>• The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre | • Marketing and reputational disadvantages associated with the perception of a smaller venue<br>• Noise spill from the arena may affect sensitive activities, particularly residential uses north of the facility |

Table 7: Covered Option 3a (on-budget scenario): 25,000 permanent

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Community well-being** | • Capacity allows for large scale events (e.g. All Blacks games), enhances the reputation of Canterbury, and supports community engagement and Civic Pride. | • The arena's capacity does not allow for major one-off sporting events (e.g. Lions Tour) reducing the reputation, community engagement and civic pride of Canterbury. |
| **Customer experience** | • Scale of the multi-use arena allows for a heightened customer experience during an event when at capacity<br>• Design of the circular bowl seating arrangement allows for patrons to be closer to the centre of the arena which allows for an enhanced experience<br>• Terraced area offers patrons varied ticket options and arena experiences inside the arena (e.g. a sponsorship activation site or 'Fan Zone'). | • Scale of the arena and roof design may adversely affect the acoustic quality in the arena<br>• Design of the arena does not allow for premium suites at the South end of the circular bowl for patrons during concert events<br>• Reduction of the Level 1 structure in the Eastern Stand to ground level will have an impact on the area available at ground floor for natural ventilation, and will impact patron flow around the arena, and may reduce the seating options for accessibility-challenged patrons<br>• Modification of mixed-use activation zone to soft landscaping may incur additional ongoing |

| Criteria | Advantages | Disadvantages |
|---|---|---|
| | | maintenance costs and require longer to repair after a major event<br>• This option does not include a terraced area for safe standing room, creating minor limitation on capacity and ticketing options |
| **Performer / player experience** | • Capacity will provide an enhanced experience for the performers / players | • None |
| **Event attraction** | • Capacity allows Canterbury to attract highly profitable major one-off and large scale events<br>• The full roof creates a weather-proof arena which has greater appeal to event organisers and reduces event risk | • Capacity does not allow for major one-off sporting events (e.g. a Lions Tour)<br>• Lack of temporary seats does not allow the arena to flexibly expand, without further investment or one-off event costs<br>• Although the number of events may not change there is a risk to attendance at events due to the different in patron experience of this option versus others<br>• Modification of mixed-use activation zone to soft landscaping may incur additional ongoing maintenance costs and require longer to repair after a major event |
| **Urban regeneration** | • The capacity allows for large scale events to be held in Canterbury giving investors greater confidence in their commitment to the city centre<br>• The scale of the arena is appropriate for Canterbury's event market<br>• The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre | • Marketing and reputational disadvantages associated with the perception of a smaller venue<br>• Noise spill from the arena may affect sensitive activities, particularly residential uses north of the facility<br>• Modification of mixed-use activation zone to soft landscaping may incur additional ongoing maintenance costs and require longer to repair after a major event restricting access for the public<br>• Ceding digital information to a private provider may impede the ability of the Council to leverage information to create a coordinated event attraction plan |

Table 8: Covered Option 4: 25,000 permanent

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Community well-being** | • Capacity allows for large scale events (e.g. All Blacks games), enhances the reputation of Canterbury, and supports community engagement and Civic Pride. | • The arena's capacity does not allow for major one-off sporting events (e.g. Lions Tour) with some minor adverse impacts on community engagement and civic pride of Canterbury. |
| **Customer experience** | • Scale of the multi-use arena allows for a heightened customer experience during an event when at capacity<br>• Design of the circular bowl seating arrangement allows for patrons to be closer to the centre of the arena which allows for an enhanced experience | • Scale of the multi-use arena and roof design may adversely affect the acoustic quality in the arena<br>• Design of the arena does not allow for premium suites at the South End of the circular bowl for patrons during concert events |
| **Performer / player experience** | • Capacity will provide an enhanced experience for the performers / players | • None |
| **Event attraction** | • Capacity allows Canterbury to attract highly profitable major one-off and large-scale events<br>• The full roof creates a weather-proof arena which has greater appeal to event organisers and reduces event risk | • Capacity does not allow for major one-off sporting events (e.g. a Lions Tour)<br>• This design does not accommodate future-proofing for temporary seats. |
| **Urban regeneration** | • The capacity allows for large scale events to be held in Canterbury giving investors greater confidence in their commitment to the city centre<br>• The scale of the arena is appropriate for Canterbury's event market<br>• The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre | • Marketing and reputational disadvantages associated with the perception of a smaller venue<br>• Noise spill from the arena may affect sensitive activities, particularly residential uses north of the facility |

Table 9: Option 8: Hard Roof, Retractable Turf 25,000 permanent + 5,000 temporary

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Community well-being** | • Capacity allows for major events (e.g. Edinburgh Tattoo, Te Matatini, Lions Tour, World cup Rugby, various world championships) increasing the reputation of Canterbury and supporting community engagement and civic pride.<br>• Hard roof reduces noise break-out to the Northern area beyond the site which includes residential areas | • Likely cost may detract from investment in other community facilities<br>• Scale and additional cost may be viewed as 'extravagant' given the regeneration challenges elsewhere in Canterbury |
| **Customer experience** | • Capacity allows for increased attendance for major one-off events<br>• Scale of the arena allows for a heightened patron experience during an event when at full capacity<br>• Design of the circular bowl seating arrangement allows for patrons to be closer to the centre of the arena which allows for an enhanced experience<br>• Hard roof increases the acoustic quality within the arena | • Complete circular bowl will not be set-up for all events as it requires temporary seating reducing the patron experience.<br>• Design of the arena does not allow for premium suites at the South end of the circular bowl for patrons during concert events |
| **Performer / player experience** | • Capacity will provide an enhanced experience for the performers / players | • Complete circular bowl will not be set-up for all events as it requires the temporary seating reducing the experience for performers / players. |
| **Event attraction** | • Capacity allows Canterbury to attract major one-off and large-scale events with larger events being highly profitable<br>Roof creates a weather-proof arena which has greater appeal to event organisers and reduces event risk<br>Retractable turf allows for more flexible / faster changeover between major event types (no need to replace turf) | • Temporary seating will increase operational costs of the arena when setting up for an event |
| **Urban regeneration** | • Capacity allows for major one-off and large-scale events to be held in Canterbury giving investors greater confidence in their commitment to the city centre<br>• The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre | • The high cost of the facility may detract from other urban investments. |

## Cost-Benefit analysis

The short-list options have been assessed using a Cost-Benefit Analysis (CBA). A CBA is a decision-making tool that aims to assess the value of a project or competing projects on a consistent basis. This is done by quantifying all costs and benefits in monetary terms, where possible, and discounting them to a common point-in-time to determine the net benefits of each project.

## Quantified costs and benefits

Table 10 details the quantitative benefits and costs assessed as part of the CBA.

Table 10 Quantitative benefits and costs assessed as part of the CBA

| Benefit | Description |
|---|---|
| **Event revenue** | An indicative events schedule for the CMUA has been used to inform revenue assumptions underpinning the operating model. This events schedule was prepared based on input from Vbase, NZRU, the Stadium Trust, ChristchurchNZ, and international events experts. It was peer reviewed by TEG Dainty. Revenue generated from events held at the CMUA include:<br>• Ticketing income and royalties<br>• Fixed venue hire<br>• Merchandise<br>• Catering<br>• Commercial rights<br>• Membership and corporate suites<br>• Functions and other revenue. |
| **Tourism** | **Value added from new visitors to the Canterbury region**<br>Gross value add (GVA) estimates the economic impact to the Canterbury region as a result of staging events at the new stadium. This includes the direct value added to the region generated as a result of expenditure from out-of-region and overseas visitors that specifically come to or extend their stay in Canterbury to attend events at the new stadium. It is conceptually similar to GDP. |
| | **Value added from retained local expenditure**<br>In the Base Case, it is assumed that many Cantabrians will continue to travel to other regions of New Zealand to attend events that do not come to Christchurch. Assuming individuals have a fixed discretionary income for entertainment, this represents a lost economic benefit to the Canterbury region under the Base Case scenario.<br>The proportion of Cantabrians who have historically attended events in other regions was used to inform this calculation. |
| **Consumer surplus** | Consumer surplus represents the amount local Cantabrians may be willing to pay to make use of the facilities above the cost of entry (ticket price). This represents a non-monetary benefit accruing to event attendees above the total cost to attend. |
| **Land value uplift** | The CMUA will likely attract private sector investment in the area surrounding the stadium. This has the potential to revitalise the east side of the CBD and improve land value of property within the precinct.<br>The benefit measured is on top of any baseline land value increases (i.e. only the land value increase attributable to the stadium is considered a benefit). |
| **Civic pride** | Cantabrians can value an event or calendar of events even if they do not attend the event/s. This is commonly referred to as the existence (non-use) value or the civic pride one obtains as a result of the presence of an event within one's locality. |
| **Residual asset value** | It is likely that the stadium will continue to be used beyond the 25-year operating assessment period. The remaining life of the stadium beyond the assessment period (i.e. its residual value) represents a benefit. |
| Cost | Description |
| **Project capital costs** | Construction, professional services, and associated infrastructure costs for: enabling works, site preparation, site remediation, services connections, ground improvement, main stands and seating bowl, roof, façade, event area fit out, ICT/technology, sports lighting, pitch, external concourses and transport. |
| **Lifecycle Costs** | Asset maintenance and asset replacement expenses over the lifecycle of the facility. |
| **Operating expenses** | Staff costs, administration, IT, marketing/communications, events and facilities management, stadium maintenance, council rates, taxes and insurance, contingency, other operating costs. |
| **Bid Incentive Fund** | Incentive package includes the payment from the Council to promoters to attract events to the arena. This payment is essential to ensure the CMUA is competitive with other stadiums in New Zealand and the Asia-Pacific region. These amounts do not include other advertising or events promotion for other venue, or what is undertaken as part of marketing for Christchurch overall.<br>Part of the bid incentive fund is the top-up costs that are paid by the stadium to the promoter to compensate them for the fact they could have generated more tickets revenue if the stadium had a larger capacity. |

### Non-monetised benefits and costs

A CBA is complex as it involves converting (where possible) a project's costs and benefits into dollar terms. This can be difficult, as it looks to monetise both market values and non-market values (i.e. those values that are not transacted in the economy). Some benefits cannot be quantified, and a qualitative discussion of those costs and benefits that could impact the conclusion of the analysis has been undertaken.

The identified project options would deliver the socioeconomic benefits set out in the Investment Logic Map (ILM) as described in the Strategic Case. Broadly, the main benefits expected to be delivered include:

- Additional investment and economic growth to the region.
- Promotion of Christchurch as an attractive place to work, study, live and visit.
- Providing Christchurch with more major entertainment venues accessible to families and other residents.
- Accelerated levels of investment and relocation of businesses in the CBD.

The following table provides a qualitative assessment of the identified social, economic and environmental impacts of the project options.

| Category | Qualitative benefit | Description |
|---|---|---|
| **Social** | Amenity uplift/public realm benefits | The benefits from the increased local amenity and the improvements to the public realm will be realised as a result of the CMUA. High quality urban design improves safety and security, encourages community interaction and increases opportunities for informal recreation and socialisation. Such provision of amenity improvements can also result in an uplift in value of property and businesses within local areas. This is partially quantified in the land value increase evaluation. |
| **Economic** | Provide key social infrastructure necessary for Christchurch to be competitive with other Australasian cities | As New Zealand's second largest city and with capacity for urban growth, Christchurch has the potential to deliver significant additional economic benefit to New Zealand without significant additional infrastructure costs.<br>To achieve this, Christchurch needs to provide a competitive offering to people and talent. A multi-use arena appropriate to Christchurch's size and position as New Zealand's second largest city is a necessary part of this offering. |
| | Support of the central city and other anchor projects | The CMUA complements the other facilities and amenities in the central city. Typically, entertainment centres, sporting stadiums, convention centres and theatres have individually, or in combination been at the heart of programmes intent on bringing life back to undervalued and under-utilised parts of a city. The widely held view is that these major facilities generate a level of commercial and social activity, the benefits of which flow on to other parts of the precinct, anchoring and stimulating greater levels of visitation in the area, new activity and development. |
| | Catalytic effect of the project | The benefits of the project acting as a 'change catalyst' to support business confidence, the visitor economy and the development of the eastern CBD. The development and construction of the CMUA may be a significant transformative project with the potential to act as a catalytic injection to Christchurch CBD, assisting to support business confidence and investment. The development of major facilities in cities the world over are seen as potential catalysts of urban renewal and precinct redevelopment. Initial engagement with property developers suggest that between $50-100m of investment is being delayed due to the uncertainty around the CMUA. |
| | Exposure of New Zealand to overseas tourist and domestic markets | A high-quality venue and the events hosted at the CMUA represents "free branding" of Christchurch and Canterbury attracting international tourism and investment. This will be evident in the increase in Christchurch's exposure to overseas tourist markets via television coverage, social media and word of mouth. |
| | Leveraged private sector investment | This benefit measures the additional investment undertaken as a result of the investment in the arena. Specifically, this will measure the level of private sector investment around the CMUA that is attributable to investment in the arena. |
| | | |
| Category | Qualitative cost/ dis-benefit | Description |
| **Economic** | Visitor disruption | It is expected that there will be some disruption to the enjoyment of visitors due to construction associated with CMUA in the CBD. |
| **Environmental** | Noise | Noise spill from the arena may affect sensitive activities, particularly residential uses north of the facility. The site is designated for arena use, and does not technically require a consent for noise issues on the site. Marshall Day's report (Section 4.7) notes, however, that noise in parts of the East Frame and around Lichfield Street may exceed 75db during concerts which could reduce public tolerance for the frequency of such events. It may also legally limit the frequency of events, given the Council's obligations as owner under Section 16 and 17 of the RMA. An investigation of an amendment to the Christchurch Central Recovery Plan (CCRP) using the Greater Christchurch Regeneration (GCR) Act is currently underway. This would clarify the expectations. |

**Summary of Costs and Benefits**

Table 11 summarises the results of the CBA for each project option, with all results discounted and reported as present values. The quantified benefits are all incremental to the Base Case i.e. they are marginal benefits that are attributable to the project option that would have not been realised under the Base Case.

Table 11: Summary of Costs and Benefits

| | Covered Option 2<br>25,000 permanent capacity & 5,000 temporary | Covered Option 3<br>25,500 permanent capacity (includes terraced area for 500) | Covered Option 3a (on-budget scenario)<br>25,000 permanent | Covered Option 4<br>25,000 permanent | Hard Roof, Retractable Turf Option 8<br>25,000 permanent capacity & 5,000 temporary |
|---|---|---|---|---|---|
| Total Costs (PV) ($m) | $481.0 | $478.6 | $456.0 | $479.3 | $581.2 |
| Total Benefits (PV) ($m) | $408.9 | $401.7 | $395.6 | $401.0 | $457.5 |
| **Net Costs and Benefits (PV) ($m)** | **($72.2)** | **($76.9)** | **($60.5)** | **($78.3)** | **($123.7)** |
| **Benefit Cost Ratio** | **0.85** | **0.84** | **0.87** | **0.84** | **0.79** |

The overall value for money of an option is summarised by the associated Benefit-Cost Ratio (BCR). BCRs represent the economic gain to the Canterbury region realised from that option (i.e. benefits) versus the amount it costs to execute that option (i.e. costs). It is calculated as the present value of all quantified monetary benefits divided by the present value of all quantified monetary costs. If the benefits are greater than the costs, then the BCR is greater than 1. Conceptually, a BCR below 1 can be thought of as spending $1 to achieve less than $1 in benefits, and a BCR above one the inverse.

There are limitations, however, to the completeness of any BCR analysis. Some benefits and costs cannot be practically quantified due to a lack of data, and others are conceptually compelling and based on strong theoretical grounds (the arena improves subjective well-being by allowing for large events to be held in the CBD), but the benefits cannot be quantified for methodological reasons. This means that qualitative factors and the overall strategic environment must also be considered when making an investment decision.

# Integrated analysis

While CBA is often a useful tool for differentiating between project options and deciding whether projects are worthwhile overall, other factors must also be taken into consideration when determining the recommended project option.

The recommended option must achieve a balance between cost (capital and ongoing) and the level of qualitative and quantitative benefits that are achieved (i.e. the option that most effectively and efficiently achieves the Investment Objectives).

The short-list options assessment has taken into consideration a number of other factors including.

- **Stakeholder expectations:** Alignment to stakeholder expectations (players, spectators and event promoters). This is particularly relevant given the expectations about a covered arena of 25,000+ seats that have been created by the CCRP and public statements from the Minister and Mayor.
- **Future capacity needs:** The ability to expand capacity to meet future demand for major events.
- **Affordability:** The affordability of each option given the available funding.

Each option was qualitatively assessed and assigned an overall rating (high, medium or low) according to its ability to address these objectives.

The summary assessment of each project option is presented in Table 12.

Table 12: Qualitative assessment of project options

| Option | Stakeholder expectations | Flexibility | Affordability |
|---|---|---|---|
| **Covered Option 2**<br>**25,000 permanent capacity & 5,000 temporary** | **High**<br>Higher seating capacity increases profitability of All Blacks tests held at the CMUA. However, **event demand projections suggest that very few events are likely to require the temporary seats.** | **High**<br>Though note back-of-house capacity is designed for 25,000, consequently additional temporary services to accommodate 30,000 which will incur additional operating costs not included in our analysis. | **Medium**<br>The purchase of temporary seating and the associated operational costs (e.g. bump in/out, storage) will increase the total cost of the CMUA in comparison to Option 3 and 4. |
| **Covered Option 3**<br>**25,500 permanent capacity (includes terraced area for 500)** | **Medium**<br>The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre. The terraced area offers patrons varied ticket options and arena experiences inside the arena (e.g. a sponsorship activation site or 'Fan Zone'). | **Medium**<br>The scale of the arena is appropriate for Canterbury's event market and does not preclude the inclusion of additional seats in the future should they be required. | **Medium**<br>Cost savings (both capital and ongoing operating) are generated as a result of the exclusion of temporary seating |
| **Covered Option 3a (on-budget scenario)**<br>**25,000 permanent** | **Medium**<br>The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre, but it may be more difficult to accommodate temporary seats in the future. It may not meet stakeholder expectations for the scale of the arena, nor future expansion opportunities.<br>Design changes resulting from the Affordability Review may reduce patron flow around the arena due to removal of the second concourse. This could affect patron experience at events e.g. entry and exit to venue, access to food and beverage outlets and may not meet stakeholder expectations for the arena. | **Medium**<br>The scale of the arena is appropriate for Canterbury's event market, but the design changes may make future inclusion of temporary seats more challenging. | **High**<br>Cost savings (both capital and ongoing operating) are generated as a result of the exclusion of temporary seating.<br>Design changes resulting from the Affordability Review have identified additional potential capital cost saving opportunities within the acceptable operating expenditure budget.<br>An alternative procurement option for the two replay screens and ribbon board control system is one identified potential capital cost saving opportunities, however additional capital investment may be required if a deal cannot be reached with a technology investor to deliver the technology. |
| **Covered Option 4**<br>**25,000 permanent** | **Medium**<br>The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre, but it may be more difficult to accommodate temporary seats in the future. It may not meet stakeholder expectations for the scale of the arena, nor future expansion opportunities. | **Medium**<br>The scale of the arena is appropriate for Canterbury's event market, but the design may make future inclusion of temporary seats more challenging. | **High**<br>Cost savings (both capital and ongoing operating) are generated as a result of the exclusion of temporary seating |
| **Hard Roof, retractable turf Option 8**<br>**25,000 permanent capacity & 5,000 temporary** | **Medium**<br>Higher seating capacity increases profitability of All Blacks tests held at the CMUA. However, **event demand projections suggest that very few events are likely to require the temporary seats.**<br>However, the retractable turf will use virtually all of the outside space to the North of the arena resulting in a loss of community space and activation zone. | **High**<br>Though note back-of-house capacity is designed for 25,000, consequently additional temporary services will be required to accommodate 30,000 which will incur additional operating costs not included in our analysis | **Low**<br>An arena of this scale is financially unaffordable. Preliminary estimates suggest it would cost $108.5m more than the next most expensive short-listed option on an EAC basis |

Table 13 below summarises the integrated assessment and ranking of each project option.

Table 13: Integrated analysis and recommended option

| | Qualitative assessment | | | CBA | | | Overall ranking |
|---|---|---|---|---|---|---|---|
| Option | Stakeholder expectations | Future capacity needs | Affordability | Benefits (PV)($m) | Costs (PV)($m) | Net Benefits (NPV)($m) | Score |
| **Covered Option 2** 25,000 permanent capacity & 5,000 temporary | High | Medium | Medium | $408.9 | $481.0 | **($72.2)** | 3 |
| **Covered Option 3** 25,500 permanent capacity (includes terraced area for 500) | Medium | High | High | $401.7 | $478.6 | **($76.9)** | =1 |
| **Covered Option 3a (on-budget scenario)** 25,000 permanent | Medium | Medium | High | $395.6 | $456.0 | **($60.5)** | =1 (as a scenario of Option 3) |
| **Covered Option 4** 25,000 permanent | Medium | Medium | High | $401.0 | $479.3 | **($78.3)** | 4 |
| **Hard Roof, retractable turf Option 8** 25,000 permanent capacity & 5,000 temporary | Medium | Medium | Low | $457.5 | $581.2 | **($123.7)** | 5 |

## Recommended Option

The initial options assessment prepared for the draft investment case identified **Covered Option 3 – 25,500 permanent capacity (including terraced area for 500)** as the preferred option. This option was selected for the following reasons:

- While Option 2 has a slightly higher net benefit (and therefore, a higher BCR) in comparison to Option 3, it is within the margins of error for this type of analysis.
- Both options are affordable using a standard EAC approach to capital costs, but only Option 3 remains close to the affordability threshold using a P85 quantitative risk analysis threshold. Option 2 is **$9.7m** over the available funding whereas Options 3 and 4 are only **$3.4m** above. At this stage of the project, room for uncertainty should be allowed where there is a fixed capital budget. MBIE and Treasury have advised that using this threshold is appropriate for the affordability analysis for this project.
- The main difference between Option 3 and Option 2 is the inclusion of the temporary seats. The design of Option 3 does not preclude the purchase and use of temporary seats should further capital funding become available, or if the need for additional capacity becomes apparent. It was concluded that the

additional benefits did not provide value for money or warrant justification for the Council to seek additional funding.

- Option 3 allows for slightly greater capacity than Option 4 at no additional cost, which generates some small additional direct benefit to patrons. It does this by utilising the area between the field and the concourse for a terraced standing area. This may make the setup of the temporary seats (should they be included later) slightly more challenging, and could have an impact on ongoing operating costs.
- Additional capital funding may be able to be found, but the case would have to be compelling, and it is not apparent from qualitative or quantitative assessment that additional investment would provide significantly greater returns to the city overall.
- Although the hard roof, retractable turf option has some advantages such as reduced noise spill, Option 8 has a number of disadvantages, in addition to its affordability challenges:
    - A hard roof may detract from the visitor experience as all events would occur under artificial light.
    - The retractable turf will use virtually all of the outside space to the North of the arena resulting in a loss of community space and activation zone.
    - The flexibility provided by an arena of this scale is not required for Canterbury's event market.
    - Option 8 is not expected to attract significantly greater content or attendance than the other short-listed options, but will cost **$108.5** million more than the next most expensive option on an EAC basis.

Due to the estimated costs to deliver Option 3 exceeding the $473m available budget, Option 3a (on-budget scenario) is recommended to progress to the project delivery phase for the following reasons:

- Option 3a (on-budget scenario) has the highest net benefit (and highest BCR) compared to the other options due to identification of $27.5m in saving opportunities without quantified reductions in the potential benefits of the Option 3, given the time permitted to assess this option. While it is not likely that the overall number of events will change, there may be reductions in attendance if patron experience cannot be preserved, which generates risk in this estimate.
- This option falls within the affordability threshold using a P85 quantitative risk analysis threshold, approximately $266,000 less than the $473m available budget.
- Design of Option 3a (on-budget scenario) does not preclude the purchase and use of temporary seats should further capital funding become available, or if the need for additional capacity becomes apparent.

## Sensitivity Analysis

To account for uncertainty in the event schedule, sensitivity analysis has been conducted to consider how changes in event frequency and capacity effects the economic viability of this project. While the scenarios test a uniform distribution of risk (e.g. +/- 10%), the consultation undertaken to date with ChristchurchNZ, Vbase, international and domestic event experts, and TEG Dainty, suggests that this event schedule is realistic but conservative. It is therefore reasonable to consider the downside risk less likely to eventuate than the upside potential. This is strongly dependent on securing an experienced operator, and establishing a strong marketing plan for the CMUA.

In the economic and financial models, the key drivers of costs and benefits are the number of events held at the arena and the number of attendees expected to attend these events. Therefore, several scenarios that varied the

events schedule and the expected attendances were run to examine how these changes affected the outputs of the model.

The key finding from the sensitivity analysis is that changes in the event schedules and estimated attendances do not have a large impact on overall costs and benefits, demonstrating the robustness of the CBA. For example, a 10% reduction in Super Rugby (Crusaders) attendance each year that the CMUA is in operation only causes the BCR to fall from **0.87** to **0.85**, while a 10% increase in Super Rugby (Crusaders) attendance causes it to rise to **0.88**.

The modelling is most sensitive to a change in large concerts, with a change of once large concert per annum over the life of the analysis. One fewer large concert each year results in the BCR falling to **0.77**, while one additional concert causes it to rise to **0.90**.

A change of this magnitude in every year over the entire life of the facility is considered unlikely, but it should be considered a high-impact, low probability event. The events schedule has been subject to robust testing, and has been peer reviewed by TEG Dainty, a key promoter. Mitigating this risk will be dependent on securing strong relationships with content providers.

# 3. Procurement and Delivery

This section of the investment case describes the approach to be taken to the procurement and delivery of the preferred option outlined in the economic case. This includes describing the method of procurement for design and construction services for the CMUA as well as ongoing operational, facilities and asset maintenance contracts. Subject to the approval of this investment case, a full procurement plan will be developed as part of the implementation phase. The characteristics of the facility that will be procured are summarised in Table 14.

Table 14: Project assumptions

| Area | Key Assumption |
|---|---|
| **Site Location** | The arena will be located on the site designated for the Stadium or Arena by the CCRP. |
| **Site Condition** | Ground conditions have been subject to preliminary investigation, indicating limited contamination, but variable geotechnical quality. The Crown will fund land remediation. |
| **Facility Ownership** | The Christchurch City Council considers that it will be the owner and likely operator of the facility following its completion. |
| **Operational Responsibility** | The Christchurch City Council expect to operate the facility, either directly or indirectly, in a manner consistent with the objectives outlined in the economic case. |
| **Asset Management and Facilities Maintenance** | The Christchurch City Council expects to maintain the facility, either directly or indirectly, and be responsible for whole of life costs. |
| **Facility Scope Definition** | The outcome of the economic case is that the facility will comprise:<br>• 25,000 seats plus a 500-person safe standing area<br>• 2,500 premium seats<br>• Have a covered arena using an ETFE roof and a fixed turf<br>• Have the capacity to accommodate 5,000 temporary seats in the future. |
| **Project Capital Expenditure** | The facility has a capital cost of $463m (EAC methodology), some $10m less than has been allocated.<br>• The Crown is to contribute $220m to the capital cost of the facility<br>• The Council is to contribute up to $253m to the capital cost of the facility. |
| **Operating and Maintenance Costs** | The net operating costs, including lifecycle costs, over 30 years are anticipated to be $132m. The Council has allocated $150m over that same period to cover these costs. |
| **Project Timing** | The arena should be in-service by Q3/2024. |

# Consideration of Procurement Models

## Procurement objectives

The procurement model must support the delivery of the investment objectives as outlined in the Strategic Case.

The procurement and investment objectives form the basis for compiling project-specific procurement evaluation criteria. These support the assessment of the short-listed procurement options and selection of the preferred procurement model. The procurement objectives focus on commercial and delivery related outcomes, designed to achieve public value by considering project outcomes, risks, timing, innovation, and market capacity, interest, and accountability.

Procurement objectives were compiled to inform and direct the procurement model evaluation criteria and assessment, and include:

1. Complexity and scope for innovation
2. Time confidence
3. Market conditions
4. Risk allocation
5. Interfaces and stakeholders
6. Client involvement and control
7. Tangible demonstration of public value
8. Flexibility to deal with change
9. Cost confidence

Workshop participants then discussed, moderated and defined evaluation criteria based on the agreed procurement objectives. Following the procurement options assessment, six procurement models were shortlisted in the workshop to progress to the evaluation and scoring stage. Workshop participants evaluated these models by assessing and scoring each procurement model against each procurement objective. Participants then compared the scores of each procurement objective across the evaluated procurement models. Evaluation and scoring focused on the extent to which each procurement model helped achieve the project's procurement objectives. This included views on current market conditions and likely competition for the project, which were subsequently tested through the market engagement phase.

The commercial workshop evaluation demonstrated that several models could meet the procurement objectives of the CMUA but no procurement approach meets all of the objectives identified by the parties.

With any procurement approach, there will be a trade-off between the amount of risk and responsibility transferred to the private sector and the willingness of the market to accept, manage and/or price that risk. The scoring of the various procurement models show that there are divergent views amongst the stakeholders as to what the optimum trade-off is. Notably, the evaluation revealed that PPP might be an appropriate model if risks could be transferred and there was enough market interest from a main contractor perspective to provide competitive tension through the procurement process.

## PPP as a potential procurement model

Procuring entities that are planning any 'significant' investment must evaluate all procurement options, including PPP procurement. Where investments have a significant service component, a choice is required between conventional procurement and a PPP. This choice is largely dependent on how likely it is that the service requirement will change over time in unpredictable ways, requiring costly contract variations.

The project has some of the right features to be considered for delivery through a PPP. The Project was assessed against the hurdle criteria developed by NZ Treasury to determine whether a PPP could be considered a viable procurement option. This Project satisfies some of the hurdle criteria for a PPP procurement option, however the timetable and market competition criteria are not clearly satisfied. There are potential challenges for the project relating to the relevant experience and capability required to deliver a complex PPP procurement process within the desired in-service timeframes, the current market conditions for vertical infrastructure projects of this scale in New Zealand mean there may be a lack of competition for the project under PPP procurement model.

## Market Engagement

Following the commercial workshop, the Council and Crown agreed to undertake an accelerated market engagement process to add further context to the findings of the commercial workshop. The market engagement tested different procurement models with local and international companies to gather further insight and feedback on:

- The market's appetite and capability to bid and deliver the project, including that of major subcontractors.
- Lessons learnt from relevant projects.
- Key constructability and risk allocation issues and approaches to managing and mitigating these.
- Contract packaging, sizing, sequencing, timing and duration to suit market conditions and constraints, and
- Potential procurement model options.

This market engagement was deliberately exploratory in nature, reflecting the formative stage of the procurement strategy and the information required to support the Investment Case. It is expected that additional market engagement will follow once a preferred procurement model has been developed – it was noted by those interviewed how important it is to keep the market up-to-date with the status of the project, even when at times it can seem like limited information can be provided.

### Market response summary

The market engagement produced high quality responses from potential suppliers covering a broad range of issues. Notably, the written feedback provided by contractors suggested a greater interest in bundled delivery than the one-on-one engagements. The one-on-one sessions allowed for more direct conversation and allowed the contractors to provide their belief that D&B (or ECI leading to a D&B) would provide for the greatest competition in the market.

The financers noted that debt and equity are available for a PPP type procurement approach and they signalled a strong interest in providing support to a PPP. However, only one had connected to a main contractor and the others noted that market competition in New Zealand could generate challenges in executing a PPP procurement. They suggested that the project would need to consider a wider and more formal marketing engagement process to encourage the Australian and other overseas firms to consider this a viable option.

The operator and maintenance market feedback noted the need for early involvement during the design process to incorporate whole of life and buildability considerations into the project.

This provided the Project Team with valuable feedback on the market's appetite and capacity for the Project, including suppliers' preferred procurement model(s) that will assist in developing the project's procurement strategy. Table 15 summarises the key findings of the market engagement process.

Table 15 Summary of key findings

| Theme | Feedback |
|---|---|
| **Overview** | • All respondents indicated interest in participating in the project. Unsurprisingly, each supplier's preferred procurement model generally aligned with their own market segment, i.e. equity providers tended to favour PPP while contractors favoured D&B or Construct Only (with ECI also favoured as a variation to these models) |
| **Competition** | • Four construction contractors indicated a clear appetite to tender for the project under a D&B or Construct Only procurement model. Another was still interested, however, could not commit at the time of the market sounding<br>• All indicated a preference to be involved as early as possible in the design development process<br>• All construction contractors indicated that PPP procurement was not preferred and four were against it. They expressed concerns related to the risk transfer on this project and the contractor margin pressures observed under a PPP structure which would need to be further examined if this approach was to be considered<br>• All noted that the cost of bidding would need to be covered to attract market interest<br>• Of the four equity providers interviewed, only one indicated a firm commitment to tender for the project under a PPP procurement model. The remaining equity providers, while expressing interest, did not identify any potential consortium partners and indicated some uncertainty regarding the interest of most domestic contractors to participate in a PPP consortium<br>• Maintenance providers and operators interviewed all expressed interest in participating in the project and noted they should be included early where possible |
| **Client** | • Participants wanted a high degree of clarity on who the public-sector counterparty, or client, will be for the project<br>• There is currently some market uncertainty around future CMUA governance and ownership arrangements, including how these will be shared between local and central government<br>• Participants believed that an active and engaged client throughout the design development and delivery would help remove any barriers and help achieve the desired outcomes<br>• The market is seeking a firm commitment to a procurement model. Recent projects, especially in Christchurch, have seen changes to the procurement mid-way through the procurement process |
| **Project brief** | • Responses highlighted that the project's success relies on a clear, comprehensive and controlled project brief before procurement.<br>• Contractors that preferred a D&B procurement model made clear that a well-developed design and functional brief would be critical for success and that this should include detailed and considered input from the operator and maintenance provider of the CMUA, prior to commencing any procurement process |
| **Design** | • The project must establish a robust design team and design development process to deliver an appropriately detailed design brief to the market. This should include client representatives and O&M providers in an active role to ensure the CMUA design brief meets the Project Team's requirements and minimises the potential for late (and costly) design changes<br>• A poor interface between the designer and contractor (e.g. under a Construct Only model) was considered to present a risk of programme delays and/or the assumption of additional risk by the project<br>• Design is driven by a capital cost target without enough regard to ongoing operating costs leading to higher than expected whole-of-life costs |
| **Subcontractor market capacity** | • Respondents had varying opinions about the subcontractor market capacity in Christchurch and New Zealand more broadly. Current projects in the Christchurch CBD, including Te Pae, the Metro Sports Facility and the Christchurch Hospital ASB, are expected to be completed or near completion by the commencement of the project. Other large-scale South Island infrastructure projects (e.g.in Invercargill and Dunedin) may impact the Christchurch market. Respondents highlighted that the sooner the CMUA timeline is confirmed, the more prepared the market will be to respond |
| **Subcontractor market capability** | • Respondents indicated that there could be capability constraints given the unique nature of the project (e.g., in delivering the long span structure and ETFE roof). Offshore subcontractors would need to be procured to fill local market capability gaps |
| **Supply** | • All respondents noted that an offshore supply of some materials will be required, including structural steel and ETFE.<br>• Respondents observed that the earlier a formal procurement process for the project is commenced, the less risk there will be around the procurement of long-lead supply chain items. Some respondents noted that embedding contractors early in the design process can lead to cost savings, an example included the procurement of seating, precast concrete and steel |
| **Governance** | • The market's desire for clarity around the public-sector counterparty for CMUA means there is substantial work required by the project to ensure it has necessary governance and project team expertise established prior to procurement. Part of this has been considered in the Management Case |
| **Community engagement** | • Respondents all observed that the CMUA will attract intense local interest and public scrutiny. Excellent communication, stakeholder engagement and understanding of any adverse public effects must be considered and managed by the Project Team |

## Reconsideration of Preferred Procurement Model

Following the market engagement, the project team considered that there was substantial appetite from suppliers for a competitive D&B procurement process. This conflicted with the score the D&B model received for the Market Conditions evaluation criteria, which was based on the workshop participants' untested views on current market appetite for D&B procurement. The workshop held on 14 March 2019 reflected a point-in-time assessment. Following market engagement, the Project Team now has stronger confidence that a competitive process for the project can be achieved using a D&B procurement model.

The two highest ranked, viable procurement approaches – D&B and PPP – both have their unique advantages and challenges as summarised below. Neither model has been used for the procurement of an arena in New Zealand previously.

| Model | Public Private Partnership | Design and Build |
|---|---|---|
| **Rationale for Selection** | Would give cost certainty in relation to both the capital.<br><br>Can drive innovation, better user experience and whole of life outcomes.<br><br>New Zealand experience with PPP's (for buildings) has shown they are more likely to be delivered on time and to a higher quality than other procurement methods.<br><br>Availability Payment model allows public to retain control of operations. | Interest from four main contractors, providing the best chance for a competitive tender process.<br><br>Reduced interface risk (compared to traditional procurement) with the integration of the design and build mitigating some client interface risk.<br><br>Greater flexibility during the design development phase (than PPP). |
| **Challenges to work through** | PPP model has not been used by local government in New Zealand previously.<br><br>The additional risk associated with PPP will require the project to be well developed prior to going to market.<br><br>Market appetite is still to be confirmed.<br><br>These are complex long-term contracts.<br><br>The mechanism for contributing the Crown funding would need to be agreed. | There is not a common definition of D&B in the market and the commercial principles, including liability for design, would need to be confirmed.<br><br>Success relies on the Contractor being able to manage design effectively – a major issues on current projects of this size.<br><br>Council needs to consider how it will manage the lack of cost certainty in both the construction and operational phases. |

## Design and Build Model

The outcomes of the commercial workshop, and the feedback received from potential suppliers during the market engagement process, showed that the D&B model offers the project a number of key advantages over the other procurement models. These include:

- Interest from four main contractors, providing the best chance for a competitive tender process
- A single procurement process that covers the design and build of the facility, which will include a response from the private sector consortia comprising the skill sets to perform all the required services
- Reduced interface risk with the integration of the design and build mitigating some client interface risk
- Potential programme savings from a faster and better understood procurement process
- Enhanced control of the project delivery from the client-side
- Greater flexibility during the design development phase

There are still be some challenges that the project will need to address, but these can be mitigated by having well-defined design requirements and committing to the development of a clear, concise and understandable functional brief prior to procurement. Some of this is already in place, as the scope for the Technical Team was to produce a Proof of Concept design.

## Proposed Contractual Structure

The absence of an equity party means that the contractual structure for the D&B model is relatively straightforward. The D&B consortia will contract directly to the delivery entity, and will be contracted under a standard NZS3916:2013 contract form. The standard form contract is likely to require a level of redrafting to take into account the scale of the project and the nature of the D&B procurement method.

A 'Cost to Complete' or similar methodology will be used to determine payments made to the D&B contractor during the construction phase. The 'Cost to Complete' methodology for assessment of construction cost differs from the more traditional 'Percentage Complete' basis in that the calculation takes into consideration the total cost to complete the works and compares this to the available funding. This approach provides greater client security by ensuring funds are available to complete the works at any given time. This process is typically adopted by quantity surveyors commissioned directly by financiers, who require line of sight to the total project cost so they can monitor this against the capped funding amount negotiated for the project

Such payments will be fixed upfront to provide cost certainty to the Crown and the Council.

While further detail would be required during the procurement phase, the D&B Contract could also include a schedule that requires the contractor to ensure that the facility meets certain availability standards for a period of approximately three years post-construction, subject to specified caveats such as damage caused by the AM/FM contractor or the operator. It is recommended that prior to a formal procurement process, the D&B model is further tested including a second round of market engagement to refine this procurement model. The two-stage procurement process will involve the following key phases

- Expression of Interest (EOI) – designed to confirm the level of market interest and capability and to select a shortlist of potential respondents who may subsequently be invited to submit proposals.
- Request for Proposal (RFP) – invites short-listed respondents to respond and, based on the Project Team's concept design and design brief, submit a fixed-price proposal for the design and construction of the CMUA. The Project and its advisors will evaluate submitted proposals to arrive at a preferred bidder.
- Preferred Bidder – following the evaluation of proposals, the Project will enter into negotiations with the preferred bidder with the objective of securing a signed contract.

The procurement process is covered in more detail in the Management Case.

### Operator and maintenance provider

#### Operator

Neither the PPP nor D&B models recommend incorporation of operational services. It is recommended that the Project confirms the operator as early as possible to maximise the value of their inputs into developing the design requirements for the CMUA. This will ensure that the operator is brought on board throughout the design development phase for the delivery of the CMUA. This recommendation is made irrespective of the procurement model chosen for the main works.

We note that the Council owned entity Vbase is the proposed operator of the facility.

Market respondents indicated that early operator involvement during the design and delivery phases of the CMUA is critical to the Project's success, to have their requirements incorporated into the design. Examples of operational considerations to include in the design are:

- Accessibility
- Location of hospitality outlets
- Circulation routes
- Logistics
- Storage
- Security
- Functionality of spaces

Additional benefits of early operator involvement include the operator having a detailed understanding of the CMUA to provide time to tailor its processes and procedures well in advance of commissioning. Market participants noted that where this previously had not occurred there were inefficiencies or late changes to the design because the design team did not consider the operators as the end users. The project could benefit from early operator involvement and considering synergies across Christchurch's multiple venues.

### Maintenance provider

Market respondents indicated that involvement of the maintenance contractor during the design and delivery phases of the CMUA is critical to the project's success, so that they have their requirements incorporated into the design. Examples of maintenance considerations to include in the design are:

- Type and quality of material
- Critical spares
- Storage
- Service level of equipment
- Access

If the project is procured under a D&B model, it is recommended that the project runs a separate procurement process for a maintenance provider as early as possible. to maximise the value that the maintenance provider can add to the design and delivery of the CMUA. This will ensure that the maintenance provider is brought on board throughout the design development phase for the delivery of the CMUA. If procured under a PPP model this will not be required as the long term concession nature of the contract means maintenance considerations will be embedded in the design produced by the successful consortium.

## Enabling and early works

Contractor participants unanimously agreed on the need to mitigate site risks prior to the procurement of main works. Site remediation is often not dealt with adequately in early stages of major projects, and especially in Christchurch due to the variability of ground conditions. Transferring the ground risk conditions, with upfront due diligence, would help to make sure tender pricing does not include inefficient contingency allowances and explicit risk pricing for ground risk.

Enabling/Early works to consider include:

- Site clearance
- Utilities relocation
- Consequential (external to site) roading changes
- Geotechnical (ground improvement)
- Site decontamination

The practical value of a separate early works package will depend on the project and its technical advisors confirming that early works can be completed prior to the commencement of the procurement of the CMUA main works.

To improve the attractiveness of the CMUA and hence maximise the competitive tension in any procurement process, it is recommended that the Project considers tendering a separate early works contract to help mitigate residual ground and site condition risks prior to procuring the main works. This recommendation is made irrespective of the procurement model chosen for the main works.

# 4. Affordability Assessment

The Financial Case outlines the overall cost and affordability of the preferred option identified in the Economic Case.

The affordability threshold was defined by the combination of the Long-Term Plan (LTP) funding currently allocated, the Christchurch Regeneration Acceleration Facility (CRAF) contribution signalled by the Crown, the Crown's contribution already made toward acquiring the site, and the allowances by the Council toward operational funding. The option that, in the view of the project team, balanced affordability, optionality, and economic benefit was selected to progress to affordability assessment.

## Whole of Life Cost

The total net whole of life cost for the CMUA is estimated to be **$639.8 million (nominal)** over the 30-year assessment period: a 5-year build period and a 25-year operating period. Estimated project costs have been assessed over a 30-year period, comprising a build period through to 2024, and 25-years of operation. The total net whole of life cost of the Recommended Option is presented in Table 16 below.

Table 16: Total cost of Recommended Option ($m)

| | Total cost ($m) (nominal) |
|---|---|
| Capital expenditure | $439.4 |
| Capitalised pre-opening costs | $1.2 |
| Lifecycle costs | $76.8 |
| Net operating expenditure (operating expenses less revenue) | $65.5 |
| Bid Incentive Fund | $56.9 |
| **Total cost** | **$639.8** |

## Quantitative Risk Assessment on Project Delivery Costs

The Council commissioned WTP to undertake a Quantitative Risk Assessment (QRA) on the project delivery costs. A QRA is a risk quantification tool used to calculate the impact on project delivery cost if certain risks eventuate. Best practice suggests that a QRA be undertaken at each phase of project delivery, although a QRA at this stage of design is somewhat unusual. The Investment Case stage is an early phase, and the range of costs will narrow as risks are better understood. At this stage, WTP have advised that it is not appropriate to use the QRA costs for the purposes of financial planning. Additional work will continue to be undertaken to understand the market and cost-push risks for this project.

WTP have reviewed the risk register provided by the Council and have utilised this information to produce a list of key risks which have been used to produce the QRA. A three-point estimate has then been produced for each

risk, representing a high, mid and low cost should the risk eventuate. This high-level approach reflects the current level of design information available for the project, with the seven key risks presented in Table 109 below.

The initial QRA assessment WTP conducted resulted in a P85 risk estimate (as requested by the Crown) of $505.3m, meaning that the project is expected to be able to be delivered for less than this cost 85% of the time. However, this was deemed unaffordable as it exceeded the $473m available budget.

This necessitated an affordability review of the preferred option to identify potential saving opportunities to present an on-budget scenario for the CMUA. This would enable the CMUA to be delivered within the **$473m** available budget at a P85 affordability threshold level. These potential savings opportunities produced the most up to date results. This final QRA applies to the costs and revenues presented throughout the financial case:

- The P50 estimate is **$455.9m**, meaning that given the known risks this project can be delivered for less than this cost 50% of the time.
- The P85 risk estimate is **$472.7m**, meaning that the project is expected to be delivered for less than this cost 85% of the time.

The available funding therefore exceeds the P85 risk estimate by approximately **$0.3m**. In light of these results, we can expect the project to be delivered under the available funding budget (slightly more than) 85% of the time.

## Funding Sources & Affordability

### Christchurch City Council (Council) contribution

The phasing of the proposed Council capital expenditure is based on the latest capital works projections prepared by WT Partnership. This is as presented in Table 17. The Council has allocated **$253 million** towards the delivery of the CMUA below. Some of that funding may not be required for the capital build of the facility, and is represented as an unallocated capital contribution. Note that this phasing supersedes that which has been assumed as part of Council's latest annual planning. These phasing changes will have a slight impact on the timings of rates adjustments (and will be revised annually as part of Council's Annual Plan / Long Term Plan updates).

Table 17: Christchurch City Council funding contribution ($m) (nominal)

| | 2019 FY | 2020 FY | 2021 FY | 2022 FY | 2023 FY | 2024 FY | Total |
|---|---|---|---|---|---|---|---|
| Council contribution | - | - | - | 39.8 | 172.9 | 30.0 | **242.7** |
| Unallocated Council Contribution | | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | **10.3** |
| **Total Council Contribution** | | **2.06** | **2.06** | **41.86** | **174.96** | **32.06** | **$253.0** |

### Crown contribution – Christchurch Regeneration Acceleration Facility

The Council has agreed to allocate **$220 million** from the CRAF towards the construction of the CMUA following the approval of an investment case. This investment case assumes that CRAF funding can be accessed alongside Council funding – that is, the Council's funding allocation does not need to be exhausted prior to accessing the CRAF. It is to be noted that the Crown expects to contribute [redacted] towards the cost of acquiring the land for the CMUA. An estimate of the proposed phasing for drawdown of the CRAF funding is presented in Table 18 below. The Crown's capital funding contribution is reported in financial years.

Table 18: Crown contribution ($m) (nominal)

| | 2019 FY | 2020 FY | 2021 FY | 2022 FY | 2023 FY | 2024 FY | Total |
|---|---|---|---|---|---|---|---|
| Crown contribution | - | 20.9 | 71.3 | 127.8 | - | - | **220.0** |

## Operating subsidy

As is frequently the case for public infrastructure projects, the operating costs for the CMUA exceed operating revenues in all years of operations. This difference will be closed through an operating subsidy provided by the Council.

Prior to the preparation of this Investment Case, the Council allocated **$4.1 million** per annum (real 2020 dollars) to cover operating and lifecycle costs or losses from the CMUA. This allocation is intended to cover lifecycle and net operating losses incurred by the CMUA over the 30-year assessment period. The Council's annual operating subsidy is presented in Table 118 and is reported in financial years. Demands on this subsidy vary depending on the year – and are driven by fluctuations in demand and lifecycle requirements, but the facility is sustainable over its whole of life, and the Council advises that it can manage operating cashflow over time.

## Capital cost affordability

The estimated EAC capital expenditure estimate sits at **$462.7m** (excluding capitalised pre-opening costs). The Council and Crown are anticipated to commit **$473.0m** to the facility (excluding land), leaving a capital surplus of **$10.3m**. The capital cost affordability against Council and Crown funding contribution is presented in Table 19 below.

Table 19: Capital cost affordability ($m) (nominal, 30-year assessment period)

| | ($m) |
|---|---|
| Estimated capital expenditure | $439.4 |
| Total Council and Crown funding available | $473.0 |
| **Capital funding surplus (shortfall)** | **$33.6** |

While the QRA estimate for Option 3a is also within the affordability threshold, having a $0.3 **million** surplus under the P85 assessment. This is considered to be within the margins of error for a project of this size and scale at this stage of design.

Table 20: Capital cost affordability ($m) (nominal, 30-year assessment period)

| | ($m) |
|---|---|
| Estimated P85 capital expenditure | $472.7 |
| Total Council and Crown funding contribution | $473.0 |
| **Capital funding surplus (shortfall)** | **$0.3** |

## Operating expenditure shortfall

The CMUA incurs average annual operating losses of **$4.2m** per annum in real terms (including lifecycle costs). This would create exposure of $0.1m. when compared to the **$4.1m** per annum (real) currently budgeted to cover operations. From a rates perspective, this would have an impact of approximately 0.02%. Table 121 presents the total operating surplus per annum in real terms.

Table 21: Operating expenditure affordability ($m) (per annum in real terms))

| | ($m) |
|---|---|
| Estimated net operating expenditure per annum (including lifecycle costs) | $4.2 |
| Total Budgeted Council Contribution (operating subsidy) per annum | $4.1 |
| **Surplus / (Deficit)** | **$(0.1)** |

### Impact on Council rates

The facility will also affect Council rates. The expenditure for the facility, and the ongoing operating costs have already been factored into the Council's Long-Term Plan. Should the CMUA not proceed, rates savings of approximately 2.9% (spread across the FY23 – FY25 financial years) could be made.

# 5. Governance and Delivery

The Management Case sets out the processes and arrangements that will be put in place to support the successful delivery of the CMUA Project.

The chosen governance solution needs to address the project delivery requirements, risk tolerance, and control expectations of the funding parties. The governance structure should provide avenues for funders to gain assurance about the project's delivery, and to make decisions about changes to the project as it progresses.

The arrangements proposed here exist only for the project's capital delivery phase. It is anticipated that the Council will be the ultimate owner and operator of the facility, either directly or by contracting operating and maintenance parties.

Council should have control over project governance and design decisions as it has long-term financial interest in the CMUA's operations. The proposed model has joint sponsorship by Crown and Council. Both funding sponsors would have visibility over project delivery. The Council would control project design and scope decisions as it has long-term financial interest in the CMUA's operations. The Council would be the agency accountable for the delivery of the Project

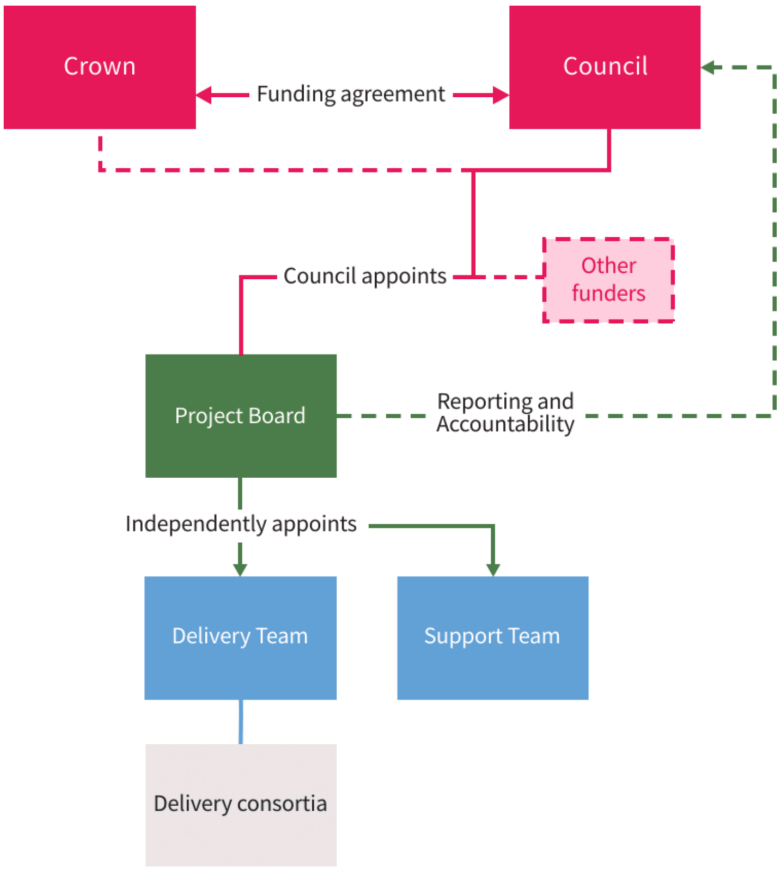
Council would establish a Project Board to provide independent governance and financial control over the delivery of the CMUA. The Board would have responsibility for ensuring:

- the project is successfully delivered on time and within budget and scope
- the project is executed in accordance with the approved Letter of Expectation
- Project objectives, as defined by Council, are achieved. This includes responsibility for optimising value, managing risk, ensuring timely delivery, meeting project performance requirements and determining remedial action if required.

There would be a quarterly Crown/Council sponsors forum to discuss the quarterly reporting provided by the Board and ensure both sponsors are informed on a "no-surprises" approach on progress of project delivery.

The proposed structure under this option is presented in Figure 1.

Figure 1: Proposed Governance Structure




Appropriate project governance for a project of this scale is critical. The ability to attract and retain the appropriate skill-sets for the project delivery is an important factor in establishment of the governance and organisational structure. A skills matrix is provide in Appendix D.

Table 22: Key Roles

| Group | Description |
|---|---|
| **Council and Ministers** | The Council would be the accountable agency for the delivery of the Project, responsible for securing the funding for the project, specifying the project outcomes and design requirements, ensuring that the project remains strategically aligned and viable, and that benefits are on track to be realised<br><br>The Council would appoint the SPV's Directors in consultation with the Crown. The Council would set the expectations for the SPV's operations.<br><br>Ministers would receive regular updates from Council, and would be advised of build progress, budget, and use of Crown's contribution. |
| **Directors of SPV** | The Directors of the SPV would be responsible for the governance of the SPV and ultimately accountability for the delivery of the CMUA. The Directors would be independent and experienced. This means they should have experience in vertical builds of $200M+, experience in stadium / arena operations, and have diverse experience across venue types, scales, and commercial structures.<br><br>They would make governance decisions with respect to project delivery, including but not limited to:<br>• Recruiting and appointing a Project Director with the appropriate skill-sets to develop, enforce, and control a service level agreement with the project management entity<br>• Considering any significant change in cost or scope in relation to delivery<br>• Reviewing and approving the contract for the delivery consortia<br>• Seeking and receiving advice on arena operations and operators, maintenance providers, etc., as appropriate to be informed about the strategy for delivering the facility<br>• Acting in the best interest of the company in the manner legally required of Directors.<br><br>The SPV would be responsible and accountable for the on-time, on-budget delivery of the project. To achieve this the SPV will directly contract with the relevant project delivery partners (e.g. contractor/consortia, operators, etc.)<br>• The SPV would dissolve following project completion, with the ongoing benefits and risks of ownership and operations transferring to the Council and its operator. |
| **Project Director** | The Project Director would provide management oversight and control over the project team and the delivery consortia. They would control project expenditure, facility scope changes, and decisions with respect to the procurement and engagement of the delivery consortia.<br><br>The Project Director would be appointed by and accountable to, the Directors (Board) for project delivery. The Project Director would not be a member of the Board.<br><br>The Project Director would act as the day-to-day project manager of the CMUA project. |
| **Delivery Consortia** | This is the design and build consortia contracted to deliver the CMUA. It is contracted by the SPV and is ultimately accountable to the SPV for its performance. It would take day-to-day instruction from the Council delivery entity. The consortia includes, but is not limited to; arena architects, engineers, design manager, main contractor etc. |
| **Operator** | The operator would be involved in ensuring the facility is built in a manner that allows for efficient, practical operations. The operator would be contracted by the SPV, but would provide advice to the delivery consortia, Council delivery entity, and SPV as appropriate. |

## Delivery Capability and Experience Required

Identifying the appropriate individuals to lead each workstream is a critical aspect of ensuring the delivery of the CMUA proceeds efficiently. An overview of key skills, capabilities and experience required for each workstream Lead is set out below. As noted, to the extent individuals cannot be identified for certain roles, external resources should be contracted / seconded to ensure there are no material gaps in the required capabilities.

Figure 2: Project Delivery Structure

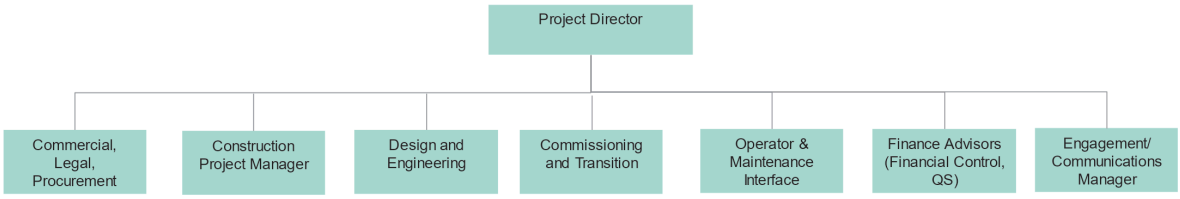



Table 23: Roles and Experience

| Role | Required Capabilities and Experience |
|---|---|
| Project Director | • Experience in construction of a $200m+ vertical build<br>• Leadership, negotiation and stakeholder management skills<br>• Should be sufficiently senior to ensure that any significant project issues and decision points are raised with key stakeholders in a timely manner<br>• Should understand the local and central government or establish a team that can navigate the project through the governance and sponsor forums<br>• Required experience includes managing the procurement of large government projects/contracts and leading commercial negotiations with medium to large contractors across design, build and maintenance components |
| Financial Manager | • Experience in management and oversight of delivering construction projects of a $200m+ vertical build<br>• Should understand the local and central government to navigate the project through the various governance forums<br>• Strong financial skills with the ability to support a vertical construction project<br>• Experience with Board reporting |
| Project Team | • Experience in the management of the design, procurement and delivery of complex construction projects, preferably with specific experience in arena design or delivery.<br>• Experience in project reporting and liaison with key stakeholders<br>• Ability to coordinate and integrate the different workstreams with a wide range of external advisors to manage<br>• Capabilities should complement those of the PD to ensure oversight of all workstreams |
| Commercial and Legal Advisor | • Experience in developing procurement strategies (including EOI/RFP documentation, tender evaluations and negotiations) and project initiation documentation for major capital projects<br>• Experience supporting budget approval process, including working with cost consultants (QS) in project budgeting<br>• Experience with major commercial negotiations on large D&B contracts on projects over $200m+ |
| Construction Project Manager | • Prepare a master schedule for the programme, including schedule risk, contingency, critical path analysis and interfacing programmes<br>• Prepare a capital cost plan. Capital cash flow forecast, including escalation and contingencies. Manage the capital expenditure of the programme<br>• Undertake risk management, document control and reporting<br>• Establish internal and external programme specific reporting mechanisms to monitor and control the performance of activities<br>• Develop, manage and reporting on Key Performance Indicators (KPIs) to provide measurements to allow the programme to be managed proactively<br>• Secretariat role for governance forums. |
| Design and Engineering | • Track record in project direction and strategic leadership of major vertical infrastructure projects<br>• Strong technical background in relevant design, construction, and risk management activities<br>• Possess experience in the preparation and drafting of performance based technical specifications<br>• A strong understanding of the New Zealand and Christchurch construction markets including market skillsets and supply chain capacity<br>• The ability to develop robust project timelines and work breakdown structures<br>• The capacity to interpret pricing data and assess value for money considerations |
| Commissioning and Transition | This role would be appointed later in the delivery, and require:<br>• Experience with managing the shakedown of large-scale multi-use facilities<br>• A strong understanding of commissioning requirements for new arenas<br>• Strong understanding of contract management, including contractor disputes over defects<br>• Experience in establishing operational and maintenance teams<br>• Relationships across the multiple event facilities in Christchurch |

| Role | Required Capabilities and Experience |
|---|---|
| Engagement/ Communications Manger | • Develop, deliver and implement a clear communications strategy about the development, timing, and event expectations for the CMUA<br>• Engage with key interested stakeholders including content providers to understand how they can / are willing to support the arena's ongoing success<br>• Set and manage public and resident expectations about the CMUA's development and operations<br>• Provide marketing and branding guidance to the operator where required |
| Operator and Maintenance Interface | • Experience in the operation and management of large-scale multi-use arena in sport and event facilities<br>• A strong understanding of market/user trends and impacts on facility planning, design and operation<br>• Strong understanding of facilities planning and operation including:<br>  • Modes of operation across both community and event usage<br>  • Financial considerations inclusive of revenue and cost drivers<br>  • Staffing models for various modes of operation<br>  • OHS and life safety considerations<br>  • Flexibility and change of use considerations<br>• An understanding of broader network considerations and impacts on facility planning<br>• Relationships with facility suppliers and sport and recreation networks<br>• Experience working with and managing facility tenants and users<br>• The ability to plan facilities to maximise revenue from both core and non-core activities |
| Financial Monitoring | • Demonstrated capability and experience managing financial reporting, monitoring, and expenditure on major construction projects<br>• QRA, cost to complete, and financial negotiation skills<br>• QS expertise to provide an independent view on the expenditure for each stage of the project |

## Procurement

Procurement for the CMUA project is designed to simultaneously achieve Council policy objectives and CMUA project objectives. The procurement process will be split into several stages in line with the structure of the selected procurement model.

The Project Management planning for Procurement will reflect the procurement procedures and steps that need to be adopted to prepare the Project for execution.

### Enabling and early works strategy

The Council and the SPV will progress with enabling and possibly early works packages prior to the appointment of the D&B consortium. Most construction elements will be within the scope of the D&B consortium's responsibility except for the enabling works. Enabling works comprise construction processes that are inherently associated with site preparation and the readying of infrastructure.

### Design and Build appointment

There is a further work required to be undertaken to finalise the D&B structure, prior to issue of the EOI and RFP.

Table 24 below sets out key actions to progress.

Table 24: Key actions

| Action | Scope / Issues |
|---|---|
| Council/Crown approval of Investment Case | Endorsement of the CMUA Investment Case. |
| Procurement of Advisory Team | Procurement of legal, independent QS, financial, technical and other specialist advisors |
| EOI / RFP Development | Develop timeline and content for market engagement process to support the EOI and RFP |
| Further Site Investigations | Complete site investigations, and provide a complete geotechnical analysis with reliance if possible to the project Partner |
| Procurement of Early and Enabling Works | Procurement of enabling and early works contractors to deliver utilities moves, site remediation, etc. Some early works may be left to the main contractor |

| Action | Scope / Issues |
|---|---|
| Procurement of Design & Build Consortia Team | Procurement of design and build consortia for the preparation of initial design packages |
| Release EOI and RFP documentation | Develop and implement approved procurement procedure |
| Site Planning Strategy | Development and implementation of project consenting strategy |
| Development and ongoing ownership of communications strategy | Managing transition from Investment case engagement to project delivery communication and engagement |
| Development and ownership of Benefit Realisation Plan | Develop a benefit realisation plan<br>Prioritise and agree key KPIs |
| Additional Stakeholder / Community Engagement | Regular updates to key stakeholders to manage timing and delivery expectations. Community engagement on proposed uses of the CMUA outside of key performance and sporting events |

Once the prepartory works for procurement have been completed, a full procurement process can then commence for the D&B consortia. This will involve:

- Expressions of Interest
- Request for Proposal for D&B Provider
- Evaluation, negotiation and appointment of preferred provider.

# Project Management

## Objectives

The Project Management structure for this project is designed to achieve the following objectives:

- Identify high risk, and long lead activities, such that they can be procured early.
- Monitor progress through all phases of the CMUA delivery to track progress against committed time, and forecast expected time to complete.

## CMUA delivery programme

The full CMUA Delivery Programme or (Master Programme) will comprise an overall coordination programme updated as necessary to reflect the latest information. This programme will have all elements and sub-programmes noted on the Programme, with other programmes then summarised and rolled up from this Master Programme for specific tasks, participants or specific elements of work. The Master Programme will expand upon the Draft Delivery Programme included in the Management Case.

## Monitoring of progress

The Project Director shall report to the Board on a monthly basis highlighting the programme status against the master programme. Progress reports received from relevant Consultants and Contractors will be reviewed.

The Project Director shall monitor the status of all work elements and contracts, prepare progress reports and expedite progress as necessary. The Project Director shall detail any slippage to the programme and recommend to the Consultants and Contractors appropriate ways to recover the slippage at each monitor and shall report on action being taken.

## Programme changes

Changes to the programme are to be recorded as revisions and highlighted to the Board. In order to anticipate problems and instigate corrective action, all team members are requested to immediately highlight areas of concern to the Project Director and be proactive at working with the project team to identify and mitigate risk.

## Handover to client

An Organisation Change Management Plan will be used to prepare the Operator for transition to the new operational environment that will exist once the Project Team has handed over the outputs, the team has been disbanded and/or the project is closed.

Elements of the Plan will include:

- Transition planning and timetable
- Communications
- Training
- Maintenance
- Performance measurement indicating how success or otherwise will be measured

The Business Owners will be required to create and maintain the Organisational Change Plan, and report on progress toward the achievement of project outcomes to the SPV and senior management.

# The Strategic Case

# 6. Purpose

Following the Canterbury Earthquakes, Christchurch lost many of its key social, cultural, and sporting venues. In response, the Crown and the Council prepared several recovery plans to support the regeneration of the city and region. The Christchurch Central Recovery Plan (CCRP) identified an arena as a key component of central city regeneration.

The purpose of this Strategic Case is to outline the case for change that drives the need for investment. This document outlines the:

- Strategic context
- Problem definition
- Investment objectives
- Benefits and risks
- Key stakeholders
- Summary of the case for change

# 7. Strategic Context

This project is framed by five strategic factors, specifically:

1. The impact of the Canterbury earthquakes and the government's response
2. The vision for Christchurch
3. The need for a new facility in Christchurch to attract greater tourism and event activity into the Central Business District (CBD)
4. The economic, social and commercial viability of the Canterbury Multi-Use Arena (CMUA)
5. The alignment of the CMUA to strategic documents and policies

## The Impact of the Canterbury Earthquakes and the Government's Response

The Canterbury earthquake sequence that began in September 2010 cost 185 lives and caused an estimated $40 billion of damage ($42 billion in 2019 dollars). The scale of damage was second only to the 1931 Napier earthquake in New Zealand's post-European settlement history, and was the second-most costly insured event in the world at the time. Amongst the built losses from the earthquakes were much of Christchurch's network of performance, cultural, and sporting venues including the Convention Centre, Court Theatre, The Arts Centre, Isaac Theatre Royal, the Town Hall, The Civic, and Lancaster Park Stadium. These venues were either demolished or required significant repair.

Table 25 below outlines the effects of the earthquake sequence on Canterbury and New Zealand.

Table 25: Impact of 2010 and 2011 earthquakes

| Impact | Description |
|---|---|
| **Population affected** | • 460,000 people in the greater Christchurch metropolitan area (Christchurch City), Selwyn and Waimakiriri |
| **Impact to CBD** | • Damage concentrated in Christchurch City, which at that time accounted for approximately 10% of national Gross Domestic Product (GDP)<br>• Parts of the CBD (defined as the area contained within the 'Four Avenues' of Bealey, Moorhouse, Fitzgerald and Deans Avenues) were substantively closed for almost two years<br>• The city lost 70% of its total commercial floor space and more than half of its buildings<br>• 40,000 of its 50,000 pre-earthquake employees decamped to suburban locations |
| **Damage estimates** | • 185 deaths<br>• Over 150,000 homes damaged |

## Canterbury Earthquake Recovery Act 2011

The Canterbury Earthquake Recovery Act 2011 (CER Act) was the Crown's legislative response to the February 2011 earthquake. The CER Act emphasised the need for a successful, swift and complete recovery. The purpose of the CER Act itself is to:

- Provide appropriate institutions with powers and support to enable Greater Christchurch to be rebuilt and recover as quickly and as fully as possible
- Ensure communities and the public are involved in decisions regarding the rebuilding of their own areas
- Ensure the restoration and promotion of the greater well-being of Christchurch communities

The CER Act provided a framework for the overall response from a strategic, policy, investment and regulatory perspective, and enabled the production of recovery plans that could supersede existing planning regulations, and commit the Crown to an investment programme for the recovery and regeneration of Christchurch.

## The Christchurch Central Recovery Plan (CCRP)

The impacts of the 2010 and 2011 earthquakes have necessitated an unprecedented co-ordinated recovery plan. The demolition of much of the city's buildings and infrastructure led to the development of the Christchurch Central Recovery Plan, Te Mahere 'Maraka Ōtautahi' (CCRP). The Recovery Plan provides a framework and guide for the recovery of the central city, to:

> *"Create a denser, more productive central city, anchor investment and employment by creating civic infrastructure, and provide distinct areas to facilitate cluster development."*

The Recovery Plan describes where 16 "anchor" projects will be located so that uncertainty of major facilities is mitigated and businesses are able to identify and plan commercial and residential redevelopment. Figure 3 below illustrates the layout of the anchor projects.

Figure 3 CCRP anchor projects


The anchor projects were designed to attract people to, and move people and activity across the city, with clear pedestrian and transport links. Pre-earthquakes, the central city was perceived as being too large, with too little activity spread over too much space. The opportunity presented by the CCRP was to condense the spatial extent of the CBD, and simulate economic and social activity throughout. The areas around projects and the 'corridors' created between them were designed to provide confidence to the private sector and residents, in the knowledge that while regeneration would take time, the key activity areas would be known and committed. The completion and delivery on this commitment remains crucial to the economic and cultural regeneration of Christchurch.

## Proposed Multi-Use Arena

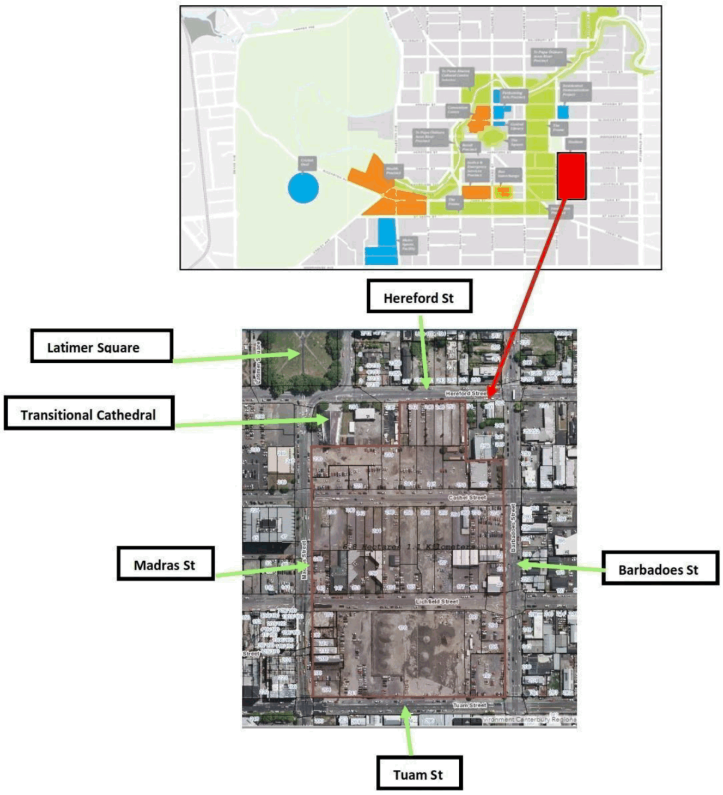
As part of recovery planning, the CCRP included the development of a new permanent stadium as an anchor project as part of the new spatial blueprint for the CBD. The CCRP envisioned a recovering and regenerating city where first-mover risk[5] was mitigated by public-sector investment in a range of assets. These assets were specifically chosen to support and stimulate activity in the CBD, and provide residents across Canterbury with a reason to re-engage with their city centre.

[5] First-mover risk means the first investor bears the risk of no one else investing in the area, therefore the business there is not profitable. It can result in no or very little investment in an area.

The arena is one of the key vertical anchor projects signalled for development by the CCRP. As with the other key projects, its purpose was to provide certainty to the form and function of an urban centre that had lost over 70% of its building stock – some 1,300 buildings. The commitment to rebuild, and the location of key residential, transport, and civic assets helped to give the private sector confidence about the shape the city would take. It also meant that investors could understand the level of activity into which they would be building. This investment was underpinned by the belief that it is important for central and local government to keep its word after major disasters; delivering the arena is essential to keeping that faith.

To enable the execution of this critical commitment, the Crown acquired land across the city to deliver these anchor projects in their committed locations. One such site was designated and acquired for a future stadium, across three city blocks in the CBD around a central site on the eastern side of the city centre bordered by Barbadoes, Madras, Tuam and Hereford Streets, as illustrated in Figure 4 below. The stadium's official name is now the Canterbury Multi-Use Arena (CMUA).

Figure 4: Proposed site for the CMUA




The CCRP noted ten key design principles guiding the location and selection of anchor projects. The delivery of the benefits envisioned by the CCRP necessitates the completion of a system of projects and investments required to regenerate Christchurch. The CMUA is a crucial anchor project in achieving this regeneration. Without the CMUA, a critical node of activity in the south-east of the CBD will not be delivered, and the links between the cultural and economic hubs would be incomplete.

Supporting the investment programme of the CCRP was the programme business case for investment prepared by the Canterbury Earthquake Recovery Authority (CERA) in 2014, and updated in late-2015. The programme business case for the CCRP notes the arena's alignment to three of the key investment objectives underpinning the recovery plan.

The programme business case for the CCRP specifically noted the expectation that the arena was intended to:

1. Increase local, national and international visitors to the central city by redeveloping a key facility.
2. Contribute to a spatially efficient urban form through its co-location with other key facilities such as the bus interchange, retail precinct and Eastern Frame.
3. Provide certainty and confidence to private investors in businesses such as food and beverage and retail by identifying the site of a key facility within the central city.

The key principles relevant to the arena investment are presented in Table 26 below.

Table 26: Key CCRP principles, Alignment to the CMUA

| Principle | Description | Relevance to the Arena |
|---|---|---|
| **Contain** | Contain the core to the south, east, and north with a frame | • The location of the arena creates a boundary for activity on the south of the East Frame<br>• The location relative to transport connections helps to 'funnel' activity back toward the core of the city |
| **Catalyse** | Position anchor projects so that development opportunities are created around and between them | • The activity that the arena will attract will help to underpin existing business, and catalyse new development<br>• The arena will sustain activity to the north of the facility with a fan zone attracting people on event and non-event days |
| **Repair** | Focus on the areas that need the most assistance to develop | • For a variety of reasons, the east of the CBD has been slower to regenerate. The arena will provide a needed boost for development in this area |
| **Complete** | Complete the core as quickly as possible | • Further delays to the delivery of the arena will stall regeneration in the east, and could undermine existing businesses |
| **Attract** | Invite and attract people into the central area as a place to live, work, play, learn, visit and invest | • The arena will act to attract locals and tourists, bringing $84m in new tourism expenditure to Canterbury<br>• It will also create and support additional activity on event days and throughout the year |

## The Vision for Christchurch

Christchurch has an ambition to increase its contribution to the national economy and become an internationally relevant city, attractive to people, high value business and investment, and realising the aspirations set out in the CCRP.

With significant assets and high amenity and lifestyle offerings in a desirable natural environment, Christchurch is well-positioned to deliver greater prosperity to its residents and make a more significant contribution to New Zealand's prosperity, consistent with the country's Living Standards Framework and the UN Sustainable Development Goals.

The vision for the city is consistent with the ambitions of Te Rūnanga o Ngāi Tahu to deliver intergenerational impact, articulated as "For us and our children after us".

The level of ambition for the city is quantified in the city's Prosperity Framework, which sets out a series of goals designed to be considered as a whole. The Prosperity Framework has the following 2028 goals for the city:

### Grow scale and value

1. Grow Christchurch's national economic relevance to 9% of national real GDP
2. Grow the scale of Christchurch's population by 104,500 people in Greater Christchurch
3. Grow the economic wealth of Christchurch through $9,100 uplift in GDP per capita

## Improve perception and confidence

4. Grow the proportion of Christchurch residents' perceptions of their quality of life to 5% points above the national average
5. Regain Christchurch's pre-quake share of national visitor spend of 12.6%

## Be inclusive and sustainable

6. Maintain the proportion of Christchurch residents who have enough money to meet daily needs at above the national average
7. Maintain unemployment rate below national average
8. Support Christchurch's aspiration to be carbon net neutral by 2045

The goals set in the Prosperity Framework are designed to support the national Living Standards Framework but cannot be achieved through incremental change. The goals require bold ambition and action to deliver greater prosperity for Christchurch and its people.

The post-quakes rebuild has provided Christchurch with a strong platform for significant future growth. The city is uniquely placed to provide a counterbalance to the national capacity constraints in other urban centres, particularly Auckland and Wellington.

However, the city's regeneration momentum is vulnerable. Without a significant increase in the demand for new commercial and residential property and for hospitality and retail offerings, the continued regeneration of the central city could stall. The city could face a period of stagnation – with a partially complete central city, empty buildings and stagnating property yields. Increased demand requires attraction of new economic activity into the city – increasing visitors, attracting population and new business investment, in addition to continuing to expand and enhance the existing economic base. Relying on the growth from the existing economic base is insufficient as forecast activity will not result in significant ongoing growth.

To realise the Prosperity Framework goals, the city must focus on:

## Addressing the near term – a proud and confident city

Christchurch needs to generate the additional economic activity required to drive regeneration, particularly of the central city, and to offset the impact of lower construction volumes. New activity (visitors, new residents, businesses and investment) is needed, alongside continued support to grow the existing economic base and ensure Christchurch has a supportive environment to start and grow business.

## Positioning ourselves as an internationally relevant city – A city where we explore opportunity

Christchurch needs to position itself as a place open to new ideas, people and ways of doing things; a new city looking to the future. By promoting a strong, compelling story of Christchurch as the basecamp for exploration, Christchurch will attract and retain the talent, innovation and businesses necessary for future economic success.

This will be achieved through the promotion of the city's narrative and the alignment and intensification of activities that reinforce the story, including international education, major events, destination development, leveraging Christchurch's Antarctic Gateway status, natural and recreational advantages, education and knowledge assets and further leveraging and enhancing Christchurch's strength in its connectivity to its natural environment and landscapes.

To fully realise the potential of the city for its residents and New Zealand, Christchurch needs a competitive offering for people and talent compared with other Australasian cities. A multi-use arena appropriate to the city's size and role as the second largest city in New Zealand is a necessary part of this offering to existing and potential residents and visitors.

A strong second city provides New Zealand with a strong, more diversified economic base and maximises the return from the significant investment by the government and private sector to date. Christchurch aspires to increase its contribution to the New Zealand economy over the next 10 years by $CCCB. This will only be achieved by attracting significantly more people (visitors and residents) to support the ongoing regeneration of the city and to realise the full value of the significant economic assets and infrastructure of the city. The multi-use arena appropriate to Christchurch's size and position in New Zealand, is necessary to support these aims.

## A New Facility: It's Time

Following the earthquakes, an assessment was undertaken of the existing Lancaster Park stadium. Assessments indicated that the repair of the stadium was not economically viable. Without that venue, Christchurch did not have a venue suitable to its size and its position as the second largest city in New Zealand, or suitable for hosting large-scale concerts, professional Rugby Union, Cricket, Rugby League, or Football matches.

Figure 5: Damage to Lancaster Park from the earthquakes in 2010 and 2011

### Christchurch stadium

To address the gap in the events market, a temporary stadium with a permanent capacity of 18,000 was delivered on a site in Addington – some 5km from the CBD – in March 2012 at a cost of $30 million[6]. This went some way toward re-establishing a sense of normalcy, and providing residents with a way to reengage in civic life. Seven years on, it continues to provide space for sport (primarily rugby), large-scale events, and concerts in Christchurch.

It was originally anticipated that Christchurch Stadium would only be required for five years, however significant upgrades and maintenance have been carried out to allow its continued operation until 2022. Additionally, major cricket events were moved to Hagley Oval at a cost of $21.6m. This move has been highly successful, with Hagley Oval becoming a regular international venue with a capacity of 8,000.

As a temporary venue, Christchurch Stadium has been a success, however it is not suitable for long-term operations. Engagement with promoters, community stakeholder groups, Councillors, and representatives from

[6] Inovo Projects, 2018

sporting codes have made it clear that the stadium is inadequate for long term use. Many events that are taking place at the Christchurch Stadium are held as a result of a desire to keep a toehold in the market. This is with the expectation that a new arena will be delivered in the short-medium term.

Critically, the temporary facility is not a replacement or substitute for a full arena offering. Since 2011, there has been a significant gap in the type of event Christchurch has been able to host. In particular, large-scale concerts, exhibitions and sporting events only infrequently come to Christchurch due to the lack of an appropriate venue. When these events do come to Christchurch it is often a result of appealing to content providers sense of duty to provide games or concerts to a city still suffering in the aftermath of the earthquakes. In other cases, it is a result of significant incentive payments to attract content that would otherwise go to cities with superior venues.[7]

The current facility lacks key features and facilities that would make it appealing to promoters and content providers. As this Investment Case will demonstrate, the current venue is not fit-for-purpose and has multiple inadequacies, including:

- Insufficient capacity compared to other venues in New Zealand cities
- Insufficient supporting infrastructure that negatively impacts on the visitor experience
- A poor atmosphere compared to Dunedin's Forsyth Barr Stadium, as the roof creates a more exciting environment and removes weather risk
- Inadequate to enable Christchurch to provide a competitive leisure offering as a second-tier Australasian city to attract and retain people

The longer the delay in replacing the stadium continues, the more content will suffer. In addition, maintaining the temporary facility is estimated to cost more than $11 million in real terms over the next 10 years with the stadium once again reaching the end of its useful life during the proposed construction timeframe of the CMUA. Continued repairs, upgrades, and stop-gap measures will not deliver on the expectations held by the community and stakeholders to see a new major cultural and sporting facility in the heart of the City.

## Accelerating the recovery

The arena was original scheduled to be completed by mid-2017. Delays to regeneration following a major disaster are common, but in the interest of ensuring that those delays are reduced, the government committed $300 million for the purposes of accelerating recovery in Canterbury and Christchurch through the CRAF, subject to investment case approvals.

In September 2018, the Council resolved to use $220 million of that fund for the purposes of accelerating the development of the arena, and lodged an investment proposal with Treasury formalising that request. In seeking funding, the arena was expected to meet the objectives of the CRAF. The objectives that are most relevant to this Investment Case are summarised in Table 27 below.

Table 27: Alignment of CRAF objectives to CMUA

| Objective | Relevance to the Arena |
|---|---|
| **Community Resilience** | • This case will demonstrate the strong effect that arenas have on the civic pride of a city. They help to build social and cultural capital in a city, which is of benefit to all residents, even those who do not use them.<br>• The arena design makes it a destination, facilitating social interaction between members of the community. |
| **Economic Activity** | • The CMUA will generate significant new economic activity for Christchurch from tourism expenditure.<br>• The CMUA is also expected to unleash delayed investment with perhaps $50-100m of assets currently held back due to uncertainty over the arena's delivery. |

[7] Confidential contracts provided by Vbase for the purposes of this business case show that many events would not come to Christchurch but for significant incentive payments.

| Objective | Relevance to the Arena |
|---|---|
| **Rebuild, Catalyse and Stimulate** | • Parts of the CBD remain disjointed, and the east of the CBD lacks an anchor for growth. The arena will provide that point of focus, driving new investment, creating connections to the public realm, and sending a strong signal about the regeneration of the CBD.<br>• The arena will attract new hospitality investment, and that investment will further catalyse the demand for residential development close by. |

Separately, the Council has committed $253m in its Long-Term Plan (LTP) for the arena's development, along with some $4.1m in annual funding to cover operations. This is in addition to the [redacted] that the Crown anticipates spending on land for the CMUA.

Accelerating the recovery matters, particularly now. The balance of this case will discuss the need for this specific investment, considering the context in which it is being developed. The funding is available, the site is known, and the commitment has already been made.

## The economic, social and commercial viability of the CMUA

Over the past five years, a series of feasibility assessments have assessed the economic, social and commercial viability of the CMUA. The most crucial of these reports are summarised in Table 28 below.

Table 28: CMUA feasibility studies and reports

| Document | Description |
|---|---|
| **Technical Reports: Various Authors**<br>**January 2019** | These reports included:<br>• An architectural design report produced by stadium planners Populous, covering designs for the field of play, stand configuration, roof, player and spectator facilities and multi-use flexibility.<br>• A detailed concept design report by Aurecon that covers structural design, building services ICT, lighting, environmental sustainability, turf systems, civil engineering and traffic considerations.<br>• A geotechnical report produced by Tonkin & Taylor<br>• Other technical contributors to the project include:<br>• Marshall Day Acoustics<br>• STRI/SSTM turf consultants |
| **Strategic Assessment of the Preferred Development Models**<br>***Christchurch City Council***<br>**October 2017** | Explored the opportunities and risks associated with the stadium design requirements including:<br>• Retractable turf<br>• Acoustics<br>• Roof technologies<br>• Updated land geotechnical analysis<br>• Spatial planning of a potential facility on the subject site |
| **Multi-Use Arena Pre-Feasibility Study**<br>***Christchurch Stadium Trust***<br>**May 2017** | Commissioned by the Crown and promoted a preferred option which included:<br>• Permanent capacity of 25,000 seats expandable to 30,000 with temporary seats<br>• Solid, acoustically treated roof<br>• Concrete floor with a retractable natural turf<br>• Rectangular configuration |
| **Affordability Review of Metro Sports Facility and the Canterbury Stadium**<br>***Department of Prime Minister and Cabinet***<br>***Christchurch City Council***<br>**April 2017** | Considered whether the Metro Sports Facility (MSF) and the CMUA projects reflect the best outcome for Christchurch and the Canterbury region. The key factors assessed in the review were:<br>• The affordability of both projects, including capital, operations and whole of life costs<br>• The accelerated completion of the projects<br>• The delivery of increased benefits from the projects<br>• Generation of positive externalities<br>The review identified that the preferred option was the development of standalone MSF and CMUA projects on their currently designated sites, in line with the currently proposed scope of facilities and within an affordable budget envelope. |

## The alignment of the CMUA to strategic documents and policies

In addition to supporting the shared Crown and Council objectives outlined in the CCRP and CRAF, the CMUA development also supports Council's goals and priorities as presented in Table 29.

Table 29: Alignment to strategic plans and policies

| Strategic Document | Goals and Priorities |
|---|---|
| **Christchurch Long Term Plan 2018-2028** | The Strategic Framework for the Long-Term Plan currently identifies two Community Outcomes for Christchurch that are relevant to the CMUA:<br>1. Strong Communities (including):<br>• A strong sense of community<br>• Celebration of identity through arts, culture, heritage and sport<br>2. A Liveable City (including):<br>• A vibrant and thriving CBD<br>• A well-connected and accessible city<br>Restoring events to Christchurch also supports a relevant outcome in the draft Strategic Framework for the Long Term Plan 2018-2028, namely:<br>3. A Prosperous Economy (including):<br>• A great place for people, business and investment<br>• Modern and robust city infrastructure and community facilities<br>4. A Healthy Environment<br>• Healthy waterways<br>• Sustainable use of resources<br>• Unique landscapes and indigenous biodiversity are valued |
| **Christchurch Prosperity Framework, 2018** | The Multi-Use Arena is a necessary piece of leisure amenity infrastructure which will support the city's Prosperity Goals for 2028:<br>• Grow Christchurch's national economic relevance to 9% of national real GDP<br>• Grow the scale of Christchurch's population by 104,500 people in Greater Christchurch<br>• Grow the proportion of Christchurch residents' perceptions of their quality of life to 5% points above the national average<br>• Regain Christchurch's pre-earthquake share of national visitor spend of 12.6% |
| **Christchurch Major Events Strategy 2018** | The arena is designed to support the delivery of the ChristchurchNZ-led Major Events Strategy. Supporting the aims of the strategy, notably it will:<br>• Ensure that venues are fit for purpose and provide a high-quality experience<br>• Increase the contribution that major events make to the city's economy<br>• Attract internationally-recognised events<br>• Make a positive contribution to the community's perception of their quality of life (civic pride). |
| **Christchurch Economic Development Strategy 2017** | The Economic Development Strategy identifies the main opportunities to make step changes to Christchurch's economy through attraction of people (migrants, students and visitors) and growing the value of the Christchurch economy. Key actions include:<br>• Enhancing city amenities, including prioritising the delivery of major visitor attractions<br>• Attracting and retaining people, business, investment and visitors, which is supported by the Visitor and Major Events Strategies and their ambition to return Christchurch's share of the national visitor economy back to pre-earthquake levels by 2025<br>• Implementing the anchor projects to provide Christchurch with world class facilities, and accelerate the regeneration of the CBD. |
| **Christchurch Visitor Strategy 2016** | The aim of the Visitor Strategy is to reclaim Christchurch's pre-earthquake role in national tourism, and to use visitor numbers to drive the city and region's social and economic development. Key priorities identified in the Strategy for achieving this goal include:<br>• Increasing shoulder and off-peak visitor numbers<br>• Enabling a bigger range of events to enhance liveability, encourage investment, and attract visitors<br>• Prioritising development of the major visitor attractions<br>• Strongly advocating for timely delivery of catalytic anchor projects |

# 8. Problem Definition

Understanding the key problems that an investment in the area would address means building on completed work. It also means looking at opportunities for tourism, civic pride, and new investment, not just a set of individual issues. An investment logic mapping workshop was held on 18 February 2019 to revise and agree on the 'problem definition' and 'investment objectives' for the CMUA project, explicitly building on some of the work that had already gone before. The workshop was attended by representatives from:

- Christchurch City Council
- Vbase – Events and Operations Team
- Sport Canterbury
- Sport NZ
- Canterbury Rugby Football Union (CRFU)
- New Zealand Rugby Football Union (NZRFU)
- Crusaders
- Aurecon
- Populous

An Investment Logic Map (ILM) is a simple, single-page diagram that details the underpinning logic of the investment. It provides a clear statement of the problem that needs to be addressed and the benefits that will follow from addressing the problems. Each problem is weighted with a percentage to convey the relative importance of each problem. The problems are then described and evidenced in further detail in the following section.

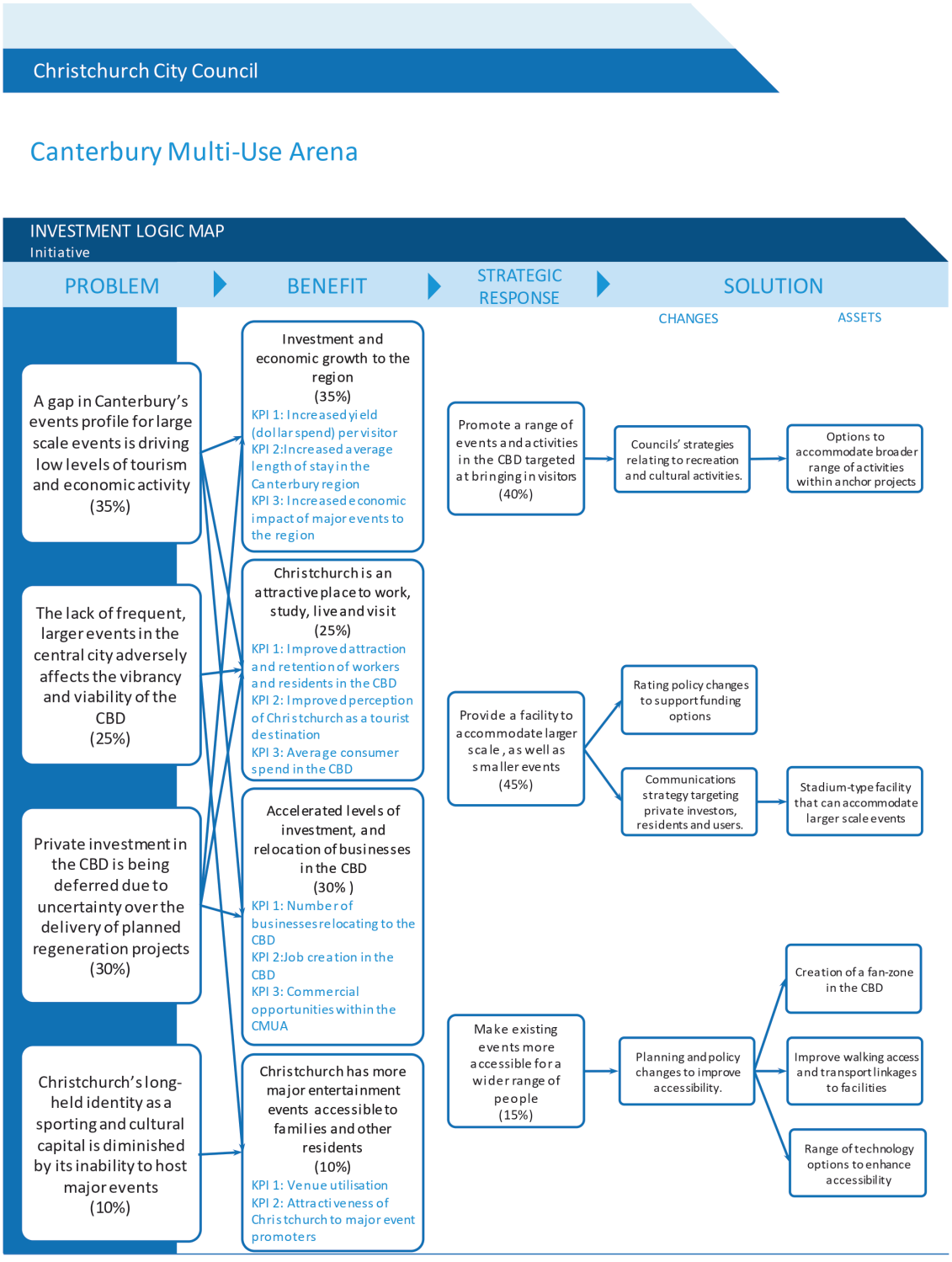
Four problem statements were identified and the causes of these problems were discussed, confirmed and subsequently endorsed by the officials group. Table 30 summarises the problem, the underlying cause and effect, and Figure 6 shows the investment logic for investment in the CMUA.

Table 30: Problem Statements

| Problem | Cause | Effect |
|---|---|---|
| 1. Problem Statement 1: A gap in Canterbury's events profile for large-scale events is driving low levels of tourism and economic activity<br>(35%) | • Current venues in Canterbury are not suitable for hosting large scale events<br>• Christchurch is less able to attract major concerts, cultural events and exhibitions relative to other centres its size<br>• Christchurch is less able to attract major sporting events, relative to centres its size | • Lost opportunity to stimulate the region's visitor economy<br>• Lost opportunity to attract unique domestic and international visitors<br>• Lost expenditure from those who leave Canterbury and travel to attend events elsewhere<br>• Inability to host large events makes Christchurch less vibrant for residents, affecting quality of life and consequently the ability of employers to attract new talent to the city at a time when competition for talent is intensifying<br>• Christchurch's leisure offering as a Tier 2 city in Australasia is not competitive with other Tier 2 cities<br>• Lack of events throughout the year amplifies issues relating to visitor seasonality |
| 2. Problem Statement 2: The lack of frequent, larger events in the CBD adversely affects the vibrancy and viability of the CBD (25%) | • Christchurch does not provide a "full product offering" for those who visit, live and work in the region<br>• Greater Christchurch is not perceived as the event and cultural experience expected of a city of its scale and relative importance | • Christchurch does not generate the same level of economic benefits from sporting and cultural events as other regions<br>• Greater Christchurch will fail to share in economic revitalisation without strong investment in core civic assets at its core<br>• Without investment in regeneration projects in the CBD, the population density needed for a vibrant and attractive central city will not be achieved<br>• Insufficient activity within the city's CBD has flow-on effects for the entire city's economy and wellbeing |

| Problem | Cause | Effect |
|---|---|---|
| 3. Problem Statement 3: Private investment in the CBD is being deferred due to uncertainty over the delivery of planned regeneration projects<br>(30%) | • Uncertainty of investment in regeneration projects is delaying private investment in the CBD | • Lost opportunity to revitalise the eastern part of the CBD<br>• Delays create uncertainty for first-mover investors, and reduces confidence for future investment<br>• Delayed investment has an indirect effect on the functioning of the CBD, undermining the multi-nodal development approach and agglomeration benefits envisioned in the CCRP<br>• Businesses and residents are taking a "wait and see" approach to investment in the area, resulting in insufficient demand for developers to proceed with confidence |
| 4. Problem Statement 4: Christchurch's long-held identity as a sporting and cultural capital is diminished by its inability to host major events<br>(10%) | • Christchurch's identity as a sporting and cultural capital of New Zealand is declining | • Christchurch is less well known and promoted externally in a positive way. The city becomes less relevant nationally and internationally |

Figure 6: Investment Logic Map



## Problem 1: A gap in Canterbury's events profile for large-scale events is driving low levels of tourism and economic activity (35%)

### Current venues in Canterbury are not suitable for hosting major sporting and cultural events

Currently, Christchurch has four major venues that host concerts, exhibitions, and major sporting events:

- Christchurch Stadium
- Horncastle Arena
- Hagley Park
- Hagley Oval

The staged opening of the Town Hall has added a fifth venue for medium sized cultural events, and the planned opening of the Convention Centre, Te Pae, in 2020 will provide another venue for exhibitions and conferences.

A brief description of the types of events held at these venues is provided in Table 31.

Table 31: Current Venues in Christchurch

| Venue | Capacity (Concerts) | Capacity (Sports) | Description |
|---|---|---|---|
| Christchurch Stadium | 30,000 | 18,000 | Christchurch Stadium is currently used for 'football codes' including Rugby Union, Rugby League and Football. The venue is also used for large concerts and other events such as Nitro Circus, although these are infrequent |
| Horncastle Arena | 8,888 | 7,200 | Indoor arena used for smaller scale concerts, basketball, netball and some community and school events |
| Hagley Park | Varies by event set-up | n/a | Large city park used for festival-type events such as the South Island Food and Wine Festival, Laneways, Urban Polo, Great Kiwi Beer Fest, Holi Festival, Coca Cola Christmas in the Park and the Noodle Market. The venue is also used for concerts, which have included UB40, Fat Freddy's Drop, Sparks in the Park and Toto |
| Hagley Oval | n/a | 8,000 | Cricket ground located within Hagley Park, used for international and domestic cricket. Hosts the majority of home games for the Canterbury Cricket Association and regular international test cricket |
| Town Hall (Largest Single Room) | 2,250 | n/a | The Town Hall is used for a variety of lectures, smaller concerts, and small conference-style events |
| Te Pae | n/a (in theory c. 2,000) | n/a | Te Pae will not directly compete with the CMUA for events |

For a city of Christchurch's size and prominence, there is a noticeable gap in the city's event facility hierarchy, particularly when considering the temporary nature of the Christchurch Stadium. Table 32 below details the venues capable of hosting large-scale events in cities of comparable size to Christchurch across New Zealand and Australia.

Table 32: Venues in Mid-Sized Australasian cities

| City | Urban area Population | Major Stadium | Maximum Seated Capacity |
|---|---|---|---|
| **Christchurch** | 400,000 | Christchurch Stadium | 18,000 |
| | | Lancaster Park (until 2011) | 39,000 |
| **Wellington** | 420,000 | Westpac Stadium | 35,000 |
| **Hamilton** | 200,000 | Waikato Stadium | 25,800 |
| **Dunedin** | 122,000 | Forsyth Barr Stadium | 30,800 |
| **Canberra, ACT, Australia** | 450,000 | Canberra Stadium | 25,000 |

| | | | |
|---|---|---|---|
| **Newcastle, NSW, Australia** | 320,000 | Newcastle International Sports Centre | 23,000 |
| **Gold Coast, QLD, Australia** | 560,000 | Cbus Super Stadium | 27,400 |
| **Wollongong, NSW, Australia** | 300,000 | Wollongong Showground | 23,000 |

Engagement with promoters, former executives of Westpac Stadium in Wellington, and international stadium experts retained for this case have all noted the competitive disadvantage at which Christchurch currently finds itself.

For major international events, New Zealand is an optional add-on, while for large domestic events, the South Island presents a limited market. In this environment, cities in the South Island are 'event takers' where the best arena wins. To compete with Dunedin on an ongoing basis, Christchurch must have at least the same quality facilities as Forsyth Barr. For an arena in Christchurch to be competitive, it must be an arena of scale, have a roof to mitigate weather risk, and provide a superior level of comfort to patrons.

Structured engagement with players, promoters, and attendees finds that Christchurch is not currently able to compete with Dunedin for major events. On the occasions where Christchurch Stadium has hosted large events, engagement with Vbase and ChristchurchNZ suggests that spectator feedback on the venue is frequently negative.

## Christchurch is less able to attract major concerts, cultural events and exhibitions relative other centres its size

There is an observable gap between the potential Christchurch has to attract events with the right facilities, and the level of event activity that has been occurring. Large-scale non-sporting events (15,000+ attendees) only infrequently come to Christchurch due to the lack of an appropriate venue in Christchurch. This is demonstrated by the fact that since 2015, Christchurch has only managed to attract three large-scale concerts (Phil Collins, Bruce Springsteen and the Foo Fighters).

Christchurch is missing opportunities to host other major cultural events and exhibitions. Without upgrading the existing event infrastructure necessary to support the demand for content in Christchurch, these opportunities will continue to be lost. Table 33 highlights the potential opportunity that exists to increase the number of events and average attendance at major concerts, cultural events and exhibitions.

Table 33: Concerts and events[8]

| Event | Current State | | New covered stadium | |
|---|---|---|---|---|
| | Potential number of events per year (average) | Average attendance (assuming no capacity constraints) | Potential number of events per year (average) | Average attendance (assuming no capacity constraints) |
| Large Concerts | **0.3*** | **26,000** | **3** | **28,000** |
| Small Concerts | 3 | 6,000 | 4 | 10,000 |
| Other events content (non-sporting) | **0.3** | **10,000** | **1** | **10,000** |
| Mega Events | 0.2** | 30,000 | **0.2** | **30,000** |
| Total | **3.8** | **-** | **7.2** | **-** |

*0.3 events per year refers to roughly one event every three years

**0.2 events per year represents roughly one event every six years (actual value is 0.17)

[8] The number of opportunities and estimated average attendance were developed based on the experience of Vbase and international events experts. They reflect the events market in New Zealand and the appetite of local event promoters to bring events to the Canterbury region.

The increase in events may appear modest (increasing from roughly 4 to 7 on average each year), but this represents a change in frequency for many events from being once every few years to multiple times in a year. It also represents a step-change in the scale of events Christchurch can comfortably host. Further, all events that were once held at Christchurch Stadium will now take place in the CBD, further supporting redevelopment of the core.

Christchurch should be New Zealand's natural events home on the South Island, but instead is being overlooked as an events venue due to the scale and quality of its facilities, and the presence of a covered stadium in Dunedin – Forsyth Barr Stadium. Forsyth Barr opened in August 2011, less than a year after the September 2010 and February 2011 earthquakes in Christchurch. It is a covered stadium with a maximum capacity of 30,800, and is predominantly used for concerts, rugby and community events.

Since Forsyth Barr and Christchurch Stadium opened in 2011 and 2012 respectively, there has been a significant difference in the number of large-scale concerts held at each venue. This difference highlights Christchurch's inability to compete with Dunedin for major events. For example, Christchurch Stadium has held only three concerts with 20,000+ in attendance, while Forsyth Barr has hosted 13 concerts with 20,000+ in attendance.

Major events that come to Christchurch Stadium are adversely affected by the risk of inclement weather. Patrons and performers take this risk into account when attending events, and major concerts that come to Christchurch are acutely conscious of the weather risk. Other major concert venues such as Forsyth Barr and Spark Arena in Auckland do not face such disadvantages, meaning they are far more attractive to promoters, as evidenced in the case study below.

**Case Study: 2018 Ed Sheeran Concerts**

**Background**

In 2018 Ed Sheeran played a series of three concerts over Easter Weekend at Forsyth Barr Stadium in Dunedin. The total attendance over the three concerts was 108,000, which is almost the population of Dunedin. Almost a third of the attendees came from Canterbury.

**Why Dunedin?**

Ed Sheeran's promoter, Michael Gudinski, said that the risk of poor weather in the South and the roof at Forsyth Barr Stadium made Dunedin an attractive proposition. He is quoted as saying:

> *"Why Dunedin? It's got a fantastic venue, it's covered and people in New Zealand are prepared to travel. The venue is attractive in Dunedin because of the weather."*

Gudinski also said that the roof made Dunedin a "safer bet" than Christchurch and that the decision to not play in New Zealand's second and third largest cities was "pretty obvious".

*Economic Impact*

The concerts had a strong positive impact on the Dunedin and Otago economy:

- Injection to the Dunedin economy via visitor spending was estimated to be $37.9 million
- Visitors stayed an average of 1.8 nights
- Average spend by those who responded to the survey was $542 a person
- $24m was added to local GDP
- $10.9m household income was earned

The consideration of a larger, covered arena in Christchurch is merited, as Christchurch needs to be able to provide a competitive alternative to events at Forsyth Barr. Major concerts and events are booked as part of an Australasian tour, and New Zealand is frequently seen as 'optional'. Cities that receive events have little negotiating power in New Zealand, and must provide a superior experience to attract events.

## Christchurch is less able to attract major sporting events, relative to centres its size

Similar factors affect Christchurch's ability to attract and cater for major sporting events. Christchurch is increasingly falling behind other cities and venues in its ability to attract All Blacks tests. Since Forsyth Barr and

Christchurch Stadium opened in 2011 and 2012 respectively, there has been a discrepancy in the number of All Blacks Tests held at each venue:

- Since the opening in 2012, Forsyth Barr has been the preferred venue for international rugby tests in the South Island, hosting six All Blacks tests to four in Christchurch.
- Forsyth Barr is seen as the premiere venue to host blockbuster fixtures against Australia, England and the British and Irish Lions.
- Christchurch Stadium has not hosted an All Blacks test since 2016 and is not scheduled to do so in 2019.
- Since 2016, the NZRU have hosted All Blacks tests at regional venues in the North and South Islands at venues including Yarrow Stadium (Taranaki) and Trafalgar Park (Nelson) at the expense of Christchurch. Second-tier All Blacks test have been historically held at regional centres, although this may change as NZRU re-examines its operating model.

Christchurch is also not well positioned to attract major future events, such as NRL, HSBC Rugby Sevens, and Football World Cup qualifiers. This is a consequence of several factors:

- Christchurch Stadium, with a capacity of 18,000, faces strong competition from Dunedin with a covered stadium with capacity of 30,800
- Christchurch Stadium is too small and does not represent a strong commercial proposition for NZ Rugby
- The quality of the Christchurch facility relative to Dunedin is poor. The facility itself is aging, the seats are small compared with international standard facilities. There is limited premium seating and food and beverage space, and the stadium is uncovered
- The hospitality and accommodation offering surrounding the existing arena is poor and dispersed, leading to a poor pre-and-post-game experience

Failing a change in facility investment and incentives payments, Christchurch appears likely to continue to lose out on major sporting events, with Auckland, Wellington and Dunedin all being viewed as more attractive venues.

Canterbury Rugby are also facing challenges hosting Super Rugby fixtures at Christchurch Stadium which include:

- Low crowd attendance affected by the basic amenities of the temporary stadium and inclement weather
- Difficulty in selling corporate packages due to a minimal range of hospitality options at Christchurch Stadium

Player and patron quality is also a key factor, as evidenced by current All Blacks Captain Kieran Reid, who has been quoted both advocating the need for a quality fan experience and the need for a new arena:

> *"When we head out on the field, we're not just playing to win: we're playing for the fans. We want them to have the best possible experience and that means the best atmosphere and facilities.*
>
> *"Canterbury is a proud rugby region but we've been missing out. A new arena is an opportunity to give people something more – an experience that keeps them connected to the game and inspires them to get out there every weekend."*

These comments are echoed by Canterbury Rugby Football Union CEO Tony Smail:

> *"Canterbury needs the new arena. It will offer the quality experience that the people of Christchurch and Canterbury should expect. People came to the temporary stadium after the earthquakes and we are*

*thankful of their support, every year since then the people have become less enamoured with it knowing the alternatives that exist."*

*"There's absolutely no doubt we would attract more people back to rugby with a new, better facility and a multi-use arena would attract even greater numbers."*

*"CRFU is 100% supportive of the multi-use arena. We're rugby people but we all attend and support community and other events because we're Canterbury people too."*

## Lost opportunity to stimulate the region's visitor economy

As noted, Christchurch should be the natural home for major events due to the following factors:

- The presence of an international airport allows for cost effective and simpler transport and logistics, with access to a large international airport and more frequent international connections without the cost of chartered flights (or ground transport) to Dunedin
- Christchurch has a population four times larger than Dunedin with higher average income, generating greater buying power and supplying a larger pool of people to attract events
- The area around the arena site is already developing with high quality hospitality venues nearby. This is directly due to the signal sent by CCRP
- The arena site is designated in the city plan for stadium uses meaning that there are few restrictions on concert style events

This opportunity can have significant and positive effects on the economy, including:

- Higher total visitation (domestic and international)
- Higher visitor expenditure
- Greater length of stay in the Canterbury region

A well-developed events strategy can retain visitors in Canterbury longer, particularly if conventions also seek to leverage Christchurch's wider central city event offering as part of their marketing package. Engagement with the sector suggests that more tourists will come to the Canterbury region because of the enhanced event profile of the arena, the events it holds, and its increased capacity. Modelling undertaken for this Investment Case conservatively estimates that stays in Christchurch will increase by nearly 100,000 bed-nights per-annum because of the domestic and international tourism driven by the new arena.

Hosting large events is one way to encourage a strong tourism market. Tourism expenditure leads to higher incomes and consumption and increases in employment. Larger events such as concerts and entertainment activities are also likely to increase the subjective well-being of the region's residents by providing entertainment that is not currently available in Canterbury.

This increase in subjective well-being applies to both users and those who cannot afford to attend events at a future events venue. Users get obvious direct benefits, but even those residents who cannot afford to attend such events will benefit from a city that is more vibrant. Completing the CCRP's vision will support increased employment and increased urban activity that can make the city more attractive, and provide more ancillary activities to residents of all ages. Directly, a fan zone associated with an arena can provide a way for all residents, regardless of income, to actively connect with large events.

## Opportunities to attract unique domestic and international visitors

Large concerts and events attract domestic and international visitors to a city. An inability to attract additional large-scale events and concerts means Christchurch and the Canterbury Region will forego the significant tourism benefits that can be generated from hosting these events. Table 34 shows the number of unique domestic and international visitors to large-scale concerts in Christchurch, of which a significant proportion were from outside of Canterbury. The total revenue generated from each concert is also included to provide a sense of the scale of each concert.

Table 34: Christchurch concert visitors and revenue

| Event | Unique Visitors | Percentage of Unique Visitors from outside Canterbury | Revenue (real) |
|---|---|---|---|
| **Phil Collins 2019** | 6,953 | 40.7% | $4.8m |
| **Bon Jovi 2018** | 9,269 | 53.2% | $4.1m |
| **Bruce Springsteen 2017** | 10,412 | 28.6% | $5.7m |
| **Leonard Cohen 2013** | 2,380 | 24.6% | $1.0m |
| **One Direction 2013** | 3,311 | 39.9% | $1.0m |

An example of how a region can benefit from attracting visitors to large-scale events is Westpac Stadium in Wellington. Wellington's stadium attracts a large proportion of its revenue and attendance from out-of-town visitation, with a significant number coming from Canterbury, as illustrated in Table 35.

Table 35: Westpac Stadium Events

| Event | Percentage of visitors form out of town | Percentage of visitors from the Canterbury region | Total Crowd |
|---|---|---|---|
| **Eminem Concert, 2019** | 56% | 11% | 46,000 |
| **Guns & Roses Concert, 2017** | 40% | 13% | 32,000 |
| **Edinburgh Tattoo, 2017** | 57% | 22% | 20,000 on average<br>(80,000 over four nights) |

This has several implications for Christchurch. It is assumed that many Cantabrians will continue to travel to other regions of New Zealand (such as Wellington) and attend events that do not come to Christchurch. This travel will result in reduced economic activity in Canterbury, as those who travel to Wellington spend some of their limited discretionary income in Wellington instead of Christchurch.

## Lack of experience opportunities and vibrancy affects quality of life – affects ability to retain and attract talent

The inability to host large events makes Christchurch less vibrant for residents, affecting quality of life, and consequently the ability of employers to attract new talent to the city at a time when competition for talent is intensifying. An inability to retain and attract people with the capabilities and skills the city requires impacts its long-term economic performance and competitiveness. It also limits the extent to which Christchurch can contribute effectively to the national economy.

## Visitation to Christchurch is highly seasonal

Large differences between peak (summer) visitation and visitor numbers to the city in the colder months leads to poor asset utilisation for accommodation, visitor attraction and hospitality providers, particularly in the CBD. This makes investment in additional accommodation or visitor attraction hard to justify. It also leads to workforce instability in the hospitality and accommodation industries. Hosting large events during quieter

months can attract greater visitor numbers and help address this issue, improving investor confidence for other private sector visitor facilities.

## Problem 2: Problem Statement 2: The lack of frequent, larger events in the CBD adversely affects the vibrancy and viability of the CBD (25%)

### Christchurch does not provide a "full product offering" for those who visit, live and work in the region

Christchurch has made significant progress when assessed against the levels of activity in the period immediately after the Canterbury earthquakes. Overall functionality has been restored to the city, the business community is returning to the CBD and a new spatial framework within the four avenues of the CBD is starting to emerge.

However, the objectives of the CCRP were not just intended to restore what was lost. It also sought to take the opportunity to create a new city form that would drive social and economic growth for the region and country. Despite the progress that has been made, the CBD is still well short of achieving those aspirations across most metrics assessed, and the city's share of the national economy has not returned to pre-earthquake levels. As a result, the potential upside from the combined investment across the public, private and community sectors has not yet been fully realised.

The CBD has recovered at a slower rate than the rest of the city, both in terms of population and employment as illustrated in Figure 7 and Figure 8 below.

It is important that people live and work in the CBD for multiple reasons:

- Productivity increases as businesses take advantage of a compact CBD and the reduced travel times and knowledge transfer this generates
- The CBD consequently becomes a more vibrant place with more foot traffic, retail and hospitality options

Figure 7: Population in the CBD and Christchurch City

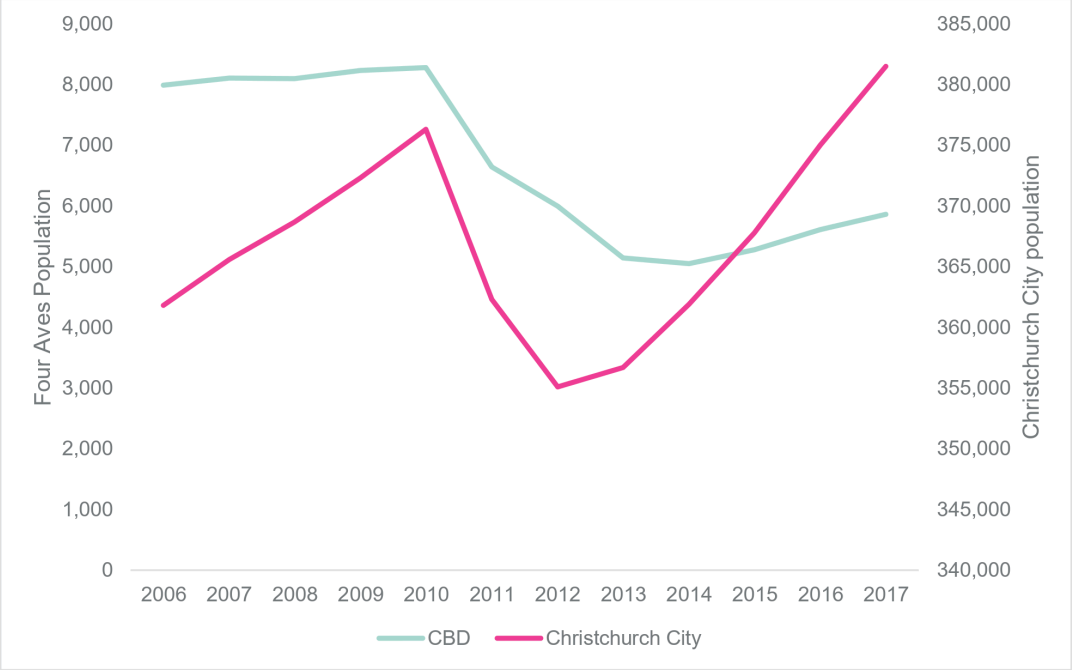



Figure 8: Employment in the CBD and Christchurch City


To meet the needs and expectations of residents and tourists in New Zealand's second largest city and a large and growing South Island capital, Christchurch must provide a 'full product offering' to be competitive with other Australasian cities for people and talent. This includes an expectation that Christchurch can hold large and varied events across multiple venues.

Christchurch will not realise its economic aspirations, as set out in the city's Prosperity Framework, unless it provides the leisure amenity competitive with other Tier 2 Australasian cities. This includes a multi-use arena which is appropriate to its size and its role as the second largest city in New Zealand.

Extensive stakeholder consultation with over 50 groups and organisations was undertaken as part of the Draft Multi-Use Arena Pre-Feasibility Study developed by the Christchurch Stadium Trust. The strong consensus from those consulted was that the lack of redevelopment in the CBD is impacting on Christchurch's attractiveness as a place to visit, live and work. Stakeholders identified the key issues that must be resolved if Christchurch is to strengthen its appeal as a vibrant city:

- The liveability of Christchurch and its reputation as a 21st century city with "things to do"
- Ability to compete with other cities in attracting major events and concerts
- Keeping expenditure in the city and within the Canterbury region
- The return of private sector investment confidence to the city
- The attraction and retention of young people to the city who are currently choosing to work and study elsewhere
- Return of city and regional pride

Large events contribute to a bustling and exciting CBD on event days as people come from overseas, out-of-town and from the suburbs to attend events. This is an important part of the event experience, as people go to bars and restaurants both before and after the concert/match. It also supports investment, with locals spending an average of $100 per-night before and after an event, and overnight tourists spending an average of $200[9]. This further supports hospitality, retail, and accommodation investment leading to a city with more choice for locals.

The opportunity and the risk is outlined in the *2018 Central City Momentum Advice* report produced by Regenerate Christchurch demonstrates the need to refocus efforts on investment in the CBD. Table 36 below – adapted from that report – highlights rising unemployment, slowing retail and business growth, weak consumer confidence, and declining civic pride.

Table 36: Current State Assessment Indicators

| Indicator | Trend / Current Status |
|---|---|
| Unemployment and jobseeker support applications | Rising |
| Central City employment | Below minimum requirements for central city viability |
| Trends in CBD rents and vacancy rates | Stable to deteriorating |
| CBD retail spend | Pace of growth slowing |
| Business growth | Pace of growth slowing |
| Asset and land valuations | Stable to deteriorating |
| Investor confidence measures | Weak |
| Civic pride measures | Settling below other cities |
| Residential participation | Below minimum requirements for CBD viability |

By creating a demonstrable point of change and investment, the Arena can begin to turn the tide of some of these indicators. In particular, it can provide another point of activity in the south-east node alongside the Ara Institute of Canterbury, the 'Merchants Quarter' south of St Asaph Street, and the area bounded by St. Asaph, Armagh, Lichfield, and Tuam Streets (the SALT district) which is increasingly emerging as a more prominent night spot.

[9] Estimates provided by Christchurch City Council's major events team, and verified through external peer review

## Christchurch does not capture its 'share' of economic benefit from cultural and sporting events

Christchurch has an opportunity to expand its share of the event market. While Christchurch has been able to host some high-profile sporting and cultural events, the city has not been able to capture the same share of events as similar cities. Even when Christchurch does host events, the size, experience, and location of the arena means that Christchurch and Canterbury do not benefit as strongly as would be possible with an enhanced facility.

Compared to Wellington, Christchurch holds a fraction of the number of high-profile events. Since 2012 Wellington has held 30 large events to Christchurch's 12, including:

- Eight All Blacks tests compared with Christchurch's six, with Christchurch tests being less well attended, in part because Christchurch struggles to attract Tier-1 tests. This is due to differences in the capacity and quality of the respective arenas, with average attendance at a test in Wellington 35,300 compared to only 19,700 in Christchurch.
- Four major concerts to Christchurch's three, in spite of Westpac Stadium widely being considered a poor performance venue for major concerts.

Even when Christchurch holds events, it generates less economic activity than cities that have hosted events of similar scale. This is evidenced in the following case study that measured the economic impact of the 2017 British and Irish Lions tour of New Zealand.

**Case Study: 2017 New Zealand Lions Series[10]**

**Background**

The British and Irish Lions (the Lions) is a rugby team consisting of players from England, Scotland, Ireland and Wales. Every four years, the Lions tour the Southern Hemisphere visiting either New Zealand, South Africa or Australia.

The New Zealand Lions Series 2017 consisted of 10 matches taking place from 3 June 2017 to 8 July 2017. In total, 342,000 seats were filled to watch matches across seven venues from Whangarei to Dunedin, with over 53,000 of the seats filled by international visitors. The 10 matches consisted of:

- 3 tests against the All Blacks
- 5 matches against Super Rugby franchises (one against each franchise)
- 1 match against the Māori All Blacks
- 1 match against the New Zealand Provincial Barbarians side

**Christchurch's role**

Christchurch hosted only a single game, the Crusaders against the Lions on the 10th of June at Christchurch Stadium. The three All Blacks Tests were played in Auckland (two) and Wellington (one). As one of New Zealand's three major cities, it is likely that Christchurch would have held one of the two Auckland tests if it had had an adequate arena.

**Economic impact**

The inability of Christchurch to host an All Blacks test as well as the moderate attendance at the Lions v Crusaders game means that Christchurch received comparatively lower economic benefits:

- Of the host cities, Christchurch received the second lowest economic benefit both in terms of GDP and FTE (employment), behind only Whangarei, a city less than a sixth of the size of Christchurch
- Wellington, the city of most comparable size to Christchurch, received benefits of more than three and four times in terms of GDP and FTE impacts respectively

| | Whangarei | Auckland | Christchurch | Rotorua | Hamilton | Wellington |
|---|---|---|---|---|---|---|
| **Matches** | 1 | 3 | 1 | 1 | 1 | 2 |
| **Official Attendance** | 19,700 | 138,600 | 20,600 | 35,500 | 24,400 | 78,000 |
| **Total guest nights** | 16,100 | 232,200 | 37,600 | 60,200 | 30,900 | 109,000 |

[10] PWC. *DHL New Zealand Lions Series 2017: Economic impact and benefits analysis of the DHL New Zealand Lions Series 2017*. 2018

| Case Study: 2017 New Zealand Lions Series[10] | | | | | | |
|---|---|---|---|---|---|---|
| **GDP (total impact)** | $6.2m | $67.9m | $8.3m | $11.1m | $10.7m | $30.7m |
| **FTE (total impact)** | 96 | 808 | 100 | 156 | 156 | 407 |

This may be attributable to two main factors:

- The location of Christchurch Stadium outside of the CBD, which means that there are fewer opportunities for before and after event expenditure. International experiences in London, Belfast and elsewhere have shown between attendance and expenditure increases by as much as a factor of three when the venues are located near or in the central city.[11]
- The lower number of visitor days associated with out-of-town residents who attend events but do not then extend their stay in Canterbury.

## Without investment in regeneration projects in the CBD, Christchurch will not achieve forecast population growth

The Christchurch City Council population projections released in December 2016 suggest by 2028 there are expected to be some 120,000 more people in Christchurch than there were in 2013. By 2028, the combined population of the three territorial authorities making up the Urban Development Strategy (UDS) area is anticipated to be 575,000 people, with Christchurch City making up 74% of this.[12]

The Canterbury region is also expected to grow by approximately 144,000 people over a 25-year period. The population projections for the Canterbury population (in five-year intervals) are presented in Table 37.

Table 37: Canterbury Region population projections

| Arena | 2018 | 2023 | 2028 | 2033 | 2038 | 2043 |
|---|---|---|---|---|---|---|
| **Canterbury population projections** | 623,200 | 664,200 | 694,300 | 721,700 | 745,800 | 767,300 |

Source: StatsNZ

Population targets for the CBD were also included in the CCRP. The residential chapter of the CCRP proposed a population target between 12,000 and 24,000 people living in the CBD to support a prosperous commercial and entertainment hub. Currently, the CBD population is around 6,000 residents, with growth of only 800 people in the period 2014-2017. Residential population is largely absent from the four avenues and population distribution is confined to the fringes at relatively low density.

The lack of population growth has hindered the Christchurch CBD becoming a vibrant place to live and work. This growth projection is unlikely to be achieved if Christchurch cannot offer its citizens the same opportunities as other regional and metropolitan centres.

Christchurch has a unique opportunity to be one of the best small cities in the world, and a more significant contributor to the New Zealand economy, through the regeneration effort. The CCRP sets out the vision for a new, vibrant, accessible, distinctive and connected city centre with a compact core and built identity. The plan also lays out precincts and initial anchor projects to catalyse investment, growth and social energy, bringing people back into the CBD. These projects are designed to reflect the community's wishes, replace facilities that have been destroyed, stimulate other development, attract people and regenerate and improve the urban form of the city.

[11] 2015. The Regeneration Game, Stadium Led Regeneration. Greater London Authority
[12] Christchurch City Council, Future Population, 2018.

Hosting large events, realising economic benefits and making the CBD a vibrant place are all key objectives of the CCRP blueprint, which states:

> *"The vision is for central Christchurch to become the thriving heart of an international city."*

The blueprint also adds:

> *"A well-formed and vibrant city centre produces economic and social benefits by bringing people together for business, cultural or social activities. The result is greater productivity, connectedness, development of human capital, sharing of ideas and a shared identity."*

Table 38 summarises how these goals from the blueprint align to the well-being indicators from the Living Standards Framework.

To realise the goal of the CBD being a "thriving heart of an international city" in which the well-being of its residents is a priority, it is crucial that Christchurch is able to host large events in the CBD.

Table 38: How large events contribute to well-being

| CCRP goal | LSF well-being indicator(s) | How large events contribute to goals/indicators |
|---|---|---|
| **Greater productivity** | • Income and consumption<br>• Jobs and earnings | • Greater productivity results in higher employment and incomes<br>• Greater spending in the CBD before, during and after events |
| **Connectedness** | • Civic engagement and governance | • Creates an atmosphere in the CBD during events that contributes to civic pride in the community worth $100m+ over the next 30 years |
| **Shared identity** | • Cultural identity<br>• Social connections | • Provides a civic forum for cultural events, and celebration of the city and region<br>• Fosters a sense of identity with a particular team that represents the area<br>• Provides a social occasion for residents |

## Problem 3: Private investment in the CBD is being deferred or undermined due to uncertainty over the delivery of planned regeneration projects (30%)

### Uncertainty of investment in regeneration projects is delaying private investment

A core objective of the CCRP is to bring people and businesses back to the CBD. Following the earthquakes that devastated the CBD in 2010 and 2011, redevelopment has been slow, particularly in the east side of the CBD. Figure 9 and Figure 10 show the differential between investment in the west of the CBD, underpinned by private office and retail investment and supported by public space improvements and committed public projects (like the Convention Centre), and the east which still has significant undeveloped space.

Figure 9: Aerial view of east side of the CBD

Source: Populous, Canterbury Multi-Use Arena – Spatial Analysis Report, 20 December 2017

Figure 10: Christchurch CBD development


Source: Google Earth, Accessed February 2019.

Arenas fulfil multiple roles in the urban fabric. They can act as anchors for regeneration, attractors of new activity, and as the cathedrals of the modern age – serving as a gathering place of the community.[13] In doing this they provide vitality, community cohesion, and generate momentum for recovery.

The arena will provide an anchor and catalyst for CBD recovery and revitalisation, and provide a focal point and an attraction for local and international visitors. Critical to the success of this approach is the integration of the arena into the growth strategy for the city, and the location of the arena in the central city.

[13] Trumpbour, R. (2008). *The New Cathedrals: Politics and media in the history of Stadium Construction.* Syracuse, NY: Syracuse University Press.

> *"The key to sports venues being a catalyst for economic development is locating them in an urban setting, and integrating them into the existing city infrastructure"*[14]

In line with this expectation, there has been private sector investment in the area surrounding the arena's future site. Businesses, particularly those in the hospitality industry, have committed to sites in the area on the expectation that the new arena will be built there. These businesses include:

- Dux Central Bar (relocated from Lincoln Road in 2016)
- Little High Eatery
- The increasing hospitality in the laneways surrounding the SALT district

These businesses relocated because of the commitment made by the Council and the Crown to activate the area through investment in a major event facility. Recently, however, private investment in the CBD has stalled predominantly due to uncertainty around the delivery of regeneration projects – uncertainty caused both by project delays and a lack of visible progress toward achieving investment goals. Other factors, such as a lack of available credit, have also slowed investment in the CBD. Developers and property reports (detailed below) have indicated that this uncertainty is a key cause. To recapture the momentum seen on the west of the city, and to replicate the catalytic effect that the announcement of Te Pae had on the centre of the Christchurch CBD, a commitment to the delivery of the CMUA is needed.

Through stakeholder engagement undertaken for this project, repeated messages were received from developers that the delays to the arena are affecting investment decisions. One developer stated that $50-100 million in development is being delayed until there is more certainty around the timing of the CMUA. Separately, Patrick Fontein of Studio D4 notes:

> *"Commercially, not having the Arena here is bad for business. Getting this thing (the Arena) built quickly is the best thing you could do for our businesses. The tenant choices we made for the ground floor active spaces under our car park building were substantially driven by the stadium, which we told would be there before now."*

Two reports commissioned by property experts Colliers and the Property Council New Zealand, further highlight the importance of anchor projects to the CBD and the level of uncertainty among developers as highlighted in Table 39 below.

Table 39: Summary of Findings: Anchor Project Delays

| Report | Key findings |
|---|---|
| **Property Council New Zealand Central City Residential Development Research (2018)** | The "delays to anchor projects – doubt and uncertainty" were classified 'red', meaning it represented a major barrier to residential development in central Christchurch:<br>• Respondent feedback in interviews conducted by PCNZ centred on the degree of certainty these projects provide in terms of giving developers confidence to make decisions<br>• The anchor projects themselves are seen as demand generators (in particular the CMUA, Metro Sports Facility and Convention Centre) that reduce the risk of development. It is important for residential investors to have certainty that these demand generators will be completed on time and to plan as they increase the number of renters<br>• The anchor projects are also important in bringing international events to Christchurch. One round of respondent interviews was conducted in the lead up to the Ed Sheeran concerts in Dunedin, a point of dissatisfaction for many respondents. The economic impact for Dunedin businesses from this event was obvious, but it is also a factor in the residential market in regard to services such as AirBnB |
| **2017 Colliers Report on Retail in New Zealand** | The report notes several drivers delaying investment in the CBD, one of which is that it is crucial to provide investors' confidence that investment in the CBD is worthwhile, it is crucial that anchor projects (of which the CMUA is the final one and has the potential to significantly increase tourism and other activity in the south-east part of the CBD) are delivered within reasonable timeframes. |

[14] Chema, T. (1996). When professional sports justify the subsidy, a reply to Robert A. Baade. *Urban Affairs, 25(5).*

International evidence supports the use of arenas for urban regeneration. As noted in the Economic Case, land values – particularly but not exclusively commercial land values – respond positively to arena investment. This means that the market is pricing in the expectation of future activity, profitability and redevelopment in an area. This is particularly true when arena development is supported by strong investment elsewhere:

> *"The most important way to spur surrounding development is by generating coming and going, drawing people through the urban environment into the facility and later discharging them back into the environment, as well as creating opportunities in both occasions for the visitors to patronize other buildings."*[15]

This process is similar to what occurred in the Docklands area of Melbourne. The Docklands redevelopment in Melbourne highlights how the development of a multi-use arena can act as a catalyst for private investment. While Docklands is not in the central city, this case study provides an example of how urban renewal and regeneration of an under-utilised site can generate significant economic benefits and improve social cohesion.

**Case Study: Docklands redevelopment**[16]

**Background**

Docklands was once Melbourne's largest and busiest port, but by the late 1980s, it had become a derelict industrial wasteland. With inner-city living becoming more popular and Melbourne's population growing, the Victorian Government saw an opportunity to extend the western edge of Melbourne's central business district and reconnect the city to its historical waterfront.

Docklands' construction started in 1997. It is now two-thirds complete and has attracted more than $12 billion in private investment to date.

**The role of Dockland stadium in stimulating private sector investment**

The Docklands Community and Place Plan was the result of an extensive community engagement program designed to:

- Identify opportunities to enhance existing and proposed developments in Docklands.
- Explore and provide input on how to create a vibrant sense of place and an engaged community over the second and final decade.

The Stadium precinct was one of the first areas to see development in Docklands, with the opening of the Docklands Stadium (now Marvel Stadium) in 2000. The multi-use arena hosts sporting events and large-scale concerts and events all year round, generating significant contribution to the Victorian economy. The development of the stadium was a catalyst project to stimulate private sector in the precinct, with Docklands attracting millions of visitors each year and offering a mix of uses including:

- Residential
- Commercial
- Retail
- Dining
- Leisure

**Importance of the Dockland precinct**

- **Private investment**: $17.5 billion (upon completion)
- **Population**: 30,000 residents and 70,000 jobs (upon completion)
- **Business**: Home to the national headquarters of some of Australia's largest companies including ANZ, NAB, Medibank Private and Myer
- **Art**: Includes more than 45 pieces of public art. Development Victoria has also launched the Harbourside Docklands Art Trail app featuring 26 pieces of public art

[15] Barghchi, M. Omar, D., Aman, M. (2002) *Sports Facilities in Urban Areas: Trends and Development Considerations.* Soc Sci & Hum 18(2).
[16] Australia's largest Urban renewal project under construction, Development Victoria, 2018

## Problem 4: Christchurch's long-held identity as a sporting and cultural capital is diminished by its inability to host major events (10%)

### Lost opportunity to re-establish Christchurch's identity as a sporting and cultural capital

The Christchurch Visitor Strategy recognises that the earthquakes robbed Christchurch of three aspects of its external identity: a garden city, its English heritage and a sporting capital. For a region with such a proud sports record and culture, it is important to host major sporting events so that the sports-loving population continue to identify with the region and its reputation as a sporting hub. The current shortfall in major sports events undermines Canterbury's reputation and identity as a sporting capital and reduces the pride Cantabrians feel as a sporting people.

An important part of a city's cultural identity is being able to celebrate other cultures by hosting artists, exhibitions and concerts. Without the ability to host large cultural events such as regular concerts, Christchurch risks being unable to capitalise on the opportunity to become a cultural capital of New Zealand.

### Christchurch's identity as a sporting and cultural capital of New Zealand is declining

Christchurch was founded just as sports in Britain were becoming better organised, with formal rules and teams of set sizes. Sport was seen as an essential aspect of life and sporting events were staged in Christchurch from the earliest years of settlement.

Christchurch's strong sporting traditions are reflected in the establishment of a number of national administrative bodies for different sports in the city. They include amateur athletics, cricket, boxing and hockey. Christchurch has also hosted international teams in various sports from the late 19th Century on, with the most significant international sporting event held in the city being the 1974 Commonwealth Games.

Many major and national sporting organisations and high-performance centres are, or were, based in Canterbury, including:

- New Zealand Cricket High Performance Centre (Lincoln)
- Apollo Projects High Performance Centre (Regional HPC)
- Ngā Puna Wai Sports Hub, an outdoor sports facility with community playing fields, recreation opportunities and international standard sports facilities. Ngā Puna Wai features:
    - Athletics tracks and fields
    - International standard Hockey pitches
    - Community facilities such as a sports hub, tennis courts and rugby league fields
- Metro Sports Facility (currently under construction)
- QEII Arena, an athletics-swimming complex that was the centrepiece of the 1974 Commonwealth Games. The complex consisted of:
    - An athletics stadium and track with a capacity of 25,000
    - An Olympic sized swimming pool
    - Multiple Basketball and Netball courts
    - Other facilities designed for First-Class Cricket and golf as well as amateur sports

- A National Cycling Centre of Excellence, including an international standard velodrome, on the QEII site in Christchurch was proposed in 2011. The Council was to decide whether it would support the proposal on 23 February 2011, one day after the second major earthquake. The Centre is now in Cambridge in the Waikato.
- Clearwater Golf Resort, home to the New Zealand Women's Open

The Canterbury region has also had a disproportionately high level of success in both the major winter and summer sporting codes in New Zealand, Rugby and Cricket.

- The Men's Canterbury Rugby team have won 14 titles in the National Provincial Championship (now called the Mitre 10 Cup) in the 43 years it has been running. This is the second most overall, behind only Auckland (17 titles), an area with a much larger population base.
- The Crusaders, the Super Rugby team centred in Christchurch that represents the Canterbury, Tasman and West Coast unions has won ten titles in the 24 years the competition has been played. This record represents by far the most titles won by any side, with the next most successful teams having won three titles each
- The Canterbury Men's Cricket team have also won nineteen Plunket Shield titles, only four fewer than the leader, Auckland, a region with a much larger population base

# 9. Investment Objectives

Investment objectives (IO) are clearly defined aims that link the problem statements to the benefits the investment is intended to generate. The objectives were developed in a workshop facilitated by EY on 19 February 2019. The workshop was attended by representatives from Christchurch City Council, key cultural and sporting organisations and the Project Team's architects, engineers, project managers and multi-use arena consultants.

The investment objectives themselves are multifaceted, and the short descriptions attached to them do not completely explain the linkages. Table 40 more thoroughly describes what is intended by each investment objective based on SMART criteria where possible. It also captures the understanding of the groups scoring each option against these objectives.

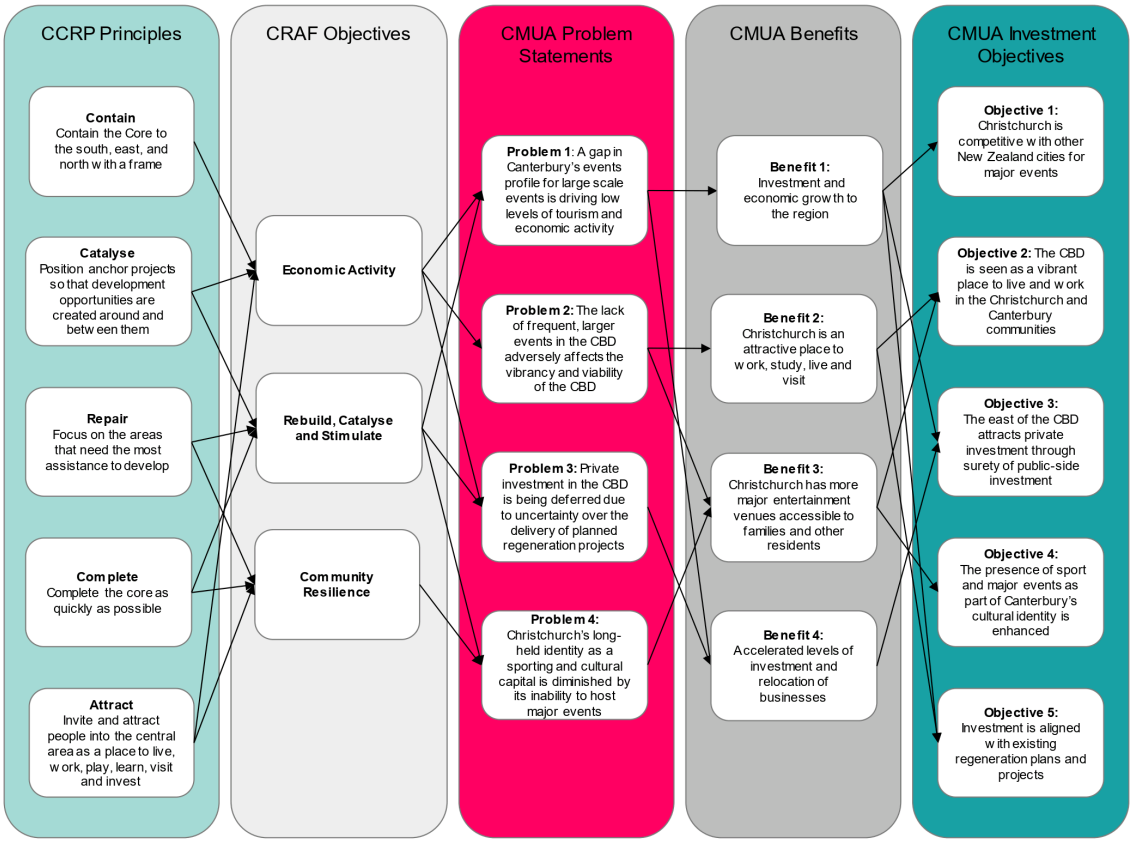
Table 40: Investment objectives

| Investment objective | | Description | Key Performance Indicators (KPI) |
|---|---|---|---|
| **Objective 1** | Christchurch is competitive with other New Zealand cities for major events | • Christchurch and Canterbury can attract major events<br>• Tourism expenditure and activity increases directly as a result of those events, leading to greater investment certainty and more activity in the CBD | • Arena-style event frequency in Christchurch increases by 30% in the first 3 years of operations<br>• Tourism expenditure increases by $85m in the first 3 years of operations as estimated by ChristchurchNZ |
| **Objective 2** | The CBD is seen as a vibrant place to live and work in the Christchurch and Canterbury communities | • The arena fills a gap in the Christchurch resident and visitor experience<br>• As an entertainment venue it builds civic pride, and makes Christchurch a more attractive place to live<br>• Combined with the other regeneration projects, the CMUA supports resident attraction and retention | • The proportion of residents outside of Canterbury attending events in Christchurch increases by 20% in 5 years based on ChristchurchNZ surveys and ticket data<br>• Council meets its 90% target on delivering an engaging programme of events |

| Investment objective | | Description | Key Performance Indicators (KPI) |
|---|---|---|---|
| **Objective 3** | The east of the CBD attracts private investment through surety of public-side investment | • The east of the CBD develops more strongly, and investment that is being delayed is released | • Planned investment of $50m+ based on building consent data within 5 years of establishment |
| **Objective 4** | The presence of sport and major events as part of Canterbury's cultural identity is enhanced | • The CMUA delivers on public and stakeholder expectations for a city and region that highly values sport<br>• The civic pride and social interaction fostered by sporting events is enhanced and maintained | • Average attendance at arena-style events increases by 25% in the first 3 years of operations<br>• Attendance at sporting events increases by 30% in the first 3 years of operations |
| **Objective 5** | Investment is aligned with existing regeneration plans and projects | • The CMUA delivers on the expectations set by the CCRP. It supports the investment made in advance by the private sector<br>• The CMUA is accelerated to more quickly deliver on the economic and social benefits outlined in the Economic Case, as per the intention of the CRAF<br>• The CMUA is affordable and able to be delivered within the whole-of-life funding envelope set aside by the Council and Crown. | • Public satisfaction with the CMUA is 90%+ within 3 years of establishment<br>• The CMUA holds its first event by Q3/2024<br>• The CMUA can be delivered within the defined capital envelope of $473m, with $4m in operating costs from opening |

The objectives of the CCRP and CRAF explicitly flow through to investment objectives and the benefits that are sought in this Investment Case. Figure 11 shows the links between the CCRP principles, CRAF objectives, problem statements, benefits and investment objectives.

Figure 11: Alignment of CCRP principles and CRAF objectives to CMUA Investment Case



# 10. Strategic Benefits and Risks

A series of discussions were held to identify and agree the benefits sought from the project, key project risks and mitigation options, and linkages and dependencies with other projects and activities. The discussions were attended by representatives from the Crown and Council Officials Group, key cultural and sporting stakeholders and the Project Team's architects, engineers, project managers, and arena consultants. The results of these discussions are set out below.

## Benefits

The CMUA is one of four anchor projects identified as contributing significantly to the recovery plan and delivering on the following objectives:

- Contributing to a spatially defined CBD by identifying the site of key facilities within the CBD
- Encouraging a quicker return of people into central Christchurch and the increase in GDP from both domestic and international visitors
- Catalysing development of further projects by the private sector

The focus of the non-monetary benefits assessment is to assess the ability of the CMUA to attract and retain visitors, workers and residents in Christchurch and the region. The key potential benefits associated with the CMUA are set out in Table 41 below, some of which will be measured in the Economic Case.

Table 41: Benefits of the CMUA

| Benefits | Key Performance Indicators | Who Benefits? | Direct / Indirect | Quantified in Economic Case? |
|---|---|---|---|---|
| **Investment and economic growth to the region** | Increased yield (dollar spend) per visitor | Wider community / CBD / region | Direct | Yes |
| | Increased average length of stay in the Canterbury region | Wider community / CBD / region | Direct | Yes |
| | Increased economic impact of major events in the region | Wider community / CBD / region | Direct | Yes |
| **Christchurch is an attractive place to work, study, live and visit** | Creation of a legacy asset and focal point in the CBD | Wider community / CBD / region | Direct | No |
| | The existing sport culture in Canterbury is enhanced and supported | Wider community | Indirect | Yes (as existing value / civic pride) |
| | Improved attraction and retention of workers and residents in the CBD | Wider community / CBD / region | Direct | No |
| | Improved perception of Christchurch as a tourist destination for local, national and international visitors | CBD / region | Direct | No |
| | Increased visitor numbers, average length of stay and average visitor spend | CBD / region | Indirect | Yes |
| **Christchurch has more major entertainment events accessible to families and other residents** | Improved health and well-being outcomes | Wider community | Indirect | No |
| | Enhanced social and community value | Wider community | Indirect | Yes (as existing value / civic pride) |
| | Residents can easily access and participate in a full range of events | Wider community | Direct | No |
| **Accelerated levels of investment, and relocation of businesses in the CBD** | Improved progress of the rebuild and revitalisation of the inner city | Wider community / CBD / region | Direct | Yes |
| | Enhanced opportunities for retail, commercial and hospitality activity | CBD / region | Indirect | No |

| Benefits | Key Performance Indicators | Who Benefits? | Direct / Indirect | Quantified in Economic Case? |
|---|---|---|---|---|
| | Creation of commercial opportunities within the CBD, along with opportunities for capital recovery | CBD | Direct | No |

## Key risks

There are several strategic risks associated with this project. Workshops have been held to identify and assess the strategic risks and their potential impact on project delivery. The proposed approach for ongoing risk management as the project moves to a delivery phase is set out in the Management Case. The key strategic risks for the CBD project are included in Table 42 below. The likelihood and consequence ratings are described in more detail in the Management Case.

Table 42: Strategic risks

| Risk | Description of risk event | Likelihood | Consequence | Risk Rating |
|---|---|---|---|---|
| **Scale and scope of the arena is incorrectly specified** | • The arena does not attract the events expected, leading to a revenue shortfall<br>• A lack of events will limit the vibrancy of the CBD, continued deferral of private investment, and undermine existing investment<br>• Inadequate scale and scope of the arena may require future costly alterations, so the arena can better attract events<br>• The arena does not meet the region's needs, leading to the venue being inefficiently utilised<br>• Insufficient facilities will have an adverse effect on patrons attending events and lead to a lack of patronage for future events and limit expected revenue<br>• The arena is not competitive with other New Zealand arenas | Unlikely | Major | High |
| **Ancillary services do not support hosting of major events** | • Inadequate ancillary services have an adverse effect on patrons' enjoyment at events, impacting continued attendance and leading to a revenue shortfall<br>• Inadequate ancillary services have an adverse effect on local public and private investment commitment to the arena<br>• Lack of ability to compete with other arenas for events e.g. rugby sevens | Possible | Moderate | High |
| **Standard of internal acoustics is poor** | • The arena does not attract future events as promoters and patrons are dissatisfied with the internal acoustics of the arena, leading to the arena being under-utilised and a revenue shortfall<br>• Considerable costs to improve internal acoustics with future modifications | Possible | Moderate | High |
| **Design of the arena is not flexible to future demand changes** | • Future costly alterations to the arena are required to reflect event demand and keep the arena competitive | Possible | Moderate | High |
| **Lack of stakeholder buy-in / support for arena recommendations** | • Project faces continued delays due to re-litigation of scope and scale<br>• Canterbury's profile as an events-friendly region declines and affects other venues<br>• Project becomes unaffordable, creating additional revenue pressure or further delays | Unlikely | Major | High |
| **Reduced liveability in the CBD due to noise levels** | • Noise levels discourage residential development around the CMUA | Unlikely | Major | High |

| Risk | Description of risk event | Likelihood | Consequence | Risk Rating |
|---|---|---|---|---|
| | • Future costs and design impacts to reduce noise breakout from the arena<br>• Event type and frequency restrictions are enforced, leading to the arena being under-utilised and a revenue shortfall | | | |
| **Operating Constraints Due to Noise** | • Noise levels could exceed 85dBLqa for large concerts within residential areas<br>• Recent advice (July 2019) states that, in spite of the designation, the Council will need to have regard to Sections 16 and 17 of the RMA.<br>• These sections require the best practicable option to be undertaken to limit noise effects<br>• Complaints and legal action could have the effect of limiting large concerts at the CMUA, although the current event schedule is unlikely to breach frequency allowances if they were put in place | Possible | Moderate | High |
| **Cost escalation** | • Project becomes unaffordable, creating additional revenue pressure or further delays<br>• Delays to arena delivery undermine investment confidence in the CBD, leading to continued deferral of private investment, and undermining existing investment | Likely | Moderate | High |
| **Contractor and procurement options are limited in Canterbury** | • The project does not attract anticipated levels of interest from contractors, leading to a loss of competitive tension and price escalation | Possible | Moderate | High |
| **Budget constraints cause design compromises** | • The facility is ultimately subject to expensive rework later in its life<br>• The arena does not meet the region's needs, leading to the venue being inefficiently utilised | Likely | Moderate | High |
| **Christchurch central transport network is not adequate to support the scale of the arena** | • Significant traffic management is required on event days and improvements to the transport network are required leading to increased costs<br>• Patrons cannot attend events easily and reliably, leading to a lack of patronage for future events and a shortfall in revenue generated | Likely | Moderate | High |
| **Noise Spill results in local opposition to events** | • Noise will spill from the North End of the arena, and that noise spill could be significant during larger concert events leading to adverse public reaction<br>• Residents in the area may seek political action to oppose the arena<br>• Residents may seek to lobby the operator to reduce event numbers, leading to loss of revenue | Likely | Moderate | High |
| **Treasury or Council do not approve the Investment Case** | • Unsuccessful delivery of the project<br>• Project targets and benefits of the arena are not fully realised<br>• Project becomes unaffordable, creating additional revenue pressure or further delays<br>• Delay to the communicated delivery date will undermine investment confidence in the CBD, leading to continued deferral of private investment, and undermine existing investment | Unlikely | Extreme | High |
| **Client capability may not be adequate to deliver a large and complex project** | • The project delivery exceeds planned cost<br>• The delivery timing is extended with consequent impacts on event attraction | Possible | Extreme | High |
| **Premium seating allocation does not meet local market demand** | • The level of premium seating provided is too great for the market, and excludes patrons due to over-subscription of standard seating | Unlikely | Moderate | Medium |

| Risk | Description of risk event | Likelihood | Consequence | Risk Rating |
|---|---|---|---|---|
| | • Premium seats are under-subscribed leading to a revenue shortfall<br>• The level of premium seating provided is too low, reducing potential yields | | | |

# 11. Constraints and Dependencies

This project is subject to several key constraints placed on it by previous work, budget, and practical factors of the designated site. The successful delivery of this project is also dependent on some key decisions by multiple Crown entities. Table 43 and Table 44 below summarises the key constraints and dependencies for the CMUA.

Table 43: Key Constraints

| Constraint | Description |
|---|---|
| **Site** | The current site is designated for arena or stadium uses, and it has been acquired by the Crown for this purpose. The CMUA's location was signalled in the CCRP. The dimensions and location of this site are fixed, and as such places a practical constraint on the physical size of the arena |
| **Site Acquisition** | The site must be fully acquired, or accommodations made, prior to the commencement of building on the site |
| **Noise** | It is possible that noise spill could act as a constraint on operations. Modelling undertaken by Marshall-Day shows that there is some risk of noise spill above 75-85dBLeq beyond the site boundary. The designation permits stadium uses, but Sections 16 and 17 of the RMA require all landowners to take the best practical option to limit noise emissions. While the number of concerts envisioned for the CMUA are not unreasonable for an urban arena, there is a risk that future noise complaints could impact the events schedule |
| **Pitch Format** | The pitch must accommodate NZRU requirements, and therefore is rectangular |
| **Funding** | The Council and Crown have signalled a budget constraint of $473m for the capital works for the CMUA. Council has budgeted $4m per annum to cover operating losses. |
| **Multi Use Nature** | The facility is expected to be able to host multiple types of events, including concerts and performance events. These require investment in acoustic design that might not be required for a sports stadium. This places a constraint on the best practical design |
| **Size** | Content providers have provided strong guidance about the minimum size requirements for the arena. Notably, consultations with NZRU and concert promoters suggest that content provided to the arena will rapidly diminish if the arena is of a scale less than 25,000 seats |

Table 44: Key Dependencies

| Constraint | Description |
|---|---|
| **Site Acquisition** | The site must be fully acquired, or accommodations made in design, prior to the commencement of building on the site |
| **Road Closures** | Road closures must be affected by LINZ and Council to allow for the arena to be built across city blocks |
| **Utilities Relocation / Easements** | Utilities, including 3-Waters and telecommunications infrastructure must be moved prior to the commencement of earthworks |
| **Event Attraction** | The success of the arena is dependent on attracting the right content from sporting codes and concert promoters. The level of content provided will be dependent on design, marketing, and securing relationships with content providers. These issues are considered later in the economic and financial cases |
| **Investment Case Approval** | The Crown and the Council must jointly approve the investment case. Coordination of this process across both entities will be critical to ensuring smooth approvals |

# 12. Key Stakeholders

## Stakeholder Engagement

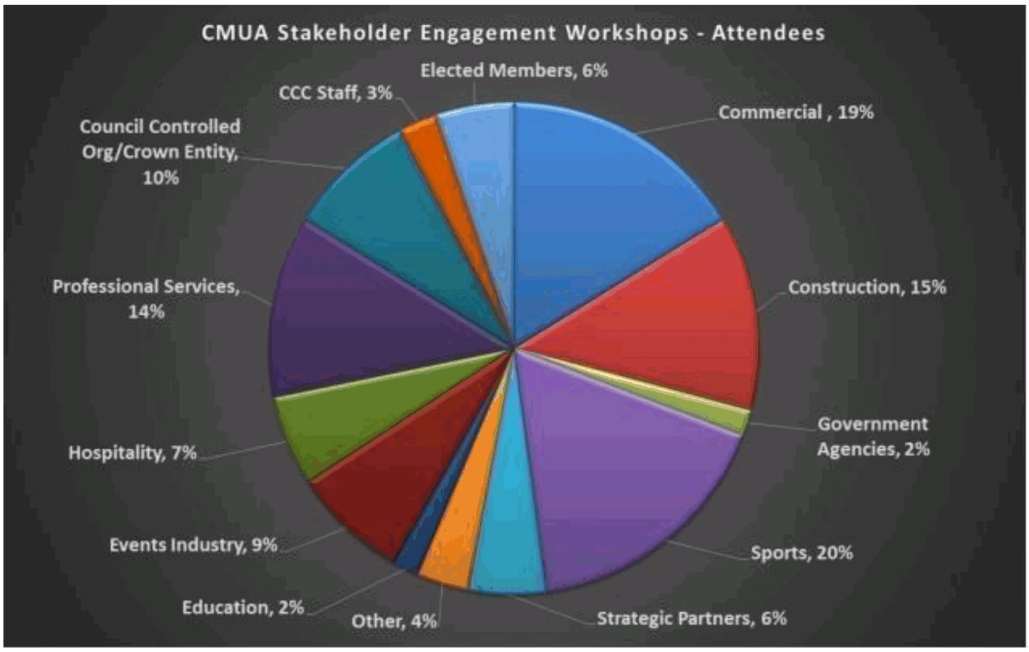
### Initial stakeholder consultation

Initial stakeholder consultation was conducted to engage with a wide range of interested parties in a technical consultation process. The four-stage approach to stakeholder engagement included:

1. Identification and alignment of stakeholders through a robust identification process
2. Design of activities to be undertaken, key participants, approach to engagement and supporting materials
3. Engagement with stakeholders through workshops, interviews, online engagement and development of information sessions
4. Reporting on the analysis

In total, 120 people across five CMUA stakeholder workshops participated in the process, with the construction, commercial and sporting sectors most highly represented as summarised in Figure 12.

Figure 12: CMUA Stakeholder Engagement Workshops - Attendees




Three key themes emerged from these workshops:

1. The contribution the CMUA will make to a vibrant, thriving CBD
2. The importance of the location of the CMUA (400 metres from the Bus Interchange)
3. The regional importance of the CMUA and the associated outcomes for communities across Canterbury.

## Ongoing stakeholder engagement

The Minister, Mayor and CMUA Project Team indicated from the outset of the Investment Case phase that stakeholder engagement was an important aspect of the process. The work underway was to be informed by the experience and expertise of the people who are involved or have an interest in the operation of the CMUA.

Stakeholder engagement activities have been ongoing throughout the development of the Investment Case, and were underway prior to this phase during pre-feasibility studies to pave the way for the arena development.

From high-level updates and discussion forums, through to one-on-one meetings with key groups and individuals, these engagement activities continue to draw new and relevant information to inform the Investment Case. In addition, three external stakeholder forums were held (one in December 2018 and a further two in February 2019) to offer a formal update on progress and gather feedback and ideas.

External stakeholders were involved in three separate sessions between December and February, with a summary of forum attendees provided in Table 45 below.

Table 45: Stakeholder forum attendees

| Forum | Attendees | Industry/discipline |
|---|---|---|
| External stakeholders<br>(13 February) | 30 | • Business (15)<br>• Sport (8)<br>• Events/entertainment (3)<br>• Other (4) |
| External stakeholders<br>(14 February) | 20 | • Sport (10)<br>• Business (7)<br>• Events/entertainment (1)<br>• Other (2) |
| Central City Residents' Associations | 5 | • Residents |

Preliminary identification of key stakeholder groups, key concerns/issues and the proposed engagement strategy are summarised in Table 46 below. A summary of the engagement plan for each stakeholder group will be explored in further detail in the Management Case.

Table 46: Key stakeholder groups

| Stakeholder/group | Key concern/ impact | Engagement strategy |
|---|---|---|
| **Community groups and organisations** | Suitability of the CMUA for their needs | Engage during investment case process and development of the detailed brief and master plan to ensure facilities are appropriate |
| **Adjacent retail and hospitality precincts** | The CMUA development will potentially affect and be affected by other anchor projects<br>Ensure the interface opportunities are optimised | Engage with project directors and relevant stakeholders for other key anchor and infrastructure projects during investment case process and development of the detailed brief and master plan to ensure potential opportunities are optimised |
| **Christchurch City Council** | Christchurch City Council will have operating responsibility for the CMUA upon completion and therefore require involvement in all aspects of the project | Member of Project Team and Project Governance Groups |
| **Te Runanga o Ngāi Tahu** | Cultural requirements to be incorporated in the design development | Consult throughout the investment case development, needs assessment and design processes |
| **Sports and recreational organisations** | Decisions about which groups will be centred at the CMUA | Engage during investment case process to understand needs and during the development of the detailed brief and master plan to ensure facilities are appropriate |
| **Christchurch and Canterbury tourism** | Optimise opportunities for mutually beneficial relationships | Engage during investment case process and development of the detailed brief and master plan to ensure potential opportunities are optimised |

| Stakeholder/group | Key concern/ impact | Engagement strategy |
|---|---|---|
| **Event managers** | Maximise the opportunity to host successful events | Engage during investment case process and development of the detailed brief and master plan to ensure potential opportunities are optimised |
| **Prospective tenants** | Optimise opportunities for mutually beneficial relationships | Engage during investment case process and development of the detailed brief and master plan to ensure potential opportunities are optimised |
| **Environment Canterbury** | Land User Recovery Plan and Natural Environment Recovery Programme lead agency<br>Manage public transport network | Involve officers for design review and liaison at key milestones |
| **UDS Partners** | Regional tourism and economic growth.<br>Potential funders through a regional rate | As discussed with the Regional Council, engage following the completion of the Investment Case |
| **Adjoining land owners** | The CMUA development will affect adjoining land owners | Prepare communication plan to ensure good public relations |

A set of key stakeholders formed the Project Reference Group (PRG) and attended two sessions on 30 May and 12 June 2019 to discuss the CMUA Investment Case. The feedback from these sessions has been incorporated into this revised Investment Case. The PRG was comprised of representatives from the following organisations:

- Christchurch and Canterbury Chamber of Commerce
- ChristchurchNZ
- Christchurch Stadium Trust
- Cosgrove Partners
- Crusaders Limited Partnership
- HSR Governance
- Mitchell Notley and Associates
- Ngāi Tahu Property
- Sport New Zealand
- Vbase

Christchurch City Council



# The Economic Case

Christchurch City Council

# 13. Purpose

This document identifies and assesses the options for the Canterbury Multi-Use Arena (CMUA) and recommends a preferred option that optimises value for money in terms of financial, economic and social benefits. Specifically, this Economic Case:

- Considers key contextual elements to inform the options development
- Identifies and assesses a long-list of options
- Identifies a short-list of options and assesses them through a Cost-Benefit Analysis (CBA)
- Assesses the affordability of each project option against potential funding sources available for the construction of the CMUA
- Undertakes an integrated analysis that incorporates the CBA, qualitative and affordability assessment to endorse a preferred project option to progress to further assessment through the remainder of the Investment Case.

# 14. Project Options Development and Assessment

The development and assessment of project options and the selection of a preferred option was undertaken in five stages:

- **Stage 1: Long-list options development:** Engagement with government, community and technical stakeholders to develop a long-list of options
- **Stage 2: Long-list option assessment:** Qualitative assessment of all options and their relative merits against the Investment Objectives and Critical Success Factors. The best performing options, or those where further analysis was deemed appropriate, were advanced to the short-list options
- **Stage 3: Short-list options assessment:** CBA and a detailed qualitative assessment of shortlisted options was undertaken to project options
- **Stage 4: Affordability assessment:** Assessment of the affordability of each project option given the potential funding sources available for the construction of the CMUA
- **Stage 5: Integrated analysis & recommended option**: Incorporating the CBA, qualitative analysis and affordability assessment to recommend a preferred project option for further assessment through the Commercial, Financial and Management Cases.

# 15. Stage 1: Long-list Options Development

The site location and the preferred orientation of the CMUA on the proposed site were confirmed by the Council and key stakeholders based on prior work completed before the development of the long-list of options.

## Site location

To enable the execution of this critical commitment, the Crown acquired land across the city for the purposes of delivering the anchor projects in their committed locations. One such site was designated and acquired for a future arena, across three city blocks in the CBD around a central site on the eastern side of the city centre

bordered by Barbadoes, Madras, Tuam and Hereford Streets as illustrated in Figure 13 below. The stadium's official name is now the Canterbury Multi-Use Arena (CMUA).

Figure 13: Proposed CMUA site


The strategic location within the central city for a multi-use arena provides a catalyst for central city recovery and revitalisation. The location will benefit from its proximity to the CBD, entertainment district and accommodation providers and will improve accessibility to the transport network, and connections with the central city and eastern frame.

A number of other locations were considered historically, but were assessed as being less satisfactory for the following reasons:

- Sites located outside of the CBD were deemed unsuitable, as the site location did not align with the core objectives of the Christchurch Central Recovery Plan.
- Locations closer to the city centre were unsuitable given the scale of the building
- Assessments indicated that the repair of the stadium at Lancaster Park was not economically viable.

## Planning and design considerations

The CMUA will be required to integrate with adjacent precincts including the East Frame and residential developments, as well as the local transport network, car parking infrastructure and potential district energy systems. This will ensure a holistic approach is taken in the design and development of the project. This approach will need to consider noise issues and the future surrounding planning environment as well as the level of retail or hospitality activity permitted on the arena site.

The CMUA will be a catalyst for local investment, and consideration needs to be given to potential adverse impacts any retail or hospitality 'wrap' on the arena could have on established or planned businesses in the wider area.

The project offers an opportunity to create a quality venue that meets the expectations of its users and reflects the vision expressed by the community for a vibrant and well-designed central city with a distinctive character. Design innovation (both technical and construction), sustainability (earthquake resilience, renewable materials and energy efficiency), and urban design principles of the Recovery Plan are expected to be incorporated in the design of the CMUA.

## Orientation of the CMUA

A critical consideration prior to developing the long-list of options in this Investment Case was the orientation of the arena, particularly whether it was situated on a north/south or east/west axis.

It was concluded based on analysis undertaken by Populous and discussions with key stakeholders that the north/south option was preferred for the CMUA. This is despite the east/west orientation performing better from a turf management perspective as assessed by turf experts STRI (formerly Sports Turf Research Institute).

From an architectural viewpoint, the north/south option is preferable due to its ability to deliver premium seating and media facilities with the optimal orientation in the west stand, away from the afternoon sun. Operationally, additional space around the stadium perimeter achieved by a north/south orientation delivers many benefits including:

- Improved access for back-of-house servicing and patron access for safe and prompt ingress and egress
- A buffer between the future stadium and the surrounding urban context, allowing for the future development of further commercial activity along Madras Street
- The venue is less 'cramped' on the site, meaning that residual space to the north is more consolidated. This provides a more usable zone for live sites on event days and the potential for recreation and public community space on non-event days
- The ability to maintain the option for future development of the site, pending compliance with height restrictions to prevent shadowing of the field of play.

## Long-list options development

To ensure a comprehensive assessment of the potential scale and size of options, a long-list of options was developed in a workshop facilitated by EY on 19 February 2019. The workshop was attended by representatives from Christchurch City Council, key cultural and sporting organisations and the Project Team's architects, engineers, project managers and multi-use arena consultants.

In developing the long-list of options, a wide range of realistic options for meeting the Investment Objectives and identified service requirements were considered. Our assessment was informed by the preceding and ongoing

situational analysis described earlier, with our multi-use arena best practice solutions derived from key stakeholders, and learning from comparable national and international arenas.

## Context for options development

Options that contained less than 20,000 or greater than 30,000 seats were not considered for the following reasons:

- Venues smaller than 20,000 would mean that Christchurch could not attract larger international concerts, and would not host major rugby tests. The venue would not be competitive with covered venues in the South Island for events, concerts, and sporting content. Event promoters have also reported that at this scale, Christchurch would not be attractive as a destination.
- Venues larger than 30,000 seats were not seen as feasible due to space constraints on the site. Also, event demand projections undertaken by our international events experts suggest that very few events (with the possible exception of large one-off events that occur approximately once every 3-6 years, and major rugby tests) would fill the arena. This would create a poor event experience, leaving the arena under-utilised for much of the time. The international trend toward smaller cultural and concert events also implies that an arena of this scale would be inappropriate, and would struggle to maintain high ticket yields.

Uncovered options (options with no roof) were considered in the long-list but did not proceed to short-list consideration. Event promoters have indicated that the weather risk means that covered venues for major events (e.g. 20,0000+) would be preferred for South Island locations. Generally, only one South Island location is selected for top-tier events, and promoters and NZ Rugby were clear that Forsyth Barr would be preferable to Christchurch if the arena is not covered. If the CMUA were uncovered it would have to compete with Westpac Stadium in Wellington for large events and have a capacity of at least 35,000. For the reasons detailed above, such a large capacity is not feasible.

Each option was assessed against its ability to deliver the benefits identified in the Strategic Case, as represented by the Investment Objectives and Critical Success Factors. A summary of the configuration, seating capacity and design of each of the long-list project options is presented in Table 47 below.

Table 47: Long-list of options – Project description

| Option Name | Roof | Seating | Premium seating | Other information |
|---|---|---|---|---|
| **Base Case** | Uncovered | • Christchurch Stadium 18,000 permanent<br>• Horncastle Arena 8,888 (concerts), 7,200 (sporting events)<br>• Hagley Park (capacity constraints determined by set-up) | **Corporate only** | • The identified Base Case "Do Minimum" Option represents the existing scenario whereby sporting events, concerts and exhibitions are held at Christchurch Stadium, Horncastle Arena and Hagley Park |
| **Covered Option 1** | Covered | 30,000 permanent, no temporary seating | 3,000 | • This design would require an increase in façade and roof areas relative to Option 2-8<br>• This option would require a material increase to back-of-house areas, increasing the space required for hospitality, toilets and facilities<br>• This option will hold more seats relative to other options. However, as the majority of seats will go in the East and South stands, the bowl will be less efficient due to the limited number of seats available in the North |
| **Covered Option 2** | Covered | 25,000 permanent, 5,000 temporary seats | 2,500 | • Façade and roof areas 55,030 $m^2$<br>• Temporary seats incur an additional capital cost of $8.8m<br>• Design allows for the use of temporary seats |

| Option Name | Roof | Seating | Premium seating | Other information |
|---|---|---|---|---|
| | | | | • Back-of-house capacity is designed for 25,000 necessitating temporary additional toilet/F&B facilities when capacity is increased to 30,000 |
| **Covered Option 3** | Covered | 25,500 permanent, includes terraced stands in the north (c. 500 pax), but no temporary seats | 2,500 | • No change in area relative to Option 2<br>• Potential for minor cost savings from a resign of the bowl to the northern end<br>• No temporary seats result in cost savings<br>• Design allows for the use of temporary seats in the future |
| **Covered Option 4** | Covered | 25,000 permanent, no terraced standing area, no temporary seating | 2,500 | • No change in the areas relative to Option 2<br>• The northern concourse could be reduced in size if it does not need to allow for temporary seating. Detailed design would be required to quantify the cost reductions, but it is anticipated to be minor (circa $5-10m)<br>• This option does not allow for future expansion (e.g. temporary seating) |
| **Covered Option 5** | Covered | 20,000 permanent, 5,000 temporary | 2,000 | • Smaller bowl with seat reduction in South and East bowls, plus a small reduction in the West<br>• Reduced roof area with minimal façade reduction<br>• Material impact to building form and overall area, potentially leading to a redesign of the arena as four independent stands |
| **Covered Option 6** | Covered | 20,000 permanent, no temporary seating | 2,000 | • Potential to redesign as four independent stands<br>• Single tier design with a concourse at the field level for the East, North and South stands<br>• Reduced roof and façade areas |
| **Dripline roof Option 7** | Dripline | 25,000 permanent, 5,000 temporary | 2,500 | • Reduced roof area<br>• Potential for increased turf maintenance requirement due to increased damage from events held when turf is wet |
| **Hard Roof, Retractable Turf Option 8** | Hard cover | 25,000 permanent, 5,000 temporary | 2,500 | • The retractable turf will use virtually all of the outside space to the North of the arena (loss of community space and activation zone).<br>• A hard roof will limit noise break out but will require either synthetic, retractable, or palletised turf due to lack of sunlight. |

# 16. Stage 2: Long-list Options Assessment

The long-list of options was assessed against both the Investment Objectives (IOs) and the Critical Success Factors (CSFs). The assessment was completed by representatives from Christchurch City Council, key cultural and sporting stakeholders, and the Project Team's architects, engineers, project managers, and multi-use arena consultants. The purpose of this qualitative assessment was to arrive at a short-list of options to be carried forward to the detailed economic CBA.

## Investment objectives (IOs)

To make sure each option had the potential to achieve the desired benefits for the Project, each project option was ranked according to its ability to meet each IO. Each option received a score of:

- **Meets (green):** The option meets the objective
- **Partially Meets (yellow):** The option can make acceptable progress towards meeting the IO
- **Does Not Meet (red)**: The option cannot support the IO to an acceptable extent

If an option did not meet one or more of the Investment Objectives it did not proceed to assessment against the Critical Success Factors.

## Critical Success Factors (CSF)

The purpose of the CSF assessment is to reduce the options remaining from the IO assessment to a short-list of options.

Each option was awarded a score between 1 and 5, based on the extent to which the option is expected to achieve each of the respective Critical Success Factors (1 = Does Not Achieve, 5 = Fully Achieves).

Following the initial scoring, the weighting of each criterion was applied to the raw scores to arrive at a weighted percentage score for each option. From this, an implied ranking was assigned, with the top-rated options (in addition to the Base Case) progressing to the shortlist for the detailed CBA.

These assessments were conducted before any cost information (except for high level capital cost estimates) had been produced. Subject matter resources – including representatives from the project's technical team, which includes architects, engineers and QSs – informed these assessments to help mitigate this risk.

## Summary of long-list options assessment

As a result of this assessment six options (including the Base Case and on-budget scenario) proceeded to short-list assessment. Table 48 provides a summary of the long-list assessment results. The sections following then detail the process for arriving at these outcomes, as detailed in Table 49 and Table 52.

Table 48: Long-list assessment summary

| Project option | Assessment | Proceed to Critical Success Factors (CSF) assessment | Proceed/do not proceed to short-list options assessment |
|---|---|---|---|
| **The Base Case** | • Used for comparison only<br>• The Base Case does not meet stakeholder expectations and undermines investment certainty in the CBD<br>• Current facilities are inadequate for hosting major sporting and cultural events | Proceed | Proceed (for comparison only |
| **Covered Option 1 30,000 permanent** | • The scale of the facility is expected to be very large on site having the potential to make surrounding areas less desirable for development<br>• An arena of this scale is strategically aligned with the CCRP but not integrated with existing Council financial plans<br>• This option is not appropriate for Canterbury's event market and will be less capable of hosting smaller events without appearing 'empty' to patrons and performers | Proceed | Do not proceed |
| **Covered Option 2 25,000 permanent & 5,000 temporary** | • Delivers on the functionality expected by stakeholders<br>• Scale is sufficient to attract major cultural and sporting events and is flexible to increased demand without feeling 'empty' during smaller events | Proceed | Proceed |
| **Covered Option 3 25,500 permanent, (includes terraced area for 500)** | • Scale is sufficient to attract major cultural and sporting events<br>• Lower up-front capital cost, but does not include the up-front capability to expand for major events | Proceed | Proceed |

| Project option | Assessment | Proceed to Critical Success Factors (CSF) assessment | Proceed/do not proceed to short-list options assessment |
|---|---|---|---|
| **Covered Option 4**<br>**25,000 permanent** | • Scale is sufficient to attract major cultural and sporting events<br>• A redesign may allow for a slightly lower capital cost than Option 2 or 3, but the arena would not necessarily have the ability to expand for major events | Proceed | Proceed |
| **Covered Option 5**<br>**20,000 permanent & 5,000 temporary** | • An arena of this scale will not meet the functionality envisaged in the CCRP and does not meet stakeholder expectations<br>• This option will not be sufficient to attract major sporting events and arena performances | Proceed | Do not proceed |
| **Covered Option 6**<br>**20,000 permanent** | • An arena of this scale will not meet the functionality envisaged by the CCRP and does not meet stakeholder expectations<br>• This option will not be sufficient to attract major sporting events and arena performances | Do not proceed | N/A |
| **Dripline Roof Option 7**<br>**25,000 permanent & 5,000 temporary** | • An arena with a dripline roof will not meet the functionality envisaged by the CCRP and does not meet stakeholder expectations<br>• The facility will be able to attract sporting events, but it will be much less attractive to non-sporting events due to the weather risk, particularly given the competitive environment on the South Island – with a covered arena in Dunedin | Proceed | Do not proceed |
| **Hard roof and retractable turf Option 8**<br>**25,000 permanent & 5,000 temporary** | • Scale is sufficient to attract major cultural and sporting events and is flexible to increased demand without feeling 'empty' during smaller events<br>• Reduced noise spill and straight-forward (and cheaper) bump-in/bump-out of non-turf events, giving the opportunity for more events. | Proceed | Proceed |

## Investment Objectives (IO) Assessment

Investment Objectives (IO) are clearly defined aims that link the problem statements to the benefits the investment is intended to generate. The IOs for the CMUA are described in the strategic case, and an explanation for the ranking presented in Table 49.

Each option was assessed against the Investment Objectives defined in the Strategic Case. Any option that failed against an Investment Objective did not proceed to further evaluation as a long-list option (with the exception of the Base Case). Results from the analysis showed that:

- Seven options partially or fully met all of the Investment Objectives
- One option (Option 6) failed to proceed to further evaluation on the basis of not meeting two Investment Objectives
- The Base Case did not meet three of the Investment Objectives, however it was progressed as the 'do minimum' option to compare the other options against

Table 49: Long-list Options Assessment against Investment Objectives

| | Long-list Options | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Base Case<br>Existing temporary stadium | Covered<br>Option 1<br>30,000 permanent | Covered Option 2<br>25,000 permanent & 5,000 temporary | Covered Option 3<br>25,500 permanent, (includes terraced area for 500) | Covered Option 4<br>25,000 permanent | Covered Option 5<br>20,000 permanent & 5,000 temporary | Covered Option 6<br>20,000 permanent | Dripline Roof Option 7<br>25,000 permanent & 5,000 temporary | Hard Roof, Retractable Turf Option 8<br>25,000 permanent & 5,000 temporary |
| **IO1 Christchurch is competitive with other New Zealand cities for major events** | **Does not meet**<br>Currently does not attract events. Is not competitive with smaller South Island cities | **Meets**<br>The CMUA facility is able to attract major sporting events and arena performances | **Meets**<br>The CMUA facility is able to attract major sporting events and arena performances | **Meets**<br>The CMUA facility is able to attract major sporting events and arena performances | **Meets**<br>The CMUA facility is able to attract major sporting events and arena performances | **Partially meets**<br>While a 20,000 + 5,000 seat arena will be regionally competitive, it will not be internationally competitive, and may struggle to compete against other regional centres (e.g. Dunedin) in New Zealand | **Does not meet**<br>A 20,000 seat arena would make the venue comparable to those in Nelson and Waikato, however these are not competitive at an Australasian level | **Partially meets**<br>The lack of a covered field introduces additional risk for event promoters, particularly for non-sporting events. It also reduces the event season and usability as an arena | **Meets**<br>The CMUA facility is sufficient to attract major sporting events and arena performances |
| **IO2 The CBD is seen as a vibrant place to live and work in the Christchurch and Canterbury communities** | **Partially meets**<br>Much of the Christchurch CBD is developing, however there are development disparities around the arena site | **Meets**<br>The CMUA increases event frequency and footfall in the Christchurch CBD | **Meets**<br>The CMUA increases event frequency and footfall in the Christchurch CBD | **Meets**<br>The CMUA increases event frequency and footfall in the Christchurch CBD | **Meets**<br>The CMUA increases event frequency and footfall in the Christchurch CBD | **Meets**<br>The CMUA increases event frequency and footfall in the Christchurch CBD | **Partially meets**<br>The CMUA increases event frequency and footfall in the Christchurch CBD, but the lack of major events will limit the extent to which this can be achieved | **Partially meets**<br>The CMUA increases event frequency and footfall in the Christchurch CBD, but the risk that some events may be cancelled due to weather | **Meets**<br>The CMUA increases event frequency and footfall in the Christchurch CBD |
| **IO3 The east of the CBD attracts private investment through surety of public-side investment** | **Does not meet**<br>Failure to invest in the arena will continue to undermine existing investment and deter future investment | **Meets**<br>An arena of this scale delivers on the functionality envisaged in the CCRP, supports existing investment, and provides an anchor to support future investment | **Meets**<br>An arena of this scale delivers on the functionality envisaged in the CCRP, supports existing investment, and provides an anchor to support future investment | **Meets**<br>An arena of this scale delivers on the functionality envisaged in the CCRP, supports existing investment, and provides an anchor to support future investment | **Meets**<br>An arena of this scale delivers on the functionality envisaged in the CCRP, supports existing investment, and provides an anchor to support future investment | **Meets**<br>An arena of this scale delivers on the functionality envisaged in the CCRP, supports existing investment, and provides an anchor to support future investment | **Partially meets**<br>An arena of sufficient scale to host large events, supports existing investment but new investment may be jeopardised as the scale of the facility will be inconsistent with previous public signals | **Meets**<br>An arena of this scale delivers on the functionality envisaged in the CCRP, supports existing investment, and provides an anchor to support future investment | **Meets**<br>An arena of this scale delivers on the functionality envisaged in the CCRP, supports existing investment, and provides an anchor to support future investment |
| **IO4 The presence of sport and major events as part of Canterbury's cultural identity is enhanced** | **Partially meets**<br>Canterbury has made significant investment in other sporting facilities but there is still a gap for larger capacity events | **Meets**<br>An arena of this scale will allow for and attract large sporting events | **Meets**<br>An arena of this scale will allow for and attract large sporting events | **Meets**<br>An arena of this scale will allow for and attract large sporting events | **Meets**<br>An arena of this scale will allow for and attract large sporting events | **Partially meets**<br>NZ Rugby is unlikely to provide test matches to an arena of this scale. It would not be able to host major events such as the FIFA World Cup | **Partially meets**<br>NZ Rugby is unlikely to provide test matches to an arena of this scale. It would not be able to host major events such as the FIFA World Cup | **Meets**<br>An arena of this scale will allow for and attract large sporting events | **Meets**<br>An arena of this scale will allow for and attract large sporting events |
| **IO5 Investment is aligned with existing regeneration plans and projects** | **Does not meet**<br>Investment has been signalled on the designated Christchurch CBD since the CCRP's approval in 2012 | **Meets**<br>Investment is aligned with existing regeneration plans and projects | **Meets**<br>Investment is aligned with existing regeneration plans and projects | **Meets**<br>Investment is aligned with existing regeneration plans and projects | **Meets**<br>Investment is aligned with existing regeneration plans and projects | **Partially meets**<br>This option delivers an arena, but does not meet the functionality expectations described in the original plan | **Does not meet**<br>The option does not meet the expectations set by existing regeneration plans and public statements | **Partially meets**<br>The option does not meet the expectation of a covered venue signalled by existing regeneration plans and public statements, but is of the scale signalled by the plans | **Meets**<br>Investment is aligned with existing regeneration plans and projects |
| **Result** | **Proceed to CSF Assessment** | **Proceed to CSF Assessment** | **Proceed to CSF Assessment** | **Proceed to CSF Assessment** | **Proceed to CSF Assessment** | **Proceed to CSF Assessment** | **Do not proceed** | **Proceed to CSF Assessment** | **Proceed to CSF Assessment** |

## Critical Success Factors (CSF)

The seven options (plus the Base Case) that met the Investment Objectives were then taken forward to scoring against the project's Critical Success Factors (CSF). CSFs are the essential attributes for meeting the Investment Objectives defined in the Strategic Case. They form the evaluation criteria that all potential scope and scale options are assessed against to ensure delivery of the essential elements for the project's success.

The CSFs were developed and agreed at a workshop on 21 February 2019. Weightings were agreed upon by workshop participants (representatives from Christchurch City Council, events management and sporting organisations and the Project Team's architects, engineers, project managers and multi-use arena consultants) and applied to each CSF to reflect the relative importance of each factor. The identified CSFs and their respective weightings and rankings are presented in Table 50 below.

Table 50: Critical Success Factors for the CMUA Project

| Critical Success Factor (CSF) | Weighting* |
|---|---|
| **Strategically aligned and integrated with existing plans**<br>How well the option meets the agreed investment objectives, related business needs and service requirements, and integrates with other strategies, programmes and projects. This includes alignment with financial strategies. | **11%** |
| **Consistent with key stakeholder expectations**<br>How well the option fulfils the expectations of ratepayers, regional residents, event promoters, and key sporting stakeholders. | **13%** |
| **Supports the attraction and hosting of large national and international events**<br>Ability of the option to attract large national and international events, including international sports matches, large concerts and other events. | **10%** |
| **Supports the attraction and hosting of a wide variety of different sporting, cultural, and other events**<br>Ability of the option to offer a high-quality attendee experience and attract a wide variety of different sporting, cultural and other events that would not come to Christchurch if it did not exist. | **11%** |
| **Increases the liveability, vibrancy and attractiveness of the Christchurch Central Business District (CBD)**<br>How well the option supports the development of the CBD into a desirable place to live, work and visit. | **15%** |
| **Encourages private investment in the Christchurch CBD**<br>How well the option supports and incentivises private investment near the stadium and in the wider CBD. | **13%** |
| **Supports Canterbury's cultural identity as a sporting capital**<br>Ability of the option to attract major international matches that have been largely absent since the earthquakes and reinforce Canterbury's cultural identity as a sporting capital. | **8%** |
| **Flexible to future changes in event demand**<br>Adaptability of the option to changes in demand for, and event size of, sports matches, concerts and other events. | **6%** |
| **Provides potential value for money**<br>Ability of the option to optimise value for money to Christchurch and the wider Canterbury region i.e. the optimal mix of potential benefits, costs and risks. | **12%** |

*Note: Values may not sum to 100% due to rounding

Each option was scored on a 1 to 5 scale to reflect its strength in meeting the CSF as presented in Table 51.

Table 51: CSF assessment criteria

| **Score** | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| **Rating** | Very Poor | Poor | Average | Good | Excellent |

The long-list options that met the Investment Objectives were assessed against the nine CSFs. The Base Case was also assessed for comparison. Table 52 presents a summary of the assessment of the long-list of options against each CSF, and the scoring rationale.

Table 52: Long-list Option Assessment against Critical Success Factors

| | Weighting | Base Case<br>Existing temporary stadium | Covered Option 1<br>30,000 permanent | Covered Option 2<br>25,000 permanent & 5,000 temporary | Covered Option 3<br>25,000 permanent, (includes terraced area for 500) | Covered Option 4<br>25,000 permanent | Covered Option 5<br>20,000 permanent & 5,000 temporary | Covered Option 6<br>20,000 permanent | Dripline Roof Option 7<br>25,000 permanent & 5,000 temporary | Hard Roof, Retractable Turf Option 8<br>25,000 permanent & 5,000 temporary |
|---|---|---|---|---|---|---|---|---|---|---|
| **CSF1 Strategically aligned and integrated with existing plans** | *11%* | **2**<br>The Base Case enables Canterbury to host cultural and sporting events, but it does not meet the expectations agreed in the CCRP. | **2**<br>The design requirements mean it is too large to fit on the designated site. An arena of this scale is strategically aligned but not integrated with existing Council financial plans. | **5**<br>An arena of this scale is integrated with the Council's strategic and financial plans. | **5**<br>An arena of this scale is integrated with the Council's strategic and financial plans. | **5**<br>An arena of this scale is integrated with the Council's strategic and financial plans. | **4**<br>An arena of this scale is integrated with the Council's financial plans but the capacity is not aligned to the project plan. | **Did not proceed to assessment** | **3**<br>An arena of this scale is integrated with the Council's financial plans but the configuration of a dripline roof is not aligned to the project plan. | **3**<br>An arena of this scale is integrated with the Councils planning, but is not integrated with the Council's financial planning. |
| **CSF2 Consistent with key stakeholder expectations** | *13%* | **1**<br>There is strong dissatisfaction with the Christchurch Temporary Stadium, and the expectation of a large-scale, central city arena has been set and well received by stakeholders. | **5**<br>The CMUA facility delivers on the functionality envisaged in the CCRP which has been accepted by stakeholders. | **5**<br>The CMUA facility delivers on the functionality envisaged in the CCRP which has been accepted by stakeholders. | **3**<br>There is a strong expectation of a large-scale arena, which stakeholders have communicated as an important factor in their perception of the arena. | **3**<br>There is a strong expectation of a large-scale arena, which stakeholders have communicated as an important factor in their perception of the arena. | **2**<br>An arena of this scale will not meet the functionality envisaged in the CCRP and does not meet stakeholder expectations. | | **2**<br>The CMUA facility will not be able to attract major sporting events and arena performances, and will attract fewer concert events than a 20,000 + 5,000 covered arena. | **3**<br>The arena is consistent with public expectations, but this needs to be balanced against costs (and rating impacts) that are likely to exceed public appetite for an arena. |
| **CSF3 Supports the attraction and hosting of large national and international events** | *10%* | **2**<br>The status quo is not competitive with other New Zealand cities for large-scale events, which has resulted in a lack of events held in Canterbury. | **5**<br>The CMUA facility is sufficient to attract major sporting events and arena performances. | **5**<br>The CMUA facility is sufficient to attract major sporting events and arena performances. | **4**<br>The CMUA facility will be able to attract major sporting events and arena performances. | **4**<br>The CMUA facility will be able to attract major sporting events and arena performances. | **3**<br>The CMUA facility will not be able to attract major sporting events and arena performances. | | **2**<br>The CMUA facility will not be able to attract major sporting events and arena performances, and will attract fewer concert events than a 20,000 + 5,000 covered arena. | **5**<br>The CMUA facility is sufficient to attract major sporting events and arena performances. |
| **CSF4 Supports the attraction and hosting of a wide variety of different sporting, cultural, and other events** | *11%* | **2**<br>Canterbury has been overlooked as a place to host large-scale sporting and arena-style events in New Zealand. | **5**<br>Delivering an arena of this scale delivers on the functionality envisaged in the CCRP, and will allow Canterbury to be an attractive venue for a variety of events of different scales. | **5**<br>Delivering an arena of this scale delivers on the functionality envisaged in the CCRP, and will allow Canterbury to be an attractive venue for a variety of events of different scales. | **5**<br>Delivering an arena of this scale delivers on the functionality envisaged in the CCRP, and will allow Canterbury to be an attractive venue for a variety of events of different scales. | **5**<br>Delivering an arena of this scale delivers on the functionality envisaged in the CCRP, and will allow Canterbury to be an attractive venue for a variety of events of different scales. | **4**<br>An arena of this scale with a roof will allow Canterbury to cater for and attract multiple types of events, but it will struggle to attract major overseas acts and will be a second-tier venue for rugby tests. | | **3**<br>The CMUA facility will be able to attract sporting events, but it will be much less attractive to non-sporting events due to the weather risk. | **5**<br>Delivering an arena of this type delivers on the functionality envisaged in the CCRP, and will allow Canterbury to be an attractive venue for a variety of events of different scales. |
| **CSF5 Increases the liveability, vibrancy and attractiveness of the Christchurch CBD** | *15%* | **1**<br>The east side of the central city would lack a key piece of infrastructure leaving a vacant site that is detrimental to developing the Christchurch CBD. | **3**<br>The scale of the CMUA facility would encourage greater footfall in the CBD encouraging greater investment, but the scale of the facility is expected to be very large on site making some areas to the east less desirable. | **5**<br>The scale of the CMUA would encourage greater footfall to the east side of the city and allow for activations around the arena e.g. fan zones. | **5**<br>The scale of the CMUA would encourage greater footfall to the east side of the city and allow for activations around the arena e.g. fan zones. | **5**<br>The scale of the CMUA would encourage greater footfall to the east side of the city and allow for activations around the arena e.g. fan zones. | **5**<br>The scale of the CMUA would encourage greater footfall to the east side of the city and allow for activations around the arena e.g. fan zones. | | **4**<br>An arena of this scale with a dripline roof will attract fewer patrons to events, limiting footfall to the east side of the city despite there being space for activations around the arena. | **4**<br>This type of facility may encourage greater use of the CMUA, but the retractable turf will reduce the space for activation around the arena e.g. fan zones. |
| **CSF6 Encourages private investment in the Christchurch CBD** | *13%* | **2**<br>While some private investment has been encouraged in the CBD through previous anchor projects, failure to invest in the arena will continue to undermine existing investment and deter future investment especially in the east side of the city. | **4**<br>An arena of this scale delivers on the functionality envisioned by the CCRP, and will anchor significant activity in the SE of the CBD, but its imposing scale may deter some private investment in the immediate proximity to the facility. | **5**<br>An arena of this scale delivers the activity in the SE envisioned by the CCRP leading to increased activity around the site, and commitment to this facility will help support investment confidence. | **5**<br>An arena of this scale delivers the activity in the SE envisioned by the CCRP leading to increased activity around the site, and commitment to this facility will help support investment confidence. | **5**<br>An arena of this scale delivers the activity in the SE envisioned by the CCRP leading to increased activity around the site, and commitment to this facility will help support investment confidence. | **5**<br>An arena of this scale delivers the activity in the SE envisioned by the CCRP leading to increased activity around the site, and commitment to this facility will help support investment confidence. | | **4**<br>An arena of this scale delivers the activity in the SE envisioned by the CCRP, but reduced attractiveness of an uncovered facility for major events will reduce the certainty of activity around the CMUA delaying private investment. | **5**<br>An arena of this scale delivers the activity in the SE envisioned by the CCRP leading to increased activity around the site, and commitment to this facility will help support investment confidence. |

| | Weighting | Base Case<br>Existing temporary stadium | Covered Option 1<br>30,000 permanent | Covered Option 2<br>25,000 permanent & 5,000 temporary | Covered Option 3<br>25,000 permanent, (includes terraced area for 500) | Covered Option 4<br>25,000 permanent | Covered Option 5<br>20,000 permanent & 5,000 temporary | Covered Option 6<br>20,000 permanent | Dripline Roof Option 7<br>25,000 permanent & 5,000 temporary | Hard Roof, Retractable Turf Option 8<br>25,000 permanent & 5,000 temporary |
|---|---|---|---|---|---|---|---|---|---|---|
| **CSF7 Supports Canterbury's cultural identity as a sporting capital** | *8%* | **2**<br>Canterbury has been overlooked as a place to host large-scale sporting events in New Zealand. | **5**<br>The CMUA facility is sufficient to attract major sporting events e.g. All Blacks tests, Football World Cup qualifiers, Women's Rugby World Cup. | **5**<br>The CMUA facility is sufficient to attract major sporting events e.g. All Blacks tests, Football World Cup qualifiers, Women's Rugby World Cup. | **4**<br>The CMUA facility is sufficient to be able to compete for major sporting events e.g. All Blacks tests. Incentives may be required to attract larger international sporting events. | **4**<br>The CMUA facility is sufficient to be able to compete for major sporting events e.g. All Blacks tests. Incentives may be required to attract larger international sporting events. | **3**<br>An arena of this scale does not allow for Canterbury to compete for major sporting events e.g. All Blacks tests. | | **5**<br>The CMUA facility is sufficient to attract major sporting events e.g. All Blacks tests, Football World Cup qualifiers, Women's Rugby World Cup. | **5**<br>The CMUA facility is sufficient to attract major sporting events e.g. All Blacks tests, Football World Cup qualifiers, Women's Rugby World Cup. |
| **CSF8 Flexible to future changes in event demand** | *6%* | **2**<br>The Base Case has limited ability to increase capacity to meet demands of future events. | **3**<br>An arena of this scale will be less capable to host smaller events without appearing 'empty' to patrons and performers. | **4**<br>An arena of this scale will allow for flexibility to cater for larger events and be 'cut down' for smaller non-sporting events. | **3**<br>An arena of this scale does not allow for the flexibility to increase capacity without additional investment. | **3**<br>An arena of this scale does not allow for the flexibility to increase capacity. | **4**<br>An arena of this scale will allow for flexibility in capacity and set-up, however it is still restricted by design. | | **4**<br>An arena of this scale will allow for flexibility in capacity and set-up, however it is still restricted by design. | **5**<br>An arena with a hard roof will allow for efficient flexibility, with no concern for turf protection requirements. |
| **CSF9 Provides potential value for money** | *12%* | **3**<br>Future investment in the Base Case would allow for cultural and sporting events to continue to take place in Canterbury. | **2**<br>An arena of this scale is not appropriate for Canterbury's event market. | **4**<br>An arena of this scale is appropriate for the Canterbury event market and provides the ability to increase capacity when required. | **3**<br>An arena of this scale is appropriate for Canterbury's event market but it does not provide the ability to increase capacity when required. | **4**<br>Delivering an arena of this scale is appropriate for Canterbury's event market and, while it does not provide the ability to increase capacity, it is more cost effective to build | **4**<br>An arena of this scale is appropriate for Canterbury's event market and, while it does not provide the ability to increase capacity, it is more cost-effective to build and is efficient to operate. | | **4**<br>An arena of this scale is appropriate for Canterbury's event market and, while it does not provide the ability to increase capacity, it is more cost-effective to build and efficient to operate. | **1**<br>An arena of this scale is not appropriate for Canterbury's event market and is financially unaffordable. Preliminary estimates suggest it would cost more than $100+m more than the next most expensive short-listed option. |
| | **Total – Weighted by %** | **1.8** | **3.7** | **4.8** | **4.2** | **4.3** | **3.8** | | **3.4** | **3.9** |
| | **Ranking** | **8** | **6** | **1** | **3** | **2** | **5** | | **7** | **4** |
| **Summary – Proceed / Do Not Proceed to short-list** | | **Does Not Proceed** | **Does Not Proceed** | **Proceed to short-list** | **Proceed to short-list** | **Proceed to short-list** | **Does Not Proceed** | **Does Not Proceed** | **Does Not Proceed** | **Proceed to short-list** |

## Development of the on-budget scenario

Consideration of the draft business case in August 2019 found that the estimated cost to deliver the preferred option exceeded the $473m available budget. The initial quantitative risk assessment (QRA) of project delivery costs resulted in estimated delivery costs of $505.3m at a P85 affordability threshold level requested by the Crown. This necessitated an affordability review[17] of the preferred option to identify potential saving opportunities to present an on-budget scenario for the CMUA.

Approximately 30 saving opportunities were identified and discussed at workshops on 14 October 2019 and 8 November 2019 which were designed to rapidly identify an on-budget scenario. The Christchurch City Council agreed to apply the following five saving opportunities to the preferred option, Option 3 (basis for this preference outlined in section 19 – 'Recommended option'), and develop an on-budget scenario. Henceforth the preferred on-budget scenario with saving opportunities applied is referred to as Option 3a (on-budget scenario). The potential risks of the saving opportunities are described in Table 53 below alongside the estimated savings as per WT Partnership's estimates.

Table 53: Potential saving opportunities and risks

| Saving opportunity | Estimated savings ($) | Potential risks |
|---|---|---|
| Reduction in façade area | $1.6m | A reduction in façade and roof would change the overall form of the arena and likely make it slightly squarer and less curved / organic. |
| Relocate raised concourse to ground level | $6.6m | The potential to remove a large area of the Level 1 suspended slab by dropping a large portion of the General Admission concourse to ground level may reduce natural ventilation, which may necessitate a mechanical fan system to assist the ventilation of the pitch area (the capital cost of such a fan system has been factored into the $6.6m estimate savings)<br>Additionally, this design change, combined with the reduction of the façade area, removes the capacity for the 500 person safe standing area. Further, the change may reduce patron flow around the arena due to removal of the second concourse which could affect patron experience at events e.g. entry and exit to venue, access to food and beverage outlets, and may reduce accessibility for disabled patrons due to removal of the second concourse. |
| Change mixed-use activation zone to soft landscaping | $4.7m | May incur additional ongoing maintenance costs and require longer to repair after a major event restricting access for the public. |
| Alternative procurement option for the two replay screens and ribbon board control system | $6.6m | Partnering with a technology firm may reduce Christchurch City Council's opportunity to realise the financial and non-financial benefits from digital assets and intelligence.<br>Should a deal not be reached with a technology investor, and further savings not be identified during the detailed design phase, additional capital investment may be required prior to the completion of the arena. It is acknowledged that the financial risk of any further investment would sit with the ultimate delivery agent. |
| Reduce overall building footprint | $8.0m | Any reduction would be focused on the relocation of part of the raised concourse to ground floor level. Potential risks of relocating part of the raised concourse to ground floor level are outlined above. |
| **Total saving opportunities** | **$27.5m** | |

The $27.5m saving has reduced the overall delivery costs at a P85 affordability threshold level to $472.7m, approximately $0.3m less than the $473m available budget. This includes approximately 17% contingency.

These savings opportunities were selected to decrease costs and minimise the impacts of changes to the preferred option already presented in the draft investment case. However, design compromises necessarily had to be made to design to meet the affordability threshold. This includes compromises to fan and performer experience, but it also includes future risks to the ownership of the digital data and the digital estate. This is due

[17] Please refer to Appendix A for the complete Affordability Review

to a mooted arrangement with a technology provider that may enable capital cost savings in exchange for management of the arena's digital content.

The risks and implications of the selected savings opportunities include:

- Reduced patron flow around the arena due to removal of the second concourse which could affect patron experience at events e.g. entry and exit to venue, access to food and beverage outlets
- Potentially reduced accessibility for disabled patrons due to removal of the second concourse
- Reduced natural ventilation, which may necessitate a mechanical fan system to assist the ventilation of the pitch area
- Additional capital investment may be required if a deal cannot be reached with a technology investor to deliver the two replay screens and ribbon board control system. It is acknowledged that the financial risk of any further investment would sit with the ultimate delivery agent.
- Modification of mixed-use activation zone to soft landscaping may incur additional ongoing maintenance costs and require longer to repair after a major event restricting access for the public
- Removal of the terraced area reduces patrons ticket options and experiences inside the arena e.g. a sponsorship activation site or 'Fan Zone'
- The cumulative effect of these changes will affect patron experience, and could create risks to event attendance.

As the affordability review was conducted following preparation of the draft investment case, Option 3a has not been fully assessed against the investment objectives and critical success factors as a formal option normally would. Strictly, Option 3a is not a 'new option' but rather represents an on-budget scenario of the preferred option (Option 3) presented in the draft business case.

It should also be noted that the potential saving opportunities identified at this stage may be unnecessary as detailed design will give further clarity and certainty of costs. This may mean some or all of these potential saving opportunities may not need to be implemented. Any saving opportunities will be validated by the Project Team and the effects of those savings will need to be tested through a robust quantitative and qualitative assessment. This may result in changes to the benefits realised and operational and financial feasibility of the CMUA.

# 17. Stage 3: Short-list Options Assessment

From the qualitative long-list assessment, a short-list of five options (including the on-budget scenario) have been selected to be further assessed through a detailed project options assessment. This section qualitatively considers the advantages and disadvantages of the short-listed options against the benefits identified in the Strategic Case. This approach serves two purposes:

1. To ensure a common understanding of the elements of the long-list options
2. To inform the CBA, and identify key areas of difference for quantitative assessment

These five options are then subjected to a quantitative CBA, and a balance of qualitative and quantitative factors are then considered in agreeing a preferred option for further evaluation in the commercial, financial and Management Cases. It should be noted that the Base Case is included for the purposes of comparison only.

Table 54: Base Case

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Community well-being** | • Enables Canterbury to continue to host some existing cultural and sporting events | • Christchurch and Canterbury are not perceived to be exciting places to visit<br>• Civic pride and connection to the CBD decreases, reducing employment and cultural opportunities<br>• The positioning of Christchurch within the national hierarchy of cities is seen to be at risk |
| **Customer experience** | • None | • There is strong customer dissatisfaction with the Christchurch Stadium due to inadequate hospitality capacity and exposure to the elements |
| **Performer / player experience** | • None | • There is strong dissatisfaction with the Christchurch Stadium with inadequate changing and team facilities |
| **Event attraction** | • None | • Limited ability to increase capacity to meet demands of future events<br>• Christchurch Stadium is not competitive with other New Zealand cities for large-scale events<br>• Canterbury has been overlooked as a place to host large-scale sporting and arena-style events in New Zealand |
| **Urban regeneration** | • Lower costs of making the temporary solutions permanent (relative to a new arena) (*circa* $10 – 15m excluding land) could free up capital to consider alternative investment in the CBD. | • Does not meet the expectations agreed in the CCRP<br>• The east side of the central city would lack a key piece of infrastructure leaving a vacant site that is detrimental to developing the Christchurch CBD<br>• Lack of investment in the arena will continue to undermine existing investment and deter future investment, especially in the east side of the city<br>• Does not deliver the quality infrastructure necessary for Christchurch to compete effectively for talent with other Australasian cities and contribute towards national prosperity |

Table 55: Covered Option 2: 25,000 permanent & 5,000 temporary

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Community well-being** | • Capacity allows for major one-off sporting events (e.g. Lions Tour) increasing the reputation of Canterbury and supporting community engagement and civic pride | • Scale of the multi-use arena and roof design will result in noise break-out to the northern area beyond the site which includes residential areas |
| **Customer experience** | • Capacity allows for increased flexibility to accommodate increased attendance for major one-off events<br>• Scale of the arena allows for a heightened patron experience during an event when at full capacity<br>• Design of the circular bowl seating arrangement allows for patrons to be closer to the centre of the arena which allows for an enhanced experience | • Complete circular bowl will not be set-up for all events as it requires the temporary seating<br>• Scale of the arena and roof design may adversely affect the acoustic quality in the arena, as the EFTE roof causes reverberation, but the impacts can be partially mitigated through design.<br>• Design of the arena does not allow for premium suites at the South end of the circular bowl for patrons during concert events |
| **Performer / player experience** | • The standard of the design will provide an enhanced experience for the performers / players | • None |
| **Event attraction** | • Capacity allows Canterbury to attract highly profitable major one-off and large-scale events<br>• The full roof creates a weather-proof arena which has greater appeal to event organisers and reduces event risk<br>• The design of the arena allows for the inclusion of flexible space, providing optionality to expand for larger events | • Temporary seating will increase capital costs of the facility's delivery and the operational costs of setting up for an event<br>• The setup / breakdown effort and cost for the temporary seats may limit the frequency that the capacity is increased in practice |
| **Urban regeneration** | • Capacity allows for major one-off and large-scale events to be held in Canterbury giving investors greater confidence in their commitment to the city centre<br>• The scale of the arena is appropriate for Canterbury's event market<br>• The scale of the arena allows for the design to sit comfortably on the site and be less intrusive on the city centre | • Scale of the multi-use arena and roof design will result in noise break-out to the Northern area beyond the site which includes residential areas |

Table 56: Covered Option 3: 25,500 permanent (includes terraced safe standing area for 500)

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Community well-being** | • Capacity allows for large-scale events (e.g. All Blacks games), enhances the reputation of Canterbury, and supports community engagement and civic pride | • The arena's capacity does not allow for major one-off sporting events (e.g. Lions Tour) reducing the reputation, community engagement and civic pride of Canterbury.<br>• Scale of the multi-use arena and roof design will result in noise break-out to the Northern area beyond the site which includes residential areas |
| **Customer experience** | • Scale of the multi-use arena allows for a heightened customer experience during an event when at capacity<br>• Design of the circular bowl seating arrangement allows for patrons to be closer to the centre of the arena which allows for an enhanced experience<br>• Terraced area offers patrons varied ticket options and arena experiences inside the arena (e.g. a sponsorship activation site or 'Fan Zone') | • Terraced area means there will not be a complete circular bowl for any events<br>• Scale of the arena and roof design may adversely affect the acoustic quality in the arena<br>• Design of the arena does not allow for premium suites at the southern end of the circular bowl for patrons during concert events |
| **Performer / player experience** | • Capacity will provide an enhanced experience for the performers / players | • Terraced area means that there will not be a complete circular bowl reducing the experience for the performers / players |
| **Event attraction** | • Capacity allows Canterbury to attract highly profitable major one-off and large-scale events<br>• The full roof creates a weather-proof arena which has greater appeal to event organisers and reduces event risk | • Capacity does not allow for major one-off sporting events (e.g. a Lions Tour), but these occur infrequently (once every 12 years). This loss would be supplanted by other large concert events having no net effect on event revenue or tourism impact<br>• Lack of temporary seats does not allow the arena to flexibly expand, without further investment |

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Urban regeneration** | • The capacity allows for large-scale events to be held in Canterbury giving investors greater confidence in their commitment to the city centre<br>• The scale of the arena is appropriate for Canterbury's event market<br>• The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre | • Marketing and reputational disadvantages associated with the perception of a smaller venue<br>• Scale of the multi-use arena and roof design will result in noise break-out to the Northern area beyond the site which includes residential areas |

Table 57: Covered Option 3a (on-budget scenario): 25,000 permanent

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Community well-being** | • Capacity allows for large scale events (e.g. All Blacks games), enhances the reputation of Canterbury, and supports community engagement and Civic Pride. | • The arena's capacity does not allow for major one-off sporting events (e.g. Lions Tour) reducing the reputation, community engagement and civic pride of Canterbury. |
| **Customer experience** | • Scale of the multi-use arena allows for a heightened customer experience during an event when at capacity<br>• Design of the circular bowl seating arrangement allows for patrons to be closer to the centre of the arena which allows for an enhanced experience<br>• Terraced area offers patrons varied ticket options and arena experiences inside the arena (e.g. a sponsorship activation site or 'Fan Zone'). | • Scale of the arena and roof design may adversely affect the acoustic quality in the arena<br>• Design of the arena does not allow for premium suites at the South end of the circular bowl for patrons during concert events<br>• Reduction of the Level 1 structure in the Eastern Stand to ground level will have an impact on the area available at ground floor for natural ventilation, and will impact patron flow around the arena, and may reduce the seating options for accessibility-challenged patrons<br>• Modification of mixed-use activation zone to soft landscaping may incur additional ongoing maintenance costs and require longer to repair after a major event<br>• This option does not include a terraced area for safe standing room, creating minor limitation on capacity and ticketing options |
| **Performer / player experience** | • Capacity will provide an enhanced experience for the performers / players | • None |
| **Event attraction** | • Capacity allows Canterbury to attract highly profitable major one-off and large scale events<br>• The full roof creates a weather-proof arena which has greater appeal to event organisers and reduces event risk | • Capacity does not allow for major one-off sporting events (e.g. a Lions Tour)<br>• Lack of temporary seats does not allow the arena to flexibly expand, without further investment or one-off event costs<br>• Although the number of events may not change there is a risk to attendance at events due to the different in patron experience of this option versus others<br>• Modification of mixed-use activation zone to soft landscaping may incur additional ongoing maintenance costs and require longer to repair after a major event |
| **Urban regeneration** | • The capacity allows for large scale events to be held in Canterbury giving investors greater confidence in their commitment to the city centre<br>• The scale of the arena is appropriate for Canterbury's event market<br>• The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre | • Marketing and reputational disadvantages associated with the perception of a smaller venue<br>• Noise spill from the arena may affect sensitive activities, particularly residential uses north of the facility<br>• Modification of mixed-use activation zone to soft landscaping may incur additional ongoing maintenance costs and require longer to repair after a major event restricting access for the public<br>• Ceding digital information to a private provider may impede the ability of the Council to leverage information to create a coordinate event attraction plan |

Table 58: Covered Option 4: 25,000 permanent

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Community well-being** | • Capacity allows for large-scale events (e.g. All Blacks games), enhances the reputation of Canterbury, and supports community engagement and Civic Pride | • The arena's capacity does not allow for major one-off sporting events (e.g. Lions Tour) with some minor adverse impacts on community engagement and civic pride of Canterbury<br>• Scale of the multi-use arena and roof design will result in noise break-out to the Northern area beyond the site which includes residential areas |
| **Customer experience** | • Scale of the multi-use arena allows for a heightened customer experience during an event when at capacity<br>• Design of the circular bowl seating arrangement allows for patrons to be closer to the centre of the arena which allows for an enhanced experience | • Scale of the multi-use arena and roof design may adversely affect the acoustic quality in the arena<br>• Design of the arena does not allow for premium suites at the south end of the circular bowl for patrons during concert events |
| **Performer / player experience** | • Capacity will provide an enhanced experience for the performers / players | • None |
| **Event attraction** | • Capacity allows Canterbury to attract highly profitable major one-off and large-scale events<br>• The full roof creates a weather-proof arena which has greater appeal to event organisers and reduces event risk | • Capacity does not allow for major one-off sporting events (e.g. a Lions Tour), but these occur infrequently (once every 12 years). This loss would be supplanted by other large concert events having no net effect on event revenue or tourism impact<br>• This design does not accommodate future-proofing for temporary seats |
| **Urban regeneration** | • The capacity allows for large-scale events to be held in Canterbury giving investors greater confidence in their commitment to the city centre<br>• The scale of the arena is appropriate for Canterbury's event market<br>• The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre | • Marketing and reputational disadvantages associated with the perception of a smaller venue<br>• Scale of the multi-use arena and roof design will result in noise break-out to the Northern area beyond the site which includes residential areas |

Table 59: Option 8: Hard Roof, Retractable Turf 25,000 permanent + 5,000 temporary

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Community well-being** | • Capacity allows for major one-off sporting events (e.g. Lions Tour) increasing the reputation of Canterbury and supporting community engagement and civic pride<br>• Hard roof reduces noise break-out to the northern area beyond the site which includes residential areas | • Likely cost may detract from investment in other community facilities<br>• Scale and additional cost may be viewed as 'extravagant' given the regeneration challenges elsewhere in Canterbury |
| **Customer experience** | • Capacity allows for increased attendance for major one-off events<br>• Scale of the arena allows for a heightened patron experience during an event when at full capacity<br>• Design of the circular bowl seating arrangement allows for patrons to be closer to the centre of the arena which allows for an enhanced experience<br>• Hard roof increases the acoustic quality within the arena | • Complete circular bowl will not be set-up for all events as it requires temporary seating reducing the patron experience<br>• Design of the arena does not allow for premium suites at the south end of the circular bowl for patrons during concert events |
| **Performer / player experience** | • Capacity will provide an enhanced experience for the performers / players | • Complete circular bowl will not be set-up for all events as it requires the temporary seating reducing the experience for performers / players |

| Criteria | Advantages | Disadvantages |
|---|---|---|
| **Event attraction** | • Capacity allows Canterbury to attract major one-off and large-scale events with larger events being highly profitable<br>• Roof creates a weather-proof arena which has greater appeal to event organisers and reduces event risk<br>• Retractable turf allows for more flexible / faster change over between major event types (no need to replace turf) | • Temporary seating will increase operational costs of the arena when setting up for an event |
| **Urban regeneration** | • Capacity allows for major one-off and large-scale events to be held in Canterbury giving investors greater confidence in their commitment to the city centre<br>• The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre<br>• Hard roof reduces noise break-out to the Northern area beyond the site which includes residential areas | • The high cost of the facility may detract from other urban investments |

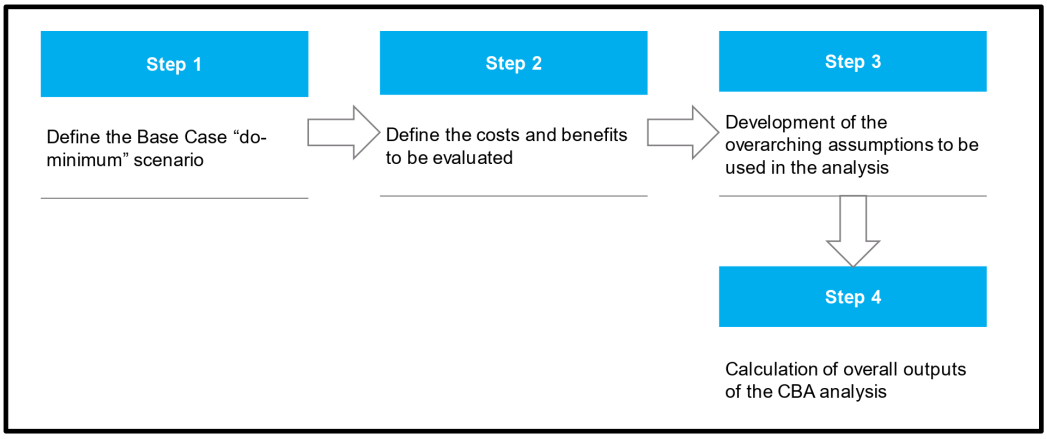
## Cost-Benefit Analysis

The short-list options have been assessed using a CBA. A CBA is a decision-making tool that aims to assess the value of a project or competing projects on a consistent basis. This is done by quantifying all costs and benefits in monetary terms, where possible, and discounting them to a common point in time to determine the net benefits of each project.

An economic CBA differs from a financial CBA in that it is performed from the viewpoint of society (in this case the Canterbury region), whereas a financial CBA looks at only the financial impacts from a project perspective.

A summary of the methodology undertaken for the CBA is provided in Figure 14 below and presented in further detail in the following sections.

Figure 14: CBA methodology




The key economic assumptions used in the CBA are detailed in Table 60.

Table 60: Economic assumptions

| | Assumption | Source |
|---|---|---|
| Model period | 2019-2048 | Project Team |
| Planning / Construction period | 2019-2023 | Project Team |
| Operations period | 2024-2048 | Project Team |
| Discount rate | 6% | Treasury |

| | Assumption | Source |
|---|---|---|
| Net present value date | Q3 2019 (Council's FY20 financial year) | Project Team |
| Events Schedule | An indicative events schedule for the CMUA has been used to inform revenue assumptions underpinning the operating model. This events schedule was prepared based on input from Vbase, NZRU, the Stadium Trust, ChristchurchNZ, and international events experts. It was peer reviewed by TEG Dainty. The events schedule is described in Table 67 to Table 70 | Vbase<br>NZRU<br>Stadium Trust<br>Christchurch NZ<br>Project Team |
| Origin of Patrons | To understand the attractiveness of the CMUA to out-of-town visitors, an analysis of patron origin was conducted, and is included in Table 71. | Vbase, historical ticket data<br>NZRU & CRFU confidential information<br>EY database assumptions<br>ChristchurchNZ analysis<br>Fresh Info peer review |
| Average Length of Stay / Specific and Extended Stay | Table 72 and Table 73 describe the assumptions about how long individuals stay in Christchurch for an event, and whether they have specifically travelled to the region for that event | Ticket origin data (Vbase)<br>Consultation with industry experts<br>Fresh Info peer review<br>ChristchurchNZ |
| **Average Daily Spend** | Table 74 reflects average daily spend for those patrons attending the CMUA. This is not just what is spent at the event, but also after the event and on hotels. | MBIE tourism database<br>ChristchurchNZ surveys<br>FreshInfo peer review |
| **Land Value Increase** | 3% one-off uplift in land value within 400m is adopted as a conservative assumption | International comparisons for arenas in similarly underdeveloped brownfield areas |
| **Consumer Surplus** | For the purposes of this assessment, a consumer surplus of 10% is applied to projected local ticket revenues under the Base Case and 30% is applied to projected local ticket revenues under the project options. | See Table 76, but also reviewed by Fresh Info, and understood to be consistent with emerging MBIE guidance |
| **Project capital expenditure** | The facility has a capital cost of $439.4m (EAC methodology). | WTP |
| **Operating and maintenance costs** | The net operating costs, including lifecycle costs, over a period of 30 years are anticipated to be $139.5m. | WTP<br>Vbase<br>Stadium Trust<br>Christchurch City Council Finance<br>EY assumptions as verified with New Zealand Stadium experts |

## Step 1: Defining the Base Case "Do-Minimum" scenario

To undertake the economic analysis, a Base Case must be established. The identified Base Case - "Do Minimum" Option is representative of the existing scenario whereby major sporting and cultural events take place at Christchurch Stadium, Horncastle Arena and Hagley Park. All domestic and international cricket will be held at Hagley Oval under both the Base Case and all project cases.

Given the nature of the asset, the primary changes, from a benefits analysis perspective, that are likely to occur between the Base Case and the project options relate to the events schedule and event attendances. Analysis of the historical average capacity and number of events held at Christchurch Stadium, Horncastle Arena and Hagley Park has been used to develop the Base Case events schedule and average attendances, as presented in Table 61 below. In developing the events schedule consideration has been given to the increasingly competitive landscape of major events and the interest from promotors and sporting codes in hosting events in high quality stadiums/arenas to improve the spectator experience. When compared to what has been achieved historically, a

"Do Minimum" scenario is likely to further decrease Christchurch's capacity to bid for and win events in the future.

Table 61: Indicative Base Case events schedule

| Event | Number of Events Per Annum | Estimated Average Attendance |
|---|---|---|
| Large concerts | 0.3 | 26,000 |
| Smaller concerts | 3.0 | 6,000 |
| Other events content (non-sporting) | 0.3 | 10,000 |
| Super Rugby (Crusaders) | 6.5 | 11,500 |
| Domestic Rugby (Canterbury) | 4.5 | 5,500 |
| Rugby Tests (All Blacks) | 0.3 | 22,000 |
| Other Rugby content | 1.0 | 1,500 |
| Football | 0.3 | 12,000 |
| Rugby League | 0.6 | 12,000 |
| Large-scale exhibitions | 3.0 | 10,000 |
| **Total Events** | **19.7** | **n/a** |

* 0.3 events per annum represents one event every three years

** 0.6 events per annum represents two events every three years.

## Step 2: Define the benefits and costs to be evaluated

### Quantified benefits

Table 62 provides an overview of the quantified benefits included in the CBA analysis of the CMUA relative to the Base Case.

Table 62: Quantitative benefits to be assessed

| Benefit | Description |
|---|---|
| **Event revenue** | An indicative events schedule for the CMUA has been used to inform revenue assumptions underpinning the operating model. Revenue generated from events held at the CMUA include:<br>• Ticketing income and royalties<br>• Fixed venue hire<br>• Merchandise<br>• Catering<br>• Commercial rights<br>• Membership and corporate suites<br>• Functions and other revenue |
| **Tourism** | **Value added from new visitors to the Canterbury region**<br>Gross value add (GVA) estimates the economic impact to the Canterbury region as a result of staging events at the new stadium. This includes the direct value added to the region generated as a result of expenditure from out-of-region and overseas visitors that specifically come to or extend their stay in Canterbury to attend events at the new stadium. It is conceptually similar to GDP. This includes spectators/patrons, athletes, media and other individuals directly associated with the events who would not otherwise travel to Canterbury in the absence of the events.<br>GVA has been estimated using input-output (multiplier) analysis. Input-output analysis represents the total change in economic activity in a region based on the change in activity from a given sector. These models assume that the resources needed to support output are available and as such, are not 'diverted' from other activity, and so the models show the activity 'supported' by investment.<br>The estimate includes only the incremental benefit (i.e. the difference between the Base Case and the new stadium). |

| Benefit | Description |
|---|---|
| | **Value added from retained local expenditure**<br>In the Base Case, it is assumed that many Cantabrians will continue to travel to other regions of New Zealand to attend events that do not come to Christchurch. Assuming individuals have a fixed discretionary income for entertainment, this represents a lost economic benefit to the Canterbury region under the Base Case scenario.<br>The proportion of Cantabrians who have historically attended events in other regions was used to inform this calculation. |
| **Consumer surplus** | Consumer surplus represents the amount local Cantabrians may be willing to pay to make use of the facilities above the cost of entry (ticket price). This represents a non-monetary benefit accruing to event attendees above the total cost to attend.<br>Consumer surplus differs across each individual as they value their attendance differently depending on their tastes, affinity to events, income levels, and the 'price elasticity' of their demand (i.e. whether their demand is sensitive to price).<br>Given that it is not possible to carry out surveys of attendees, for the purposes of this analysis, consumer surplus is approximated in two ways:<br>• By applying a percentage on projected ticket revenues based on estimates from other comparable studies<br>• By estimating the opportunity costs of attending the event for attendees, such as time and travel costs |
| **Land value uplift** | The CMUA will likely attract private sector investment in the area surrounding the stadium. This has the potential to revitalise the east side of the CBD and improve land value of property within the precinct.<br>The benefit measured is on top of any baseline land value increases (i.e. only the land value increase attributable to the stadium is considered a benefit). |
| **Civic pride** | Cantabrians can value an event or calendar of events even if they do not attend the event/s. This is commonly referred to as the existence (non-use) value or the civic pride one obtains as a result of the presence of an event within one's locality.<br>As with consumer surplus estimates, placing a value on civic pride can be problematic and would typically involve contingent valuation and survey techniques to understand how much people are willing to pay for an event to be staged locally, even if they do not attend the event.<br>Based on the benefit transfer approach, the civic pride of the new stadium was estimated using relevant comparable studies. |
| **Residual asset value** | It is likely that the stadium will continue to be used beyond the 25-year operating assessment period. The remaining life of the stadium beyond the assessment period (i.e. its residual value) represents a benefit. |

### Non-monetised benefits

A CBA is complex as it involves converting (where possible) a project's costs and benefits into dollar terms. This can be difficult, as it looks to monetise both market values and non-market values (i.e. those values that are not transacted in the economy).

In an ideal world, where there are no limitations to the information available, all costs and benefits would be presented in monetary terms. In reality, this is not possible because there are significant challenges with obtaining the required information.

To combat this challenge, it is common to present both quantitative economic costs and benefits (i.e. monetised), and a qualitative discussion of other costs and benefits (i.e. non-monetised) that could impact the conclusion of the analysis. Both the quantifiable items and the qualitative narrative should be understood in forming a conclusion from this analysis.

The identified project options would deliver the socioeconomic benefits set out in the Investment Logic Map (ILM) as described in the Strategic Case. Broadly, the main benefits expected to be delivered include:

- Investment and economic growth to the region
- Promotion of Christchurch as an attractive place to work, study, live and visit
- Christchurch having major entertainment venues accessible to families and other residents
- Accelerated levels of investment and relocation of businesses in the CBD

The following table provides a qualitative assessment of the identified social, economic and environmental impacts of the project options in order of anticipated impact quantum.

Table 63: Qualitative benefits of the CMUA

| Category | Qualitative benefit | Description |
|---|---|---|
| **Economic** | Provide key social infrastructure necessary for Christchurch to be competitive with other Australasian cities | As New Zealand's second largest city, with capacity for urban growth, Christchurch has the potential to deliver significant additional economic benefit to New Zealand without significant additional infrastructure costs.<br>To achieve this, Christchurch needs to provide a competitive offering to people and talent. A multi-use arena appropriate to Christchurch's size and position as New Zealand's second largest city is a necessary part of this offering. |
| | Catalytic effect of the project | The benefits of the project acting as a 'change catalyst' to support business confidence, the visitor economy and the development of the eastern CBD. The development and construction of the CMUA may be a significant transformative project with the potential to act as a catalytic injection to Christchurch CBD, assisting to support business confidence and investment. The development of major facilities in cities the world over has been viewed as potential catalysts of urban renewal and precinct redevelopment. Initial engagement with property developers suggest that between $50-100m of investment is being delayed due to the uncertainty around the CMUA. |
| | Support of the central city and other anchor projects | The CMUA complements the other facilities and amenities in the central city. Typically, entertainment centres, sporting stadiums, convention centres and theatres have individually, or in combination, been at the heart of programmes intent on bringing life back to undervalued and under-utilised parts of a city. The widely held view is that these major facilities generate a level of commercial and social activity, the benefits of which flow on to other parts of the precinct, anchoring and stimulating greater levels of visitation in the area, new activity and development. |
| | Exposure of New Zealand to overseas tourist and domestic markets | A high-quality venue and the events hosted at the CMUA represents "free branding" of Christchurch and Canterbury attracting international tourism and investment. This will be evident in the increase in Christchurch's exposure to overseas tourist markets via television coverage, social media and word of mouth. |
| | Leveraged private sector investment | This benefit measures the additional investment undertaken as a result of the investment in the arena. Specifically, this will measure the level of private sector investment around the CMUA that is attributable to investment in the arena. |
| **Social** | Amenity uplift/public realm benefits | The benefits from the increased local amenity and the improvements to the public realm will be realised as a result of the CMUA. High quality urban design improves safety and security, encourages community interaction and increases opportunities for informal recreation and socialisation. Such provision of amenity improvements can also result in an uplift in value of property and businesses within local areas. This is partially quantified in the land value increase evaluation. |

### Quantified costs

The following table provides an overview of the quantified costs included in the CBA analysis of the CMUA. A further breakdown of costs is presented in the Financial Case.

Table 64: Costs to be evaluated

| Cost | Description |
|---|---|
| **Project capital costs** | Construction, professional services, and associated infrastructure costs for: enabling works, site preparation, site remediation, services connections, ground improvement, main stands and seating bowl, roof, façade, event area fit out, ICT/technology, sports lighting, pitch, external concourses and transport |
| **Lifecycle Costs** | Asset maintenance and asset replacement expenses over the lifecycle of the facility |
| **Operating expenses** | Staff costs, administration, IT, marketing/communications, events and facilities management, stadium maintenance, council rates, taxes and insurance, contingency, other operating costs |
| **Bid Incentive Fund** | Incentive package includes the payment from the Council to promoters to attract events to the arena. This payment is essential to ensure the CMUA is competitive with other stadiums in New Zealand and the Asia-Pacific region<br>Part of the bid incentive fund is the top-up costs that are paid by the stadium to the promoter to compensate them for the fact they could have generated more tickets revenue if the stadium had a larger capacity |

## Non-monetised costs and economic dis-benefits

A number of qualitative costs and economic dis-benefits are likely to result as a consequence of the construction of the CMUA. These non-monetised costs are described qualitatively in Table 65 below.

Table 65: Non-monetised costs

| Category | Qualitative cost/ Disbenefit | Description |
|---|---|---|
| **Environmental** | Noise | Noise spill from the arena may affect sensitive activities, particularly residential uses north of the facility. The site is designated for arena use and does not technically require a consent for noise issues. Marshall Day's report (Section 4.7) notes, however, that noise in parts of the East Frame and around Lichfield Street may exceed 75db during concerts which could reduce public tolerance for the frequency of such events |
| **Economic** | Visitor disruption | It is expected that there will be some disruption to the enjoyment of visitors due to construction associated with CMUA in the CBD. These disruptions should be comparatively short term in nature and phased to be focussed at quieter times of the day and in off-peak months |

### Step 3: Development of assumptions to be used in the CBA

A key benefit the CMUA is intended to produce is additional tourism expenditure to the Canterbury region. In order to estimate this expenditure indicative events schedules were developed with events experts in New Zealand and overseas. The events schedules are provided on pages 83-86 and inform the estimation of tourism benefits in the following way:

- Incremental direct expenditure of the additional visitors estimated to visit the Canterbury region specifically, or extend their stay, because of an event at the new arena
- Retained direct expenditure of local visitors estimated to stay in the Canterbury region because of an event at the new arena

## Defining the Events Schedule

The CMUA is proposed to host a diverse range of events throughout the year, with a view to attracting national and international events to the Canterbury region.

The CMUA events schedule is assumed to stabilise following a three-year build-up of events. In CMUA's early years, the appeal of a new venue is likely to attract particular interest and attention from event promoters, local organisations and community groups enthusiastic to use the new facilities. This may lead to an increased event profile for the venue in the years immediately following its opening, which is likely to decrease somewhat as the calendar stabilises.

In the long-term, the CMUA's success will depend on establishing a sustainable calendar of regular events beyond its first three years of operations, coupled with appropriate incentives for event owners/promoters. The following considerations have informed the development of the events schedule:

- Due to periodic turf regeneration requirements, which would likely take place in May and October, the CMUA will be available for 46 weeks per annum
- Consultation with our local and international events experts, including reviews by Vbase, TEG Dainty, and EY's international events experts consider this to be a conservative but realistic events schedule. As competition for major events increases, a dedicated and experienced team will be required to build networks to attract additional events above and beyond the current schedule. This will be particularly important for the attraction of new and emerging events to Christchurch (such as e-Sports)
- Pack in and pack out times of 2-3 days pack-in and 2-3 days pack-out are accommodated by this schedule. This does not currently represent a constraint to the overall number of events that can be staged at the venue

- Some events are represented in the events schedule as decimals, since they do not occur every year (such as mega events) or there will be different number of events from year to year (such as Crusaders games)

It should be noted that the capacity of each option is greater in concert mode than in sports mode. Therefore, the estimated average attendance (in the events schedule) for some events may be greater than the sports mode capacity. Table 66 below details the maximum capacity of each short-list option in both sports and concert mode.

Table 66: Maximum capacity of short-list options in sports and concert modes

| | Base Case | Covered Option 2 | Covered Option 3 | Covered Option 3a (on-budget scenario) | Covered Option 4 | Hard Roof, Retractable Turf Option 8 |
|---|---|---|---|---|---|---|
| Sports mode | 18,000 | 30,000 (25,000 permanent, 5,000 temporary) | 25,000 + 500 safe standing area | 25,000 | 25,000 | 30,000 (25,000 permanent, 5,000 temporary) |
| Concert mode | 30,000 | 36,000 | 36,000 | 36,000 | 36,000 | 36,000 |

The ability of the CMUA to attract additional content to the arena will be driven by the success of:

- Attracting additional small and large-scale concerts to the venue over and above the events schedule for an average year
- Attracting other non-sporting content (e.g. Nitro Circus, e-Sports) to the venue
- The Crusaders and Canterbury Rugby in reaching the finals of their respective competitions
- Attracting international football fixtures (e.g. All Whites FIFA World Cup qualifiers) and additional A-league fixtures to the venue.

## Initial events schedule (Years 1 to 3)

Increased interest in the CMUA during its first three years of operations will likely see growth in the total number of large concerts and exhibitions held at the venue. This includes a mega-event opening act designed to attract spectators from across New Zealand to establish the reputation of the CMUA and put it 'on the map' of event promoters.

There will be a slight difference in terms of the expected average attendance for All Blacks tests as some are expected to reach capacity even in a 30,000-seat arena. Analysis indicates that it is unlikely that an increase in capacity will directly lead to an increase in attendance at other events held at the CMUA.

Table 67: Indicative events schedule for the first three years

| | Base Case "Do nothing scenario" | | Covered Option 2 25,000 permanent capacity & 5,000 temporary | | Covered Option 3 25,000 + 500 safe standing area | | Covered Option 3a (on-budget scenario) 25,000 permanent | | Covered Option 4 25,000 permanent | | Hard Roof, Retractable Turf Option 8 25,000 permanent & 5,000 temporary | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance |
| Large concerts | 0.3 | 26,000 | 3 | 28,000 | 3 | 28,000 | 3 | 28,000 | 3 | 28,000 | 3 | 28,000 |
| Smaller concerts | 3.0 | 6,000 | 4 | 10,000 | 4 | 10,000 | 4 | 10,000 | 4 | 10,000 | 4 | 10,000 |
| Other events content (non-sporting) | 0.3 | 10,000 | 2 | 10,000 | 2 | 10,000 | 2 | 10,000 | 2 | 10,000 | 2 | 10,000 |
| Super Rugby (Crusaders) | 6.5 | 11,500 | 6.5 | 15,000 | 6.5 | 15,000 | 6.5 | 15,000 | 6.5 | 15,000 | 6.5 | 15,000 |
| Domestic Rugby (Canterbury) | 4.5 | 5,500 | 4.5 | 7,000 | 4.5 | 7,000 | 4.5 | 7,000 | 4.5 | 7,000 | 4.5 | 7,000 |
| Rugby Tests (All Blacks) | 0.3 | 22,000 | 1 | 30,000 | 1 | 25,500 | 1 | 25,000 | 1 | 25,000 | 1 | 30,000 |
| Other Rugby content | 1.0 | 1,500 | 2 | 2,000 | 2 | 2,000 | 2 | 2,000 | 2 | 2,000 | 2 | 2,000 |

| | Base Case "Do nothing scenario" | | Covered Option 2 25,000 permanent capacity & 5,000 temporary | | Covered Option 3 25,000 + 500 safe standing area | | Covered Option 3a (on-budget scenario) 25,000 permanent | | Covered Option 4 25,000 permanent | | Hard Roof, Retractable Turf Option 8 25,000 permanent & 5,000 temporary | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance |
| Football | 0.3 | 12,000 | 1 | 15,000 | 1 | 15,000 | 1 | 15,000 | 1 | 15,000 | 1 | 15,000 |
| Rugby League | 0.6 | 12,000 | 1 | 18,000 | 1 | 18,000 | 1 | 18,000 | 1 | 18,000 | 1 | 18,000 |
| Large-scale exhibitions | 3.0 | 10,000 | 4 | 12,000 | 4 | 12,000 | 4 | 12,000 | 4 | 12,000 | 4 | 12,000 |
| Mega events | - | - | 0.17 | 30,000 | 0.17 | 30,000 | 0.17 | 30,000 | 0.17 | 30,000 | 0.17 | 30,000 |
| **Total** | **19.7** | | **29.2** | | **29.2** | | **29.2** | | **29.2** | | **29.2** | |

## Events schedule for an average year (Year 4 and beyond)

The following table shows an indicative events schedule once interest in the CMUA has stabilised following the initial uplift of operation. This does not include one-off events, which are assumed to occur in peak event years (as discussed later in this section). Table 68 presents the indicative events schedule for the average year following the initial three-year period.

Table 68: Indicative events schedule after initial three-year period

| | Base Case "Do nothing scenario" | | Covered Option 2 25,000 permanent capacity & 5,000 temporary | | Covered Option 3 25,500 permanent capacity (includes terraced area for 500) | | Covered Option 3a (on-budget scenario) 25,000 permanent | | Covered Option 4 25,000 permanent | | Hard Roof, Retractable Turf Option 8 25,000 permanent & 5,000 temporary | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance |
| Large concerts | 0.3 | 26,000 | 3 | 28,000 | 3 | 28,000 | 3 | 28,000 | 3 | 28,000 | 3 | 28,000 |
| Smaller concerts | 3.0 | 6,000 | 3 | 10,000 | 3 | 10,000 | 3 | 10,000 | 3 | 10,000 | 3 | 10,000 |

| | Base Case "Do nothing scenario" | | Covered Option 2 25,000 permanent capacity & 5,000 temporary | | Covered Option 3 25,500 permanent capacity (includes terraced area for 500) | | Covered Option 3a (on-budget scenario) 25,000 permanent | | Covered Option 4 25,000 permanent | | Hard Roof, Retractable Turf Option 8 25,000 permanent & 5,000 temporary | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance |
| Other events content (non-sporting) | 0.3 | 10,000 | 1 | 10,000 | 1 | 10,000 | 1 | 10,000 | 1 | 10,000 | 1 | 10,000 |
| Super Rugby (Crusaders) | 6.5 | 11,500 | 6.5 | 15,000 | 6.5 | 15,000 | 6.5 | 15,000 | 6.5 | 15,000 | 6.5 | 15,000 |
| Domestic Rugby (Canterbury) | 4.5 | 5,500 | 4.5 | 7,000 | 4.5 | 7,000 | 4.5 | 7,000 | 4.5 | 7,000 | 4.5 | 7,000 |
| Rugby Tests (All Blacks) | 0.3 | 22,000 | 1 | 30,000 | 1 | 25,500 | 1 | 25,000 | 1 | 25,000 | 1 | 30,000 |
| Other Rugby content | 1.0 | 1,500 | 2 | 2,000 | 2 | 2,000 | 2 | 2,000 | 2 | 2,000 | 2 | 2,000 |
| Football | 0.3 | 12,000 | 1 | 15,000 | 1 | 15,000 | 1 | 15,000 | 1 | 15,000 | 1 | 15,000 |
| Rugby League | 0.6 | 12,000 | 1 | 18,000 | 1 | 18,000 | 1 | 18,000 | 1 | 18,000 | 1 | 18,000 |
| Large-scale exhibitions | 3.0 | 10,000 | 3 | 12,000 | 3 | 12,000 | 3 | 12,000 | 3 | 12,000 | 3 | 12,000 |
| Mega events | 0.0 | - | 0.17 | 30,000 | 0.17 | 30,000 | 0.17 | 30,000 | 0.17 | 30,000 | 0.17 | 30,000 |
| **Total** | **19.7** | | **26.2** | | **26.2** | | **26.2** | | **26.2** | | **26.2** | |

## Events schedule for peak year

With its increased capacity, the CMUA will proactively seek to target mega events such as the Edinburgh Tattoo, Te Matatini and Andre Rieu and major sporting events such as the Rugby World Cup and HSBC Rugby Sevens tournaments. Our conservative estimate is that the CMUA could attract one mega event to the venue every six years.

Table 69 presents the indicative events schedule for the peak year period.

Table 69: Indicative events schedule for peak year

| | Base Case "Do nothing scenario" | | Covered Option 2 25,000 permanent capacity & 5,000 temporary | | Covered Option 3 25,500 permanent capacity (includes terraced area for 500) | | Covered Option 3a (on-budget scenario) 25,000 permanent | | Covered Option 4 25,000 permanent | | Hard Roof, Retractable Turf Option 8 25,000 permanent & 5,000 temporary | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance |
| Large concerts | 0.3 | 26,000 | 3 | 28,000 | 3 | 28,000 | 3 | 28,000 | 3 | 28,000 | 3 | 28,000 |
| Smaller concerts | 3.0 | 6,000 | 3 | 10,000 | 3 | 10,000 | 3 | 10,000 | 3 | 10,000 | 3 | 10,000 |
| Other events content (non-sporting) | 0.3 | 10,000 | 2 | 10,000 | 2 | 10,000 | 2 | 10,000 | 2 | 10,000 | 2 | 10,000 |
| Super Rugby (Crusaders) | 6.5 | 11,500 | 7.5 | 15,000 | 7.5 | 15,000 | 7.5 | 15,000 | 7.5 | 15,000 | 8 | 15,000 |
| Domestic Rugby (Canterbury) | 4.5 | 5,500 | 5.5 | 7,000 | 5.5 | 7,000 | 5.5 | 7,000 | 5.5 | 7,000 | 6 | 7,000 |
| Rugby Tests (All Blacks) | 0.3 | 22,000 | 1 | 30,000 | 1 | 25,500 | 1 | 25,000 | 1 | 25,000 | 1 | 30,000 |
| Other Rugby content | 1.0 | 1,500 | 2 | 2,000 | 2 | 2,000 | 2 | 2,000 | 2 | 2,000 | 2 | 2,000 |
| Football | 0.3 | 12,000 | 2 | 15,000 | 2 | 15,000 | 2 | 15,000 | 2 | 15,000 | 2 | 15,000 |
| Rugby League | 0.6 | 12,000 | 1 | 18,000 | 1 | 18,000 | 1 | 18,000 | 1 | 18,000 | 1 | 18,000 |
| Large-scale exhibitions | 3.0 | 10,000 | 3 | 12,000 | 3 | 12,000 | 3 | 12,000 | 3 | 12,000 | 3 | 12,000 |

| | Base Case "Do nothing scenario" | | Covered Option 2 25,000 permanent capacity & 5,000 temporary | | Covered Option 3 25,500 permanent capacity (includes terraced area for 500) | | Covered Option 3a (on-budget scenario) 25,000 permanent | | Covered Option 4 25,000 permanent | | Hard Roof, Retractable Turf Option 8 25,000 permanent & 5,000 temporary | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance | Number of Events | Expected Average Attendance |
| Mega events | 0.0 | 0 | 0.17 | 30,000 | 0.17 | 30,000 | 0.17 | 30,000 | 0.17 | 30,000 | 0.17 | 30,000 |
| **Total** | **19.7** | | **30.2** | | **30.2** | | **30.2** | | **30.2** | | **30.2** | |

## Non-event day utilisation

High utilisation of the CMUA is dependent upon developing and growing a non-event day revenue stream, which can be achieved by hosting various functions, meetings and community events. Table 70 presents the estimated average number of non-event day functions that may be held at the CMUA during a typical year. It is not anticipated that this will vary between each of the project options.

In estimating the non-event day utilisation, it is acknowledged that Te Pae will also host exhibitions, but these are likely to be operating in a different market to the CMUA.

Table 70: Non-event day utilisation

| Event | Definition | Average number per year | Average attendance |
|---|---|---|---|
| **Community Events** | Community group space use (often at discounted rates) | 5-10 | 50-100 |
| **Conference Events** | Plenary sessions or dinners as part of broader conference offering | Dependent on interface with Te Pae | Dependent on interface with Te Pae |
| **Functions** | Cocktail functions, Christmas parties, weddings (150 to 250 pax.) | 75 | 200 |
| **Meetings** | Smaller business meetings (20 to 40 pax) | 100 | 30 |

## Quantified benefits: Value added for incremental visitor expenditure

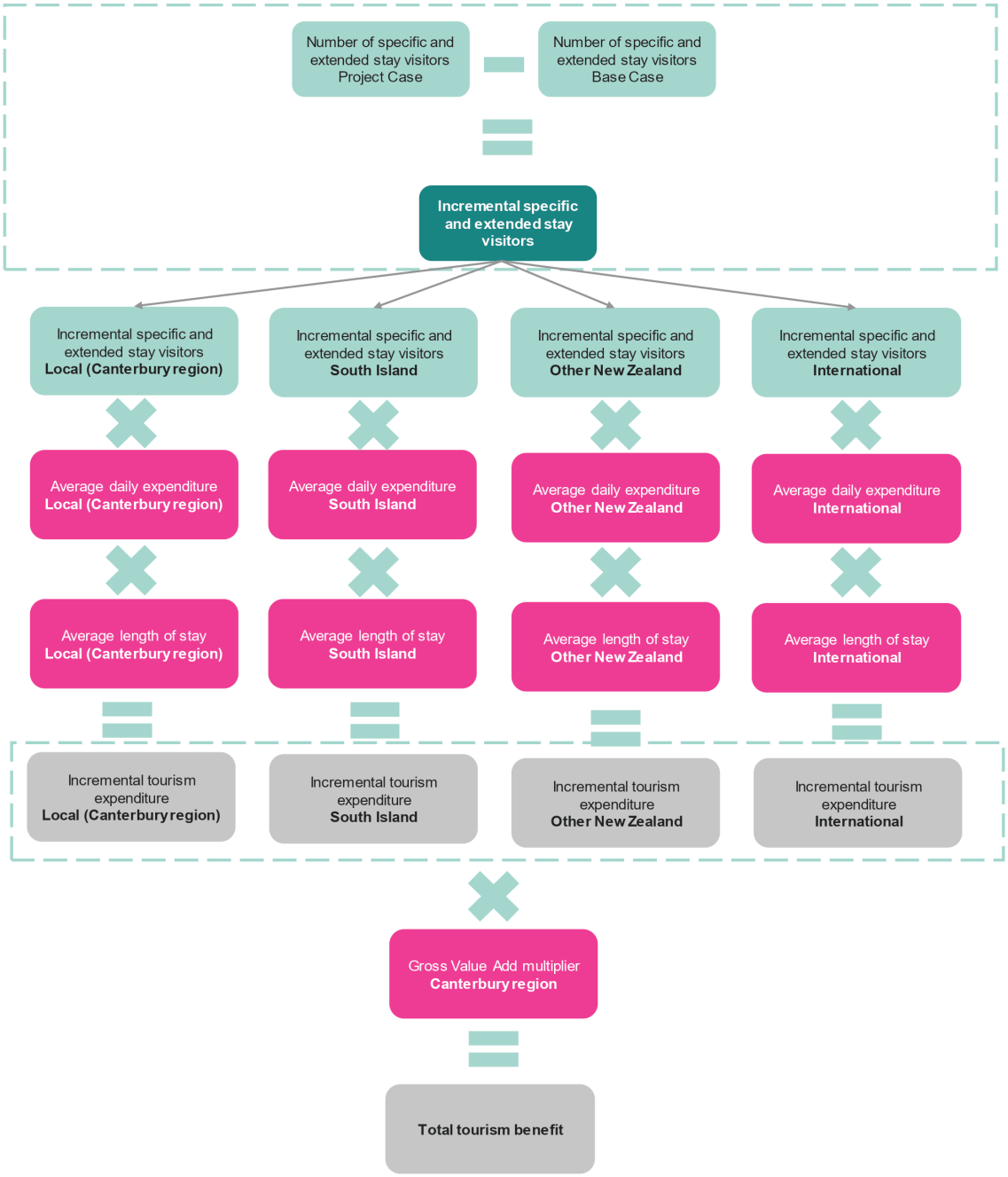
The ability of the CMUA to attract additional out-of-region visitors to Canterbury and retain local spectators who are currently travelling outside the region to attend events represents a benefit to the Canterbury region.

The methodology applied to quantify this benefit estimates the incremental economic impact to the Canterbury region from the project options because of events at the CMUA compared to the Base Case. This is achieved by estimating:

1. Incremental direct expenditure of the additional visitors estimated to visit the Canterbury region specifically, or extend their stay, because of an event at the new arena.
2. Retained direct expenditure of local visitors estimated to stay in the Canterbury region because of an event at the new arena.

The methodology used to quantify the value added for incremental visitor expenditure is presented in Figure 15 and described in further detail in the following sections.

Figure 15: Value added for incremental visitor expenditure



Using benchmark data from previous comparable events and information provided by Vbase, Christchurch NZ and publicly available information, the following key assumptions have been developed:

- Projected average number of events by event type held at Christchurch Stadium annually (Base Case)
- Average attendance by event type for events held at Christchurch Stadium (Base Case)
- Origin profile of spectators (i.e. local, other South Island, other New Zealand and international)
- Number of local spectators who would have otherwise left Canterbury to attend events not included in the Base Case (retained visitation)
- The level of specific and extended stay visitation (i.e. spectators who may come to Canterbury specifically for an event or extend their stay because of it)
- Average length of stay of local (retained visitation only), other South Island, other New Zealand and international visitors
- Average daily expenditure of local (retained visitation only), other South Island, other New Zealand and international visitors
- Other attendees (e.g. teams, media, officials, delegates etc.) who will visit Canterbury because of an event

Consistent with accepted benefits analysis practice, the tourism related expenditure estimates included in the CBA are the gross value added (GVA) portion of the direct expenditure only. GVA broadly equates to output less the costs of producing the output.

GVA has been estimated using input-output (multiplier) analysis. Input-output analysis represents the total change in economic activity in a region based on the change in activity from a given sector. These models assume that the resources needed to support output are available and as such are not 'diverted' from other activity, and so the models show the activity 'supported' by investment.

For this analysis, tourism expenditure is converted to value added by applying the direct expenditure to value add ratio of 42.2%. This ratio is the mid-point between two ratios: the Canterbury-specific ratio found in the input-output analysis (~48%) and the national ratio recommended in MBIE's event evaluation guidelines (36%). As this ratio is below the estimated Canterbury direct expenditure to value add ratio, we consider this to be a conservative estimate.

The following tables provide an overview of key assumptions that underpin calculation of economic benefits.

Table 71: Origin profile

| Region | Large concerts | Smaller concerts | Other events content | Super Rugby | Domestic Rugby | Rugby Tests | Other Rugby content | Football | Rugby League | Large-scale exhibitions | Mega events |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Local (Canterbury region) | 65% | 65% | 55% | 69% | 88% | 43% | 95% | 65% | 65% | 78% | 40% |
| South Island | 20% | 20% | 40% | 20% | 10% | 30% | 5% | 25% | 25% | 20% | 30% |
| Other New Zealand | 15% | 15% | 5% | 10% | 3% | 20% | <1% | 10% | 10% | 3% | 20% |
| International | 0% | 0% | 0% | 0% | 0% | 8% | 0% | 1% | 1% | 0% | 10% |

Table 72: Specific and extended stay

| Region | Large concerts | Smaller concerts | Other events content | Super Rugby | Domestic Rugby | Rugby Tests | Other Rugby content | Football | Rugby League | Large-scale exhibitions | Mega events |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Local (Canterbury region) | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| South Island | 85% | 85% | 85% | 85% | 50% | 95% | 100% | 85% | 85% | 75% | 95% |
| Other New Zealand | 75% | 75% | 75% | 75% | 75% | 95% | 0% | 75% | 75% | 75% | 95% |
| International | 90% | 90% | 0% | 90% | 0% | 95% | 0% | 90% | 90% | 0% | 95% |

In the Base Case, it is assumed that many Cantabrians will continue to travel to other regions of New Zealand to attend All Blacks tests and large concerts that do not come to Christchurch. Assuming individuals have a fixed discretionary income for entertainment, this represents a lost economic benefit to the Canterbury region under the Base Case scenario.

We have calculated the proportion of Cantabrians attending events in other regions to be **15%**. This proportion is based on historical attendance of Cantabrians at large events at Westpac Stadium in Wellington.

Table 73: Average length of stay (days)

| Region | Large concerts | Smaller concerts | Other events content | Super Rugby | Domestic Rugby | Rugby Tests | Other Rugby content | Football | Rugby League | Large-scale exhibitions | Mega events |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Local (Canterbury region) | - | - | - | - | - | - | - | - | - | - | - |
| South Island | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Other New Zealand | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 |
| International | - | - | - | 3 | - | 4 | - | 3 | 3 | - | - |

Table 74: Average daily spend (excluding ticket price)

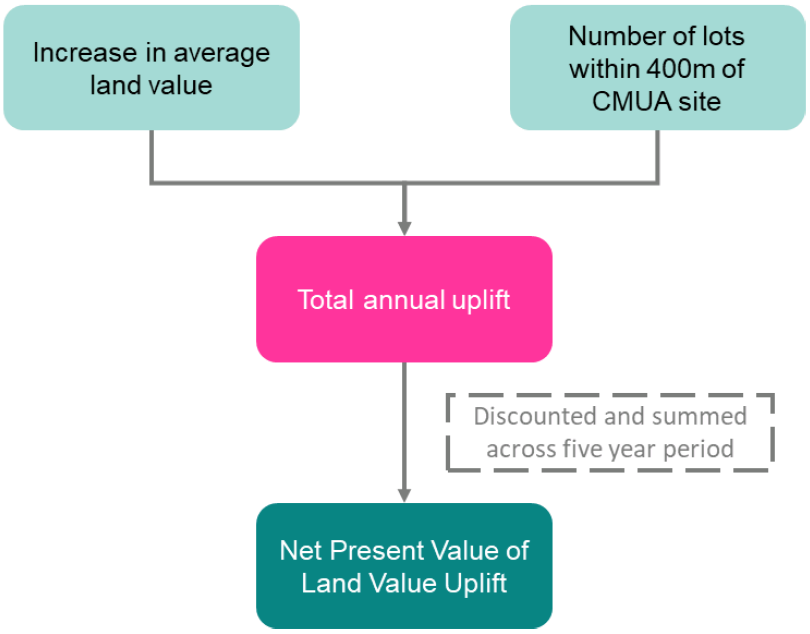
| Region | Large concerts | Smaller concerts | Other events content | Super Rugby | Domestic Rugby | Rugby Tests | Other Rugby content | Football | Rugby League | Large-scale exhibitions | Mega events |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Local (Canterbury region) * | - | - | - | - | - | - | - | - | - | - | - |
| South Island | $175 | $175 | $175 | $175 | $175 | $175 | $175 | $175 | $175 | $175 | $175 |
| Other New Zealand | $200 | $200 | $200 | $200 | $200 | $200 | $200 | $200 | $200 | $200 | $200 |
| International | $250 | $250 | $250 | $250 | $250 | $250 | $250 | $250 | $250 | $250 | $250 |

*Retained local spectators only

## Land Value Uplift

Land value uplift measures the rise or 'uplift' in land values near the arena due to the increased attractiveness of the area as a result of increased footfall, investment certainty, and anticipated expenditure. To estimate the value, the following process was undertaken (as illustrated in Figure 16).

Figure 16: Land Value Uplift methodology




The land value uplift was estimated based on existing land values and the impact of arenas on land values in international settings as presented in Table 75 below.

Table 75: Impact of stadium/sports facilities on land value

| Arena | Location | Land value uplift (%) (within 1km from stadium/arena) | Relevance to CMUA |
|---|---|---|---|
| **Max-Schmeling-Halle Multi-Purpose Arena** | Berlin | 3.6% | • Densely populated CBD location<br>• Land values<br>• Explicitly designed to improve neighbourhood quality |
| **Velodrome** | Berlin | 7.7% | • Densely populated CBD location<br>• Land values<br>• Explicitly designed to improve neighbourhood quality |
| **London Stadium (formerly Olympic Stadium)** | Stratford, London | 3.0% | • Property values<br>• Densely populated residential area<br>• Stadium part of a successful regeneration of the area |
| **Announcement of Football Stadium** | Arlington, Texas | -1.5% | • Property values<br>• Densely populated CBD location |
| **New Wembley** | London | 15.0% | • Property values<br>• Densely populated residential area<br>• Stadium part of a successful regeneration of the area |

This land value increase represents only the 'added value' to the land as a result of the CMUA investment and does not include stimulated investment (i.e. new development) that may also take place. To estimate the land value uplift, the following steps were taken:

- The average land value in the area extending 400m from the boundary of the CMUA site was determined
- A 3% increase (a conservative estimate of the uplift percentages found in the above studies) to the average land value was progressively applied over a five-year time period. The increase in uplift is assumed to begin in 2019 as the arena is announced and investor certainty rises. After 2019, land values increase at an increasing rate until they reach a total uplift of 3% in 2024, the year the CMUA opens. After 2024, the additional impact on land values attributable to the CMUA is assumed to fall to zero, with land values moving in line with the market rate. This stage involved the following steps:

  1. Estimation of the cumulative percentage increase of the average land value in each year using the following calculation:

$$Cumulative\ uplift_t = \frac{3\%}{(5-t)^{1.4}}$$

     **In the calculation, as the time period approaches the fifth and final year of uplift the denominator approaches 1 so the cumulative percentage approaches 3%. The exponential factor of 1.4 was used to model land values rising at an increasing rate over the time period.**

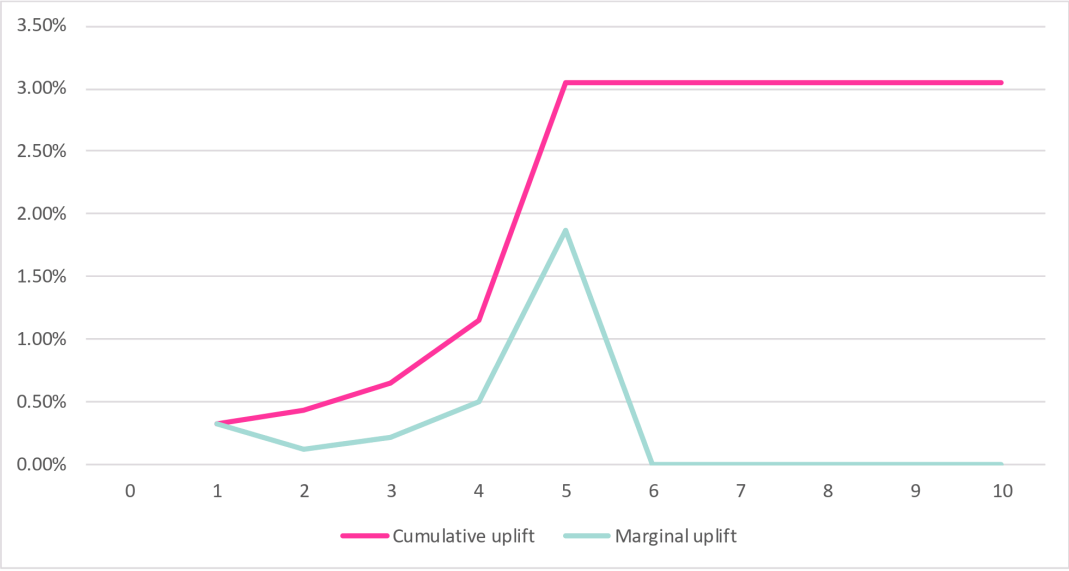
  2. This uplift percentage from each year was applied to the initial average land value to estimate the average land value, i.e.:

$$Average\ land\ value_t = Average\ land\ value_{t=2019} * (1 + Cumulative\ uplift_t)$$

  3. The average marginal uplift (the land value uplift in each period) was then the increase in the average land value between each period.

Figure 17 below illustrates the cumulative uplift and marginal uplift percentages discussed in the steps above over time:

Figure 17: Cumulative and Marginal uplift percentages



The increase in the average land value was multiplied by the number of lots in the area to give total annual uplift values.

The total land value uplift is estimated to result in a net present value (NPV) benefit of **$16.7 million.** It is expected that the expected land value uplift will be consistent across all project options.

## Consumer Surplus

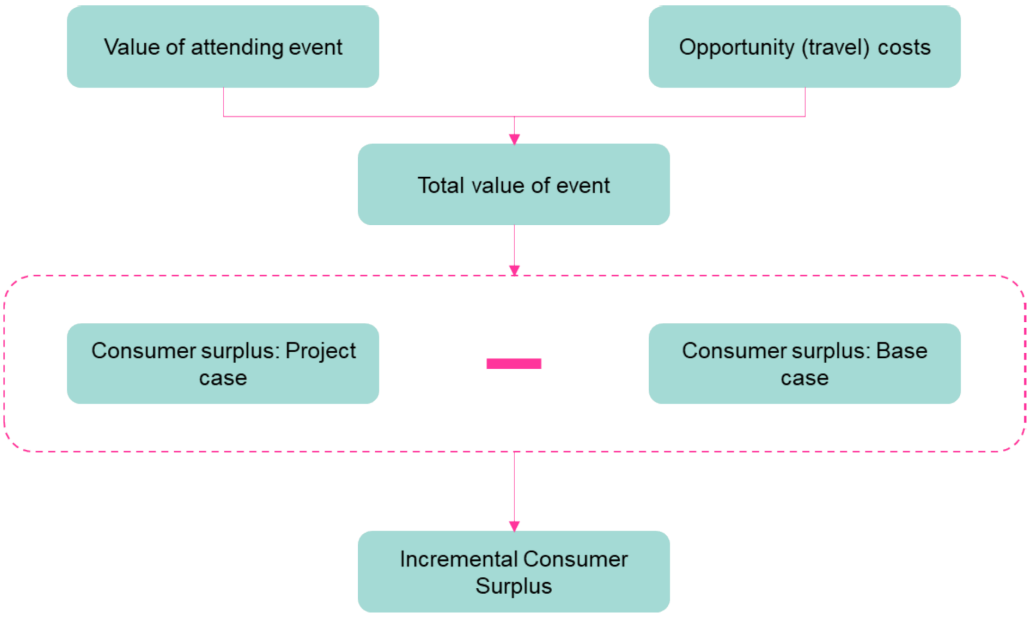
Consumer surplus is a net benefit that can be defined as the difference between what people were willing-to-pay to attend an event versus what they paid.

Consumer surplus was estimated in two parts:

1. The consumer surplus derived at the event itself
2. The consumer surplus represented by the opportunity cost of attending the event i.e. what the consumer is willing to give up in order to attend the event. This component was calculated by estimating travel costs and the time required to travel to and attend the event

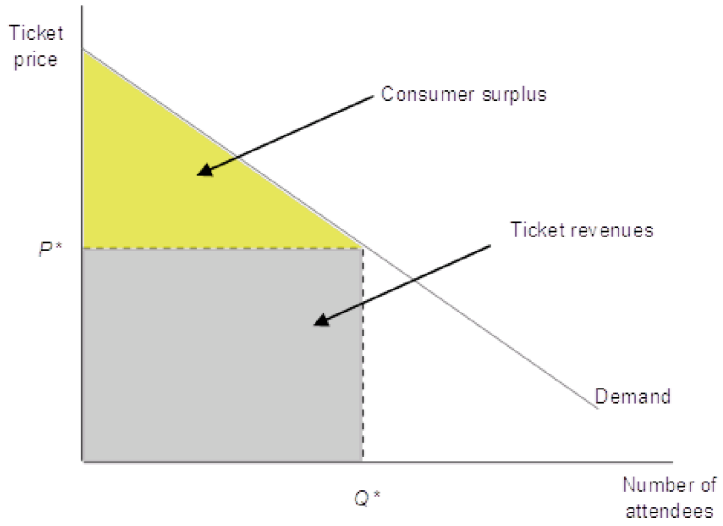
Figure 18 below illustrates the estimation of consumer surplus in this analysis.

Figure 18: Consumer surplus methodology




A graphical representation of consumer surplus derived from willingness to pay for attendance to an event is presented in Figure 19 below. It shows a downward sloping demand curve which indicates different levels of demand at different ticket prices. The amount that people are willing to pay for the event is the area underneath the demand curve. At the price point $P^*$, the amount of people that would purchase tickets would be $Q^*$, and revenues to the event organiser would be the shaded box $P^* \times Q^*$. The consumer surplus benefit to the consumer is therefore the amount they were willing to pay (the area underneath the demand curve up to Q*) less the amount they actually paid ($P^* \times Q^*$) – this can be represented by the triangle above the price point.

Figure 19: Consumer surplus derived from a spectator's willingness-to-pay for attendance




While the value of what individuals pay to attend events can be derived from historical data, measuring the amount that consumers were willing-to-pay is not easily measured. Consumer surplus is likely to differ between each person as they would value their attendance differently depending on their tastes, affinity to sports/cultural events/entertainment, income levels, and the 'price elasticity' of their demand (i.e. whether their demand is sensitive to price).

### Consumer surplus derived from attending an event

Given that it was not possible to carry out surveys of attendees at either Christchurch Stadium or the project options, for this analysis, the first component of consumer surplus is approximated by applying a percentage on projected ticket revenues based on consumer surplus estimates from other studies. Studies that have valued consumer surplus of events are presented in Table 76 estimates a range between 10.8% and 62% of ticket revenues.

Table 76: Consumer surplus estimates from previous studies

| Study/reference | Basis | Consumer surplus estimate as a % of ticket revenues (user costs) |
|---|---|---|
| Economic Evaluations Outcomes: Major events Development Fund, Meta-Evaluation Report, New Zealand Ministry of Business Innovation and Employment (May 2013) | Research conducted for major events suggests that consumer surplus typically averages approximately 20 per cent of domestic ticket sales. | 20% |
| Commissioned Study A in Victorian Auditor General's Report into *State Investments into Major Events* (2007) | Consumer surveys by the Centre of Tourism Research for the 2000 V8 Supercar event in Canberra. | 10.8% |
| McHugh (2006) A CBA of an Olympic Games, *Queen's Economics Department Working Paper No. 1097*. | Anecdotal evidence from aftermarket prices obtained for tickets to popular events at previous Olympic Games. | 15% to 50% for popular events and up to 15% for less popular events. |
| Layson (2005) "The Estimation of Consumer Surplus Benefits from a City Owned Multipurpose Coliseum Complex" *Journal of Real Estate Research.* 27(2): 221-236. | Using regression analysis to derive a demand curve, Layson estimated consumer surplus at $12.1 million, with ticket revenues of 19.4 million (based on an average ticket price of $US 11.38 and attendance of 1.7 million. | 62% |

For the purposes of this analysis, we have assumed that the consumer surplus is correlated both with the profile of events and the quality of the facility in which the events are held. This assumption aims to account for the increased benefit derived from watching an event (e.g. All Blacks test) in an indoor high-quality arena, compared to the same event in the current temporary outdoor arena.

As this CBA is performed from the view point of the Canterbury community, only the consumer surplus generated from local patrons has been included.

For the purposes of this assessment, a consumer surplus of **10%** is applied to projected local ticket revenues under the Base Case and **30%** is applied to projected local ticket revenues under the project options. The benefit included in the analysis is the difference between the estimated consumer surplus under the Base Case and the project case.

### Opportunity cost of attending an event

The opportunity cost component of consumer surplus was estimated using the following methods:

- The 'out-of-pocket' travel costs were estimated by considering distance travelled, mode of transport, and parking costs
- The time costs were estimated by multiplying the time an individual requires to travel to and attend the event by NZTA's value of leisure/non-work time per hour, which is $10.34 in current dollars
- These were combined and multiplied by the estimated attendance for both the Base Case and the project cases to get the total opportunity costs for the Base Case as well as the project case

The opportunity cost component of consumer surplus was combined and multiplied by 30% and 10% to give an overall estimate for consumer surplus for both the project case and the Base Case, respectively. The incremental consumer surplus is the consumer surplus derived from the project case minus that from the Base Case i.e. it is the additional consumer surplus Cantabrians receive over and above the amount they receive under the Base Case. This is the value used in the rest of the CBA since it represents the increase in consumer surplus attributable to the CMUA.

### Results

The estimated consumer surplus generated by the CMUA over the model period is presented in Table 77 below.

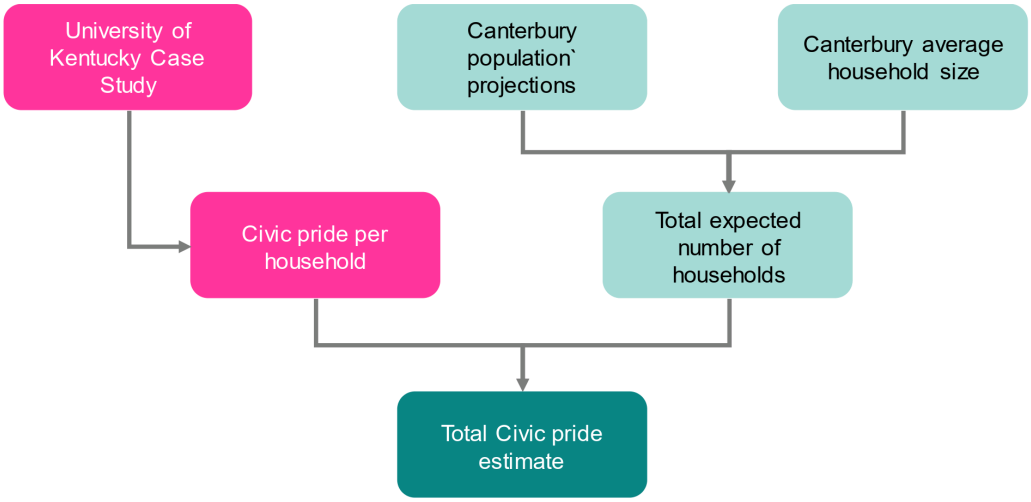
Table 77: Benefit – Consumer surplus (PV) ($m)

| | Covered Option 2<br>25,000 permanent capacity & 5,000 temporary | Covered Option 3<br>25,500 permanent capacity (includes terraced area for 500) | Covered Option 3a (on-budget scenario)<br>25,000 permanent | Covered Option 4<br>25,000 permanent | Hard Roof, Retractable Turf Option 8<br>25,000 permanent & 5,000 temporary |
|---|---|---|---|---|---|
| Consumer surplus | $105.2 | $104.0 | $103.9 | $103.9 | $117.2 |

## Civic pride

Canterbury residents can value a stadium even if they do not attend any events held at the venue. This measure is commonly refered to as the existence value or the civic pride obtained because of the presence of an asset or activity within one's locality. As with consumer surplus estimates, placing a value on civic pride can be problematic and would typically involve contingent valuation and survey techniques to understand how much people are willing to pay for a new stadium. For the purposes of this study, the benefit transfer approach has been applied using a comparable study in the United States as presented in the case study on the following page. The civic pride calculation is summarised in Figure 20.

Figure 20: Civic Pride Calculation




**Case Study: University of Kentucky[18]**

A contingent valuation method (CVM) was applied to measure the value of public goods generated by a new basketball arena for the University of Kentucky. The study asked the following key questions to residents:

*"Would you be willing to pay $X per year out of your own household budget in higher taxes to help pay for a new arena?"*

- Respondents were presented with one of four different values for X: $1, $5, $10, or $25.

The willingness-to-pay values were elicited with a payment card format:

*"What is the most you would be willing to pay out of your own household budget per year to make a new arena possible?"*

- The potential responses were zero, between $0.01 and $4.99, between $5 and $14.99, between $15 and $29.99, between $30 and $49.99, between $50 and $75, and more than $75.

It is recognised that a limitation of this analysis is the use of secondary information from studies conducted in other jurisdictions as well as on events that are of a different nature to that proposed for the stadium. For instance, people in other jurisdictions may value the civic pride associated with stadiums and sports events differently than Canterbury residents (either more or less). However, whilst there are limitations to the benefits transfer approach, the University of Kentucky arena is considered generally comparable to the project case. Both arenas are planned to replace an existing stadium and the anchor tenants generate significant interest from the local community. It could be argued that using this study as a benchmark may be conservative given the University of Kentucky arena is unlikely to attract the same profile of events as the CMUA, such as the large concerts or mega events which are assumed to support civic pride.

Converting the results of this study into $NZD and inflating to December 2018 dollars, the estimated average willingness to pay per household is $20 per year. The total annual civic pride for the Canterbury region was estimated by multiplying the benefit per household by the forecast number of households over the analysis period. This data is summarised in Table 78 and Table 79.

Table 78: Average household size

| Assumption | Unit | Source |
|---|---|---|
| Average household size | 2.7 | NZ 2013 Census data |

[18] **Johnson, Bruce K., and John C. Whitehead (2000) Value of Public Goods from Sport Stadiums: The CVM Approach, Contemporary Economic Policy, 18(1): 48-58. (Jan 2000) Published by the Western Economic Association (ISSN: 1074-3529).**

Table 79: Total population projection

| Arena | 2018 | 2023 | 2028 | 2033 | 2038 | 2043 |
|---|---|---|---|---|---|---|
| Canterbury population projections | 623,200 | 664,200 | 694,300 | 721,700 | 745,800 | 767,300 |

Source: StatsNZ

Using the data in the above tables, the PV of the civic pride benefit for each option was estimated to be **$53.9 million**. It is expected that the expected land value uplift will be consistent across all project options.

## Quantified costs

The expected annual costs of the CMUA to the public sector were determined through the development of a Financial Model, details of which are provided in the Financial Case.

The costs of the CMUA to the public sector comprise:

- Capital costs for the development, design and construction of the facility
- Lifecycle costs covering the replacement or refurbishment of CMUA components
- Operating costs relating to the operation of the facility, including pre-opening costs
- A Bid Incentive Fund to attract high profile events to the CMUA.

It is to be noted that procurement costs will be incorporated into the Financial Model upon selection of the preferred procurement model. The costs for each project option are sumarised in Table 80 below.

The costs presented throughout the Economic Case are incremental to the Base Case costs. That is, they are the total project costs minus the Base Case costs. In the Financial Case, however, total costs are presented since the Financial Case deals with overall affordability not value for money.

Table 80: Total costs of Short-List Options (PV) ($m)

| Costs | Covered Option 2<br>25,000 permanent capacity & 5,000 temporary | Covered Option 3<br>25,500 permanent capacity (includes terraced area for 500) | Covered Option 3a (on-budget scenario)<br>25,000 permanent[19] | Covered Option 4<br>25,000 permanent | Hard Roof, Retractable Turf Option 8<br>25,000 permanent capacity & 5,000 temporary |
|---|---|---|---|---|---|
| Capital expenditure | $361.9 | $355.5 | $333.0 | $355.5 | $437.2 |
| Lifecycle costs | $11.7 | $11.0 | $10.2 | $11.0 | $32.7 |
| Operating expenditure | $105.0 | $104.9 | $104.9 | $104.9 | $108.4 |
| Bid Incentive Fund | $2.5 | $7.2 | $7.9 | $7.9 | $2.9 |
| **Total cost** | **$481.0** | **$478.6** | **$456.0** | **$479.3** | **$581.2** |

## Bid Incentive Fund

A bid incentive fund is required to encourage event promoters to bring events to the CMUA and ensure it hosts a diverse range of events. An incentive fund is likely to be required to attract All Blacks tests, large-scale concerts, international rugby league and football fixtures and other(non-sporting) events to the CMUA. The fund is comprised of:

[19] Please note development of Covered Option 3a (on-budget scenario) and associated potential capital saving opportunities will be further examined during the Detailed Design phase. Forecast operating revenue and costs may change depending on which, if any, saving opportunities are selected and may require the assumptions of the Financial Case to be updated.

- An incentive package that includes incentive payments to promoters to attract events to the arena. This payment is essential to ensure the CMUA is competitive with other stadiums in New Zealand and the Asia-Pacific region
- A small amount for top-up costs are paid by the arena to some content providers that derive revenue from seated events to compensate some content providers for the relatively smaller scale of this facility (e.g. 25,500 versus 30,000+). Using incentives as 'top ups' means that the venue can be of a size that is appropriate for most Christchurch events, and where an arena of 30,000+ would be seen as too large but allows for the opportunity to attract events that normally would only play at venues with larger capacities.

The average incentive payments required to attract each event to the arena is presented in the Financial Case. These amounts do not include other advertising or events promotion for other venue, or what is undertaken as part of marketing for Christchurch overall. These incentives have been benchmarked against other similar New Zealand venues, and have been provided by stadium experts in New Zealand and Australia.

An incentive fund will be required in the years prior to the opening of the CMUA in order to attract events to the venue once the CMUA is operational. It also anticipated that the average incentive payments required to attract premium content to Christchurch will increase in the years following the opening of the CMUA. This is likely to occur as a direct result of the increasingly competitive landscape for major events in New Zealand, with the bid incentive fund allocation to be continually assessed on an ongoing basis.

## Stage 4: Overall outputs of the CBA

Our analysis has estimated the monetary costs and benefits associated with each project option in comparision to the Base Case. It is important to note that the qualitative costs and benefits are not assessed in the CBA and should be taken into consideration alongside the CBA results.

This analysis calculates a Benefit Cost Ratio (BCR) for each option. The BCR is the present value of all quantified monetary benefits divided by the present value (using a 6% discount rate) of all quantified monetary costs. A BCR that is greater than one implies a positive NPV.

Note that the operating results in the Economic Case will not necessarily tie directly to the Financial Case as they were prepared on a different basis.

## Summary of Costs and Benefits

Table 81 summarises the results of the CBA for each project option, with all results discounted and reported as present values. The quantified benefits are all incremental to the Base Case i.e. they are marginal benefits that are attributable to the project option that would have not been realised under the Base Case.

Table 81: Summary of Costs and Benefits (PV) ($m)

| | Covered Option 2<br>25,000 permanent capacity & 5,000 temporary | Covered Option 3<br>25,500 permanent capacity (includes terraced area for 500) | Covered Option 3a (on-budget scenario)<br>25,000 permanent | Covered Option 4<br>25,000 permanent | Hard Roof, Retractable Turf Option 8<br>25,000 permanent capacity & 5,000 temporary |
|---|---|---|---|---|---|
| Total Costs (PV) ($m) | $481.0 | $478.6 | $456.0 | $479.3 | $581.2 |
| Total Benefits (PV) ($m) | $408.9 | $401.7 | $395.6 | $401.0 | $457.5 |
| **Net Costs and Benefits (PV) ($m)** | **($72.2)** | **($76.9)** | **($60.5)** | **($78.3)** | **($123.7)** |
| **Benefit Cost Ratio** | **0.85** | **0.84** | **0.87** | **0.84** | **0.79** |

The overall value for money of an option is summarised by the associated Benefit-Cost Ratio (BCR). BCRs represent the economic gain to the Canterbury region realised from that option (i.e. benefits) versus the amount it costs to execute that option (i.e. costs). It is calculated as the presents value of all quantified monetary benefits divided by the present value of all quantified monetary costs. If the benefits are greater than the costs, then the BCR is greater than 1. Conceptually, a BCR below 1 can be thought of as spending $1 to achieve less than $1 in benefits, and a BCR above one the inverse.

There are limitations, however, to the completeness of any BCR analysis. Some benefits and costs cannot be practically quantified due to a lack of data, and others are conceptually compelling and based on strong theoretical grounds (the arena improves subjective well-being by allowing for large events to be held in the CBD), but the benefits cannot be quantified for methodological reasons. This means that qualitative factors and the overall strategic environment must also be considered when making an investment decision

Table 82 summarises the PV results of the economic CBA by major cost and benefit categories.

Table 82: Cost-Benefit Results (PV) ($m)

| | Covered Option 2<br>25,000 permanent capacity & 5,000 temporary | Covered Option 3<br>25,500 permanent capacity (includes terraced area for 500) | Covered Option 3a (on-budget scenario)<br>25,000 permanent | Covered Option 4<br>25,000 permanent | Hard Roof, Retractable Turf Option 8<br>25,000 permanent capacity & 5,000 temporary |
|---|---|---|---|---|---|
| **Costs (PV) ($m)** | | | | | |
| Capital expenditure | $361.9 | $355.5 | $333.0 | $355.5 | $437.2 |
| Lifecycle costs | $11.7 | $11.0 | $10.2 | $11.0 | $32.7 |
| **Operating expenditure** | $105.0 | $104.9 | $104.9 | $104.9 | $108.4 |
| Bid Incentive Fund | $2.5 | $7.2 | $7.9 | $7.9 | $2.9 |
| **Total cost** | **$481.0** | **$478.6** | **$456.0** | **$479.3** | **$581.2** |
| **Benefits (PV) ($m)** | | | | | |
| **Tourism** | $88.6 | $84.4 | $83.9 | $83.9 | $99.8 |
| **Consumer surplus** | $105.2 | $104.0 | $103.9 | $103.9 | $117.2 |
| **Land value uplift** | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 |
| **Civic pride** | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 |
| **Residual asset value** | $48.2 | $47.2 | $44.3 | $47.2 | $67.3 |
| **Operating revenue** | $96.2 | $95.4 | $92.7 | $95.3 | $102.6 |
| Total benefits | **$408.9** | **$401.7** | **$395.6** | **$401.0** | **$457.5** |
| **Outputs** | | | | | |
| Net Benefit (Cost) | **($72.2)** | **($76.9)** | **($60.5)** | **($78.3)** | **($123.7)** |
| Benefit-Cost Ratio (BCR) | **0.85** | **0.84** | **0.87** | **0.84** | **0.79** |

# 18. Stage 4: Affordability Assessment

An assessment on the overall cost and affordability for the development, design and construction of the facility for each project option has been undertaken as part of the short-list options assessment. This has been assessed against the construction cost estimates for the CMUA which have been prepared by WTP for the Council for the purpose of providing a high-level cost estimate for the CMUA.

## Funding sources

Funding for the CMUA will need to be met through a combination of capital funding from the Christchurch City Council and the Crown. The total funding available for the construction of the CMUA is presented in Table 83 below.

Table 83: CMUA funding sources (nominal)

| | Funding ($m) |
|---|---|
| **Capital funding contribution** | |
| Christchurch City Council contribution | $253 |
| Christchurch Regeneration Acceleration Facility (CRAF) | $220 |
| **Total** | **$473** |

## Capital cost affordability assessment

Each project option has been assessed in terms of its affordability. Table 84 provides an assessment of the capital cost affordability for each project option.

Table 84: Capital cost affordability ($m) (nominal, 30 year assessment period)

| | Covered Option 2<br>25,000 permanent capacity & 5,000 temporary | Covered Option 3<br>25,500 permanent capacity (includes terraced area for 500) | Covered Option 3a (on-budget scenario)<br>25,000 permanent | Covered Option 4<br>25,000 permanent | Hard Roof, Retractable Turf Option 8<br>25,000 permanent capacity & 5,000 temporary |
|---|---|---|---|---|---|
| Estimated capital expenditure | $471.0 | $462.7 | $439.4 | $462.7 | $579.5 |
| Total Council and Crown funding contribution | $473.0 | $473.0 | $473.0 | $473.0 | $473.0 |
| **Capital funding surplus (shortfall)** | **$2.0** | **$10.3** | **$33.6** | **$10.3** | **($106.5)** |

This covers the entire delivery cost of the project, and unlike in the earlier analysis does not represent a marginal analysis relative to the base case. This is because this represents a financial analysis, and there are capital allocations made for the ongoing maintenance of the temporary stadium. The costs include professional fees, project management, and other establishment costs, as well as contingency and escalation. These costs are not offset by capital contributions under the base case, as there are no budgeted costs for the ongoing use of the temporary stadium past 2024.

To provide a more robust affordability assessment, a quantitative risk assessment (QRA) was carried out for the options that met the affordability threshold in the initial assessment (Options 2-4). Table 45 provides an assessment of the capital cost affordability for each project option. This includes the results of a subsequent QRA prepared for Covered Option 3a following consideration of the draft investment case and subsequent affordability review. The costs below are P85, which means that it is considered 85% likely that actual costs will be at or below the estimated value.

Table 85: P85 Capital Cost Affordability ($m) (nominal, 30 year assessment period)

| | Covered Option 2<br>25,000 permanent capacity & 5,000 temporary | Covered Option 3<br>25,500 permanent capacity (includes terraced area for 500) | Covered Option 3a (on-budget scenario)<br>25,000 permanent | Covered Option 4<br>25,000 permanent | Retractable Option 8<br>25,000 permanent capacity & 5,000 temporary |
|---|---|---|---|---|---|
| Estimated P85 capital expenditure | $482.7 | $476.4 | $472.7 | $476.4 | n/a |
| Total Council and Crown funding contribution | $473.0 | $473.0 | $473.0 | $473.0 | $473.0 |
| **Capital funding surplus (shortfall)** | **($9.7)** | **($3.4)** | **$0.3** | **($3.4)** | **n/a** |

## Results

- Option 3 and Option 4 both exceeded the available Crown and Council funding allocation however are deemed affordable as the $3.4m capital deficit of these options under the P85 QRA were considered to be within the margins of error for this type of analysis
- The QRA shows that Option 2 delivers a P85 capital funding deficit of $9.7 million as a direct result of the capital expenditure required to purchase the temporary seats. It was concluded that the additional benefits did not provide value for money or warrant justification for the Council to seek additional funding
- Option 8 was deemed to be unaffordable under virtually any circumstance. It is not expected to attract significantly greater content or attendance than the other short-listed options but will cost $108.5m more than the next most expensive option
- Option 3a (on-budget scenario) delivers a $0.3m P85 capital funding surplus, meaning we can expect the project to be delivered within the available funding budget at least 85% of the time

It is to be noted that operating expenditure for the preferred option will be assessed in the Financial Case and will be funded through:

- Operating revenues and, if required and feasible, other commercial opportunities.
- An operating subsidy provided by the Christchurch City Council
- Regional rates increase (subject to Christchurch City Council's approval)

# 19. Stage 5: Integrated Analysis and Recommended Option

## Integrated analysis

While CBA is often a useful tool for differentiating between project options and deciding whether projects are worthwhile overall, other factors must also be taken into consideration when determining the recommended project option.

The recommended option must achieve a balance between cost (capital and ongoing) and the level of qualitative and quantitative benefits that are achieved (i.e. the option that most effectively and efficiently achieves the Investment Objectives).

The short-list options assessment has taken into consideration a number of other factors including.

- **Stakeholder expectations:** Alignment to stakeholder expectations (players, spectators and event promoters)
- **Future capacity needs:** The ability to expand capacity to meet future demand for major events
- **Affordability:** The affordability of each option given the available funding.

Each option was qualitatively assessed and assigned an overall rating (high, medium or low) according to its ability to address these objectives. The summary assessment of each project option is presented in Table 86.

Table 86: Qualitative assessment of project options

| Option | Stakeholder expectations | Flexibility | Affordability |
|---|---|---|---|
| **Covered Option 2**<br>25,000 permanent capacity & 5,000 temporary | **High**<br>Higher seating capacity increases profitability of All Blacks tests held at the CMUA. However, **event demand projections suggest that very few events (essentially only All-Blacks tests) are likely to require the temporary seats.** | **Medium**<br>As back-of-house capacity is designed for 25,000, this will require additional temporary services to accommodate 30,000 which will incur additional operating costs not included in our analysis. | **Medium**<br>The purchase of temporary seating and the associated operational costs (e.g. bump in/out, storage) will increase the total cost of the CMUA in comparison to Option 3 and 4. |
| **Covered Option 3**<br>25,500 permanent capacity (includes terraced area for 500) | **Medium**<br>The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre. The terraced area offers patrons varied ticket options and arena experiences inside the arena (e.g. a sponsorship activation site or 'Fan Zone'). | **High**<br>The scale of the arena is appropriate for Canterbury's event market and does not preclude the inclusion of additional seats in the future should they be required. | **Medium**<br>Cost savings (both capital and ongoing operating) are generated as a result of the exclusion of temporary seating. |

| Option | Stakeholder expectations | Flexibility | Affordability |
|---|---|---|---|
| **Covered Option 3a (on-budget scenario)**<br>25,000 permanent | **Medium**<br>The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre, but it may be more difficult to accommodate temporary seats in the future. It may not meet stakeholder expectations for the scale of the arena, nor future expansion opportunities.<br>Design changes resulting from the Affordability Review may reduce patron flow around the arena due to removal of the second concourse. This could affect patron experience at events e.g. entry and exit to venue, access to food and beverage outlets and may not meet stakeholder expectations for the arena. | **Medium**<br>The scale of the arena is appropriate for Canterbury's event market but may make future inclusion of temporary seats more challenging. | **High**<br>Cost savings (both capital and ongoing operating) are generated as a result of the exclusion of temporary seating.<br>Design changes resulting from the Affordability Review have identified additional potential capital cost saving opportunities within the acceptable operating expenditure budget.<br>An alternative procurement option for the two replay screens and ribbon board control system is one identified potential capital cost saving opportunities, however additional capital investment may be required if a deal cannot be reached with a technology investor to deliver the technology. |
| **Covered Option 4**<br>25,000 permanent | **Medium**<br>The scale of the arena allows for the design to sit more comfortably on the site and be less intrusive on the city centre, but it may be more difficult to accommodate temporary seats in the future. It may not meet stakeholder expectations for the scale of the arena, nor future expansion opportunities. | **Medium**<br>The scale of the arena is appropriate for Canterbury's event market but may make future inclusion of temporary seats more challenging. | **High**<br>Cost savings (both capital and ongoing operating) are generated as a result of the exclusion of temporary seating. |
| **Hard Roof, retractable turf Option 8**<br>25,000 permanent capacity & 5,000 temporary | **Medium**<br>Higher seating capacity increases profitability of All Blacks tests held at the CMUA. However, **event demand projections suggest that very few events are likely to require the temporary seats.**<br>However, the retractable turf will use virtually all the outside space to the north of the arena resulting in a loss of community space and activation zone. | **Medium**<br>As back-of-house capacity is designed for 25,000, this will require additional temporary services to accommodate 30,000 which will incur additional operating costs not included in our analysis. | **Low**<br>An arena of this scale is financially unaffordable. Preliminary estimates suggest it would cost $108.5m more than the next most expensive short-listed option. |

Table 87 below summarises the integrated assessment and ranking of each project option.

Table 87: Integrated analysis and recommended option

| | Qualitative assessment | | | CBA | | | Overall ranking |
|---|---|---|---|---|---|---|---|
| Option | Stakeholder expectations | Future capacity needs | Affordability | Benefits (PV)($m) | Costs (PV)($m) | Net Benefits (NPV)($m) | Score |
| **Covered Option 2**<br>25,000 permanent capacity & 5,000 temporary | High | Medium | Medium | $408.9 | $481.0 | **($72.2)** | 3 |

| | Qualitative assessment | | | CBA | | | Overall ranking |
|---|---|---|---|---|---|---|---|
| Option | Stakeholder expectations | Future capacity needs | Affordability | Benefits (PV)($m) | Costs (PV)($m) | Net Benefits (NPV)($m) | Score |
| **Covered Option 3** 25,500 permanent capacity (includes terraced area for 500) | Medium | High | High | $401.7 | $478.6 | **($76.9)** | 2 |
| **Covered Option 3a (on-budget scenario)** 25,000 permanent | Medium | Medium | High | $395.6 | $456.0 | **($60.5)** | 1 |
| **Covered Option 4** 25,000 permanent | Medium | Medium | High | $401.0 | $479.3 | **($78.3)** | 4 |
| **Hard Roof, retractable turf Option 8** 25,000 permanent capacity & 5,000 temporary | Medium | Medium | Low | $457.5 | $581.2 | **($123.7)** | 5 |

## Recommended Option

The initial options assessment prepared for the draft investment case identified **Covered Option 3 – 25,500 permanent capacity (including terraced area for 500)** as the preferred option. This option was selected for the following reasons:

- While Option 2 has a slightly higher net benefit (and therefore, a higher BCR) in comparison to Option 3, it is within the margins of error for this type of analysis
- Both options are affordable using a standard EAC approach to capital costs, but only Option 3 remains close to the affordability threshold using a P85 quantitative risk analysis threshold. Option 2 is **$9.7m** over the available funding whereas Options 3 and 4 are only **$3.4m** above. At this stage of the project, room for uncertainty should be allowed where there is a fixed capital budget. MBIE and Treasury have advised that using this threshold is appropriate for the affordability analysis for this project
- The main difference between Option 3 and Option 2 is the inclusion of the temporary seats. The design of Option 3 does not preclude the purchase and use of temporary seats should further capital funding become available, or if the need for additional capacity becomes apparent. It was concluded that the additional benefits did not provide value for money or warrant justification for the Council to seek additional funding
- Option 3 allows for slightly greater capacity than Option 4 at no additional cost, which generates some small additional direct benefit to patrons. It does this by utilising the area between the field and the concourse for a terraced standing area. This may make the setup of the temporary seats (should they be included later) slightly more challenging, and could have an impact on ongoing operating costs

- Additional capital funding may be able to be found, but the case would have to be compelling, and it is not apparent from qualitative or quantitative assessment that additional investment would provide significantly greater returns to the city overall
- Although the hard roof, retractable turf option has some advantages such as reduced noise spill. Option 8 has a number disadvantages, in addition to its affordability challenges:
    - A hard roof may detract from the visitor experience as all events would occur under artificial light
    - The retractable turf will use virtually all of the outside space to the North of the arena resulting in a loss of community space and activation zone
    - The flexibility provided by an arena of this scale is not required for Canterbury's event market
    - Option 8 is not expected to attract significantly greater content or attendance than the other short-listed options, but will cost **$108.5** million more than the next most expensive option on an EAC basis.

Due to the estimated costs to deliver Option 3 exceeding the $473m available budget, Option 3a (on-budget scenario) is recommended to progress to the project delivery phase for the following reasons:

- Option 3a (on-budget scenario) has the highest net benefit (and highest BCR) compared to the other options due to identification of $27.5m in saving opportunities without quantified reductions in the potential benefits of the Option 3, given the time permitted to assess this option. While it is not likely that the overall number of events will change, there may be reductions in attendance if patron experience cannot be preserved, which generates risk in this estimate.
- This option falls within the affordability threshold using a P85 quantitative risk analysis threshold, approximately $266,000 less than the $473m available budget
- Design of Option 3a (on-budget scenario) does not preclude the purchase and use of temporary seats should further capital funding become available, or if the need for additional capacity becomes apparent.

## Sensitivity Analysis

To account for uncertainty in the event schedule, sensitivity analysis has been conducted to consider how changes in event frequency and capacity effects the economic viability of this project. While the scenarios test a uniform distribution of risk (e.g. +/- 10%), the consultation undertaken to date with ChristchurchNZ, Vbase, international and domestic event experts, and TEG Dainty, suggest that this event schedule is realistic but conservative. It is therefore reasonable to consider the downside risk less likely to eventuate than the upside potential. This is strongly dependent on securing an experienced operator and establishing a strong marketing plan for the CMUA.

The following scenarios examined the sensitivities of the following parameters across the build-up, average, mega event and peak years:

- +/- 1 large concert each year
- +/- 1 small concert each year
- +/- 10% attendance at large concerts
- +/- 10% attendance at small concerts
- +/- 10% attendance at Rugby Tests (All Blacks)

- +/- 10% attendance at Super Rugby (Crusaders) matches

It should be noted that, due to the conservative nature of the events schedule, the 'low scenario' (the one in which the number of events or attendance at events is lower than expected) is considered very unlikely.

The findings are generally robust to sensitivity testing. For example, a 10% reduction in Super Rugby (Crusaders) attendance each year that the CMUA is in operations only causes the BCR to fall from **0.87** to **0.85**, while a 10% increase in Super Rugby (Crusaders) attendance causes it to rise to **0.88**.

The only area of risk is in the ability to host large concerts. One fewer large concert each year results in the BCR falling to **0.80**, while one additional concert causes it to rise to **0.94**.

The two sensitivities with the largest impact on the BCR were:

- +/- 1 large concert each year (BCR range of **0.80** to **0.94**)
- +/- 1 small concert each year (BCR range of **0.85** to **0.89**)

Losing one concert each year is not a small change in the events schedule, as it represents a failure to attract a large concert every year over the life of the analysis, resulting in **25** fewer large concerts over this period. The same logic applies for the other sensitivities; they represent changes over the entire operating period as opposed to 'one bad (or good) year'.

Table 88 on the following page displays the effect of the 'large concerts – number of events' sensitivity on the costs and benefits of each short-listed option. The 'Main Scenario' column indicates the case in which no sensitivity is applied.

Table 88: Sensitivity Analysis – Large Concerts (PV) ($m)

| | Covered Option 2<br>25,000 permanent capacity & 5,000 temporary | | | Covered Option 3<br>25,500 permanent capacity (includes terraced area for 500) | | | Covered Option 3a (on-budget scenario)<br>25,000 permanent | | | Covered Option 4<br>25,000 permanent | | | Hard Roof, Retractable Turf Option 8<br>25,000 permanent capacity & 5,000 temporary | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Costs (PV) ($m)** | | | | | | | | | | | | | | | |
| **Sensitivity Scenarios** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** |
| Capital expenditure | $361.9 | $361.9 | $361.9 | $355.5 | $355.5 | $355.5 | $333.0 | $333.0 | $333.0 | $355.5 | $355.5 | $355.5 | $437.2 | $437.2 | $437.2 |
| Lifecycle costs | $11.7 | $11.7 | $11.7 | $11.0 | $11.0 | $11.0 | $10.2 | $10.2 | $10.2 | $11.0 | $11.0 | $11.0 | $32.7 | $32.7 | $32.7 |
| Operating expenditure & Bid Incentive Fund | $105.7 | $107.5 | $109.2 | $110.3 | $112.1 | $113.8 | $111.06 | $112.8 | $114.59 | $111.0 | $112.8 | $114.6 | $109.5 | $111.3 | $113.0 |
| **Total cost** | **$479.3** | **$481.0** | **$482.8** | **$476.8** | **$478.6** | **$480.3** | **$454.3** | **$456.0** | **$457.8** | **$477.6** | **$479.3** | **$481.1** | **$579.4** | **$581.2** | **$582.9** |
| **Benefits (PV) ($m)** | | | | | | | | | | | | | | | |
| **Sensitivity Scenarios** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** |
| Tourism | $75.1 | $88.6 | $102.2 | $70.9 | $84.4 | $98.0 | $70.4 | $83.9 | $97.5 | $70.4 | $83.9 | $97.5 | $86.2 | $99.8 | $113.3 |
| Consumer surplus | $91.6 | $105.2 | $118.7 | $90.5 | $104.0 | $117.6 | $90.3 | $103.9 | $117.5 | $90.3 | $103.9 | $117.5 | $103.6 | $117.2 | $130.7 |
| Land value uplift | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 |
| Civic pride | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 |
| Residual asset value | $48.2 | $48.2 | $48.2 | $47.2 | $47.2 | $47.2 | $44.3 | $44.3 | $44.3 | $47.2 | $47.2 | $47.2 | $67.3 | $67.3 | $67.3 |
| Operating revenue | $90.5 | $96.2 | $101.9 | $89.7 | $95.4 | $101.0 | $87.1 | $92.7 | $98.4 | $89.6 | $95.3 | $100.9 | $96.5 | $102.6 | $107.6 |
| **Total benefits** | **$376.1** | **$408.9** | **$441.6** | **$368.9** | **$401.7** | **$434.4** | **$362.8** | **$395.6** | **$428.3** | **$368.2** | **$401.0** | **$433.7** | **$424.3** | **$457.5** | **$489.6** |
| **Outputs** | | | | | | | | | | | | | | | |
| **Sensitivity Scenarios** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** |
| **Net Benefit (Cost)** | **($103.2)** | **($72.2)** | **($41.2)** | **($107.9)** | **($76.9)** | **($45.9)** | **($91.5)** | **($60.5)** | **($29.5)** | **($109.3)** | **($78.3)** | **($47.4)** | **($155.1)** | **($123.7)** | **($93.3)** |
| **Benefit-Cost Ratio (BCR)** | **0.78** | **0.85** | **0.91** | **0.77** | **0.84** | **0.90** | **0.80** | **0.87** | **0.94** | **0.77** | **0.84** | **0.90** | **0.73** | **0.79** | **0.84** |

Table 89 on the following page displays the effect of the 'small concerts – number of events' sensitivity on the costs and benefits of each short-list option.

Table 89: Sensitivity Analysis – Small Concerts (PV) ($m)

| | Covered Option 2<br>25,000 permanent capacity & 5,000 temporary | | | Covered Option 3<br>25,500 permanent capacity (includes terraced area for 500) | | | Covered Option 3a<br>(on-budget scenario)<br>25,000 permanent capacity | | | Covered Option 4<br>25,000 permanent | | | Hard Roof, Retractable Turf Option 8<br>25,000 permanent capacity & 5,000 temporary | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Costs (PV) ($m)** | | | | | | | | | | | | | | | |
| **Sensitivity Scenarios** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** |
| Capital expenditure | $361.9 | $361.9 | $361.9 | $355.5 | $355.5 | $355.5 | $333.0 | $333.0 | $333.0 | $355.5 | $355.5 | $355.5 | $437.2 | $437.2 | $437.2 |
| Lifecycle costs | $11.7 | $11.7 | $11.7 | $11.0 | $11.0 | $11.0 | $10.2 | $10.2 | $10.2 | $11.0 | $11.0 | $11.0 | $32.7 | $32.7 | $32.7 |
| Operating expenditure & Bid Incentive Fund | $107.5 | $107.5 | $107.5 | $112.1 | $112.1 | $112.1 | $112.8 | $112.8 | $112.8 | $112.8 | $112.8 | $112.8 | $111.3 | $111.3 | $111.3 |
| **Total cost** | **$481.0** | **$481.0** | **$481.0** | **$478.6** | **$478.6** | **$478.6** | **$456.0** | **$456.0** | **$456.0** | **$479.3** | **$479.3** | **$479.3** | **$581.2** | **$581.2** | **$581.2** |
| **Benefits (PV) ($m)** | | | | | | | | | | | | | | | |
| **Sensitivity Scenarios** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** |
| Tourism | $85.2 | $88.6 | $92.0 | $81.0 | $84.4 | $87.8 | $80.5 | $83.9 | $87.3 | $80.5 | $83.9 | $87.3 | $96.4 | $99.8 | $103.2 |
| Consumer surplus | $101.0 | $105.2 | $109.4 | $99.8 | $104.0 | $108.2 | $99.7 | $103.9 | $108.1 | $99.7 | $103.9 | $108.1 | $113.0 | $117.2 | $121.4 |
| Land value uplift | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 |
| Civic pride | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 |
| Residual asset value | $48.2 | $48.2 | $48.2 | $47.2 | $47.2 | $47.2 | $44.3 | $44.3 | $44.3 | $47.2 | $47.2 | $47.2 | $67.3 | $67.3 | $67.3 |
| Operating revenue | $93.8 | $96.2 | $97.9 | $93.0 | $95.4 | $97.1 | $90.3 | $92.7 | $94.5 | $92.9 | $95.3 | $97.0 | $100.2 | $102.6 | $104.3 |
| **Total benefits** | **$398.9** | **$408.9** | **$418.2** | **$391.7** | **$401.7** | **$411.0** | **$385.6** | **$395.6** | **$404.9** | **$391.0** | **$401.0** | **$410.3** | **$447.5** | **$457.5** | **$466.8** |
| **Outputs** | | | | | | | | | | | | | | | |
| **Sensitivity Scenarios** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** |
| **Net Benefit (Cost)** | **($82.1)** | **($72.2)** | **($62.9)** | **($86.9)** | **($76.9)** | **($67.6)** | **($70.4)** | **($60.5)** | **($51.2)** | **($88.3)** | **($78.3)** | **($69.0)** | **($133.6)** | **($123.7)** | **($114.4)** |
| **Benefit-Cost Ratio (BCR)** | **0.83** | **0.85** | **0.87** | **0.82** | **0.84** | **0.86** | **0.85** | **0.87** | **0.89** | **0.82** | **0.84** | **0.86** | **0.77** | **0.79** | **0.80** |

Table 90 below summarises each sensitivity on the costs and benefits of the preferred option (Option 3a)

Table 90: Sensitivity Analysis Summary: Preferred Option (Option 3a)

| | +/- 1 Large Concert | | | +/- 1 Small Concert | | | +/- 10% attendance at Large Concerts | | | +/- 10% attendance at Small Concerts | | | +/- 10% attendance at Rugby tests (All Blacks)* | | | +/- 10% attendance at Super Rugby (Crusdaers) matches | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Costs (PV) ($m)** | | | | | | | | | | | | | | | | | | |
| **Sensitivity Scenarios** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-10% attendance** | **Main Scenario** | **+10% attendance** | **-10% attendance** | **Main Scenario** | **+10% attendance** | **-10% attendance** | **Main Scenario** | **+10% attendance** | **-10% attendance** | **Main Scenario** | **+10% attendance** |
| | | | | | | | | | | | | | | | | | | |
| Capital expenditure | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 | $333.04 |
| Lifecycle costs | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 | $10.18 |
| Operating expenditure & Bid Incentive Fund | $111.59 | $113.36 | $115.12 | $113.36 | $113.36 | $113.36 | $113.36 | $113.36 | $113.36 | $113.36 | $113.36 | $113.36 | $113.36 | $113.36 | $113.36 | $113.36 | $113.36 | $113.36 |
| **Total cost** | **$454.81** | **$456.58** | **$458.34** | **$456.58** | **$456.58** | **$456.58** | **$456.58** | **$456.58** | **$456.58** | **$456.58** | **$456.58** | **$456.58** | **$456.58** | **$456.58** | **$456.58** | **$456.58** | **$456.58** | **$456.58** |
| **Benefits (PV) ($m)** | | | | | | | | | | | | | | | | | | |
| **Sensitivity Scenarios** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-10% attendance** | **Main Scenario** | **+10% attendance** | **-10% attendance** | **Main Scenario** | **+10% attendance** | **-10% attendance** | **Main Scenario** | **+10% attendance** | **-10% attendance** | **Main Scenario** | **+10% attendance** |
| Tourism | $70.4 | $83.9 | $97.5 | $80.5 | $83.9 | $87.3 | $80.0 | $83.9 | $87.8 | $82.9 | $83.9 | $85.0 | $81.6 | $83.9 | $83.9 | $81.1 | $83.9 | $86.8 |
| Consumer surplus | $90.3 | $103.9 | $117.5 | $99.7 | $103.9 | $108.1 | $99.8 | $103.9 | $108.0 | $102.6 | $103.9 | $105.2 | $103.3 | $103.9 | $103.9 | $101.4 | $103.9 | $106.4 |
| Land value uplift | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 | $16.7 |
| Civic pride | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 | $53.9 |
| Residual asset value | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 | $44.3 |
| Operating revenue | $87.1 | $92.7 | $98.4 | $90.3 | $92.7 | $94.5 | $92.0 | $92.7 | $93.5 | $92.5 | $92.7 | $93.0 | $92.4 | $92.7 | $92.7 | $92.3 | $92.7 | $93.2 |
| **Total benefits** | **$362.8** | **$395.6** | **$428.3** | **$385.6** | **$395.6** | **$404.9** | **$386.9** | **$395.6** | **$404.3** | **$393.0** | **$395.6** | **$398.2** | **$392.3** | **$395.6** | **$395.6** | **$389.7** | **$395.6** | **$401.4** |
| **Outputs** | | | | | | | | | | | | | | | | | | |
| **Sensitivity Scenarios** | **-1 Large Concert** | **Main Scenario** | **+1 Large Concert** | **-1 Small Concert** | **Main Scenario** | **+1 Small Concert** | **-10% attendance** | **Main Scenario** | **+10% attendance** | **-10% attendance** | **Main Scenario** | **+10% attendance** | **-10% attendance** | **Main Scenario** | **+10% attendance** | **-10% attendance** | **Main Scenario** | **+10% attendance** |
| **Net Benefit (Cost)** | **($92.0)** | **($61.0)** | **($30.0)** | **($71.0)** | **($61.0)** | **($51.7)** | **($69.7)** | **($61.0)** | **($52.3)** | **($63.6)** | **($61.0)** | **($58.4)** | **($64.3)** | **($61.0)** | **($61.0)** | **($66.8)** | **($61.0)** | **($55.1)** |
| **Benefit-Cost Ratio (BCR)** | **0.80** | **0.87** | **0.93** | **0.84** | **0.87** | **0.89** | **0.85** | **0.87** | **0.89** | **0.86** | **0.87** | **0.87** | **0.86** | **0.87** | **0.87** | **0.85** | **0.87** | **0.88** |

* There is no difference between the main scenario and the '+10% attendance' scenario at Rugby Tests (All Blacks) because Rugby Tests are assumed to sell out under the main scenario, so an additional 10% attendance is not possible

# The Commercial Case

# 20. Introduction

The purpose of this Commercial Case is to outline the process to identify, develop and select the preferred procurement model for the CMUA project (the project) to deliver the Recommended Option identified in the Economic Case.

The selection of the procurement model has been supported by a market sounding engagement process used to seek feedback on the procurement options, which involved the Treasury's Infrastructure Transactions Commission (IT) as a key stakeholder. A number of other parties were also critical in defining the procurement objectives and evaluation criteria/scoring.

This process involved:

- Confirming the project's characteristics, including key project assumptions and risks
- Understanding the Crown and Council's procurement objectives, and the appropriate evaluation criteria and weightings for assessing these objectives
- Assessing the market profile and project-specific challenges particular to the Christchurch rebuild as it relates to the delivery models used for other arenas across Australia and New Zealand
- Determining and assessing the long-list of procurement models, considering advantages, risks and market capacity and capability
- Identifying and defining the shortlist of procurement models
- Evaluating and scoring the short-list of procurement models using the project profile information, procurement objectives, evaluation criteria and scoring scale
- Introducing, as a result of significant uncertainties expressed about market capacity and capability during the process to date, a market sounding to determine the best procurement option, and that would likely provide price tension from the resulting RFP
- Engaging with the market (including construction contractors, event facility operators, maintenance providers and equity investors) to understand the project's potential procurement challenges and the market's capacity and view of potential procurement options for the Investment Case, and
- Recommending the preferred procurement model.

The balance of this Commercial Case details the procurement options considered and evaluated, the project team's market engagement process and the preferred procurement model. The case then outlines the risk allocation for the preferred procurement model, and the potential contracting mechanisms to deliver the project using the preferred procurement model.

# 21. Procurement Models

Procurement models can be broadly divided into two categories

1. Traditional - the design and construction of a facility is separated from its ongoing maintenance and operations (i.e. Construct Only or Design and Build)
2. Alternative - the design, construction, and provision of maintenance and operational services are partially or wholly bundled to incentivise innovation and whole-of-life efficiencies. The final project cost can also be determined earlier in the programme

The following analysis applies project-level assumptions to support a qualitative assessment of potential delivery models. A detailed procurement plan for the core components of the project (i.e. design, construction, operations and maintenance) will be developed following the approval of this Investment Case and endorsement of the recommended option.

## Overview of potential procurement models

After identifying project characteristics and risks, a list of potential procurement models was compiled referencing models previously used to deliver social infrastructure projects of similar scale across Australasia. The long-list of potential procurement models include:

- Construct Only
- Design and Build (D&B)
- Alliancing
- Design, Build and Maintain (DBM)
- Public Private Partnership (PPP)
- Build, Own, Operate and Transfer (BOOT)

The procurement models were qualitatively assessed to determine how each model aligns with the key project assumptions and the project's characteristics.

### Consideration of PPP as a potential procurement model

Procuring entities that are planning any 'significant' investment must evaluate all procurement options, including PPP procurement. Where investments have a significant service component, a choice is required between conventional procurement and a PPP. This choice is partly dependent on is the likelihood of unpredictable service requirement changes over time, requiring costly contract variations. The CMUA for example will likely have intermittent and variable usage over its lifespan, rather than a stable and largely predictable daily regime such as horizontal infrastructure, prisons and the like.

The CMUA project has some of the right features to be considered for delivery through a PPP. The project was assessed against the New Zealand Treasury's hurdle criteria to determine whether a PPP could be considered a viable procurement option. This project satisfies some of the hurdle criteria for a PPP procurement option, however the timetable and market competition criteria are not clearly satisfied. There are potential challenges for the project relating to the relevant experience and capability required to deliver a complex PPP procurement process within the desired in-service timeframes. Additionally, the current market conditions, as assessed by market sounding, for vertical infrastructure projects of this scale in New Zealand, along with an intermittent and unpredictable usage profile, mean there may be a lack of competition under PPP procurement model.

### Early Contractor Involvement (ECI)

ECI represents a variation of a Construct Only or Design and Build (D&B) process. While ECI is not a procurement model in itself, it was included in the procurement assessment as a variation into the Contract Only and D&B models. During the commercial workshop and market sounding, attendees noted that several projects in New Zealand have been unsuccessful in utilising the ECI approach. It was widely viewed that early involvement of the main contractor, operator and maintenance providers would be critical to the design process and should be considered when developing the detailed procurement plan.

## Elimination of BOOT model

Following the procurement model assessment, the BOOT model was eliminated from further consideration as it conflicts with the Crown and Council's desire to control the use of the facility to meet community expectations. Additionally, the BOOT model includes an event operations component and the need to maximise return on private sector investment, which will likely conflict with the Crown and Council's vision of the CMUA contributing to an event-friendly city that coordinates event offerings across venues.

The advantages and risks to the Crown and Council for the project of the remaining procurement options are summarised in Table 91.

Table 91: Potential procurement models – advantages and risks

| Procurement model | Description | Advantages | Risks |
|---|---|---|---|
| **Construct Only** | • The Crown and Council enters into contracts for construction based on separately-procured design (either concurrently or consecutively)<br>• No ongoing obligations for asset maintenance and operations by contractor, as separate in-house or externally-procured operations, maintenance and lifecycle arrangements would be put in place | • Fast time to market<br>• Low tendering cost<br>• High level of design and implementation control allowing for inclusion of stakeholder / community expectations and input from Council-procured operator and maintenance provider<br>• Potential to reduce delivery schedule by overlapping design phase and construction phase of project<br>• Model likely to be readily accepted by market<br>• Potentially larger pool of tenderers, leading to increased competition<br>• Greater certainty (due to design) likely to drive down tender prices<br>• Ability to control stakeholder management process<br>• Ability to better control material quality and durability | • Requires skilled resources to manage project (internal or external client-side project managers)<br>• No single point of responsibility for design and construction – can create interface risks between design, construction, and operation<br>• Very high burden on the Crown and Council to develop a clear, concise and understandable design brief that meets investment objectives and long-term operations and maintenance requirements<br>• Separation of design from construction may give rise to claims and delays<br>• Minimal opportunity for cost value management and innovation<br>• Majority of risks retained by public sector |
| **Design and Build (D&B)** | • The Crown and Council engages a contractor to conduct detailed design and construction of project for an agreed fixed sum<br>• No ongoing obligations for asset maintenance and operations by contractor, as separate in-house or externally-procured operations, maintenance and lifecycle arrangements would be put in place<br>• Effective where the scope and design brief is clear, concise and well-defined | • Single point of accountability for the D&B<br>• Administrative efficiency<br>• Potential for fast-tracking as design does not need to be complete for main works to commence in particular procurement of critical materials<br>• Contractor can incorporate experience and innovation into design, e.g. selection of materials, supply chain and construction methods<br>• Contractor normally warrants design<br>• Lump sum for D&B provides cost certainty | • Requires clear and detailed brief by project sponsor<br>• Longer tender period required to assess design proposals, pricing information and risk premiums<br>• May require payment of a premium to transfer risk<br>• Lack of focus on lifecycle costs, therefore client retains the risk of operational costs<br>• The Crown and Council might be liable for time and cost overruns from any scope changes<br>• Designer is accountable to the contractor rather than client, which requires additional client side oversight to ensure requirements are met<br>• Higher pricing anticipated as contractor prices for design risk |

| Procurement model | Description | Advantages | Risks |
|---|---|---|---|
| **Early Contractor Involvement (ECI)** | ECI is not a procurement model but represents a variation on contracting through Construct Only or Design and Build models. There are two possible approaches under an ECI:<br><br>**a. Two stage approach**<br><br>• Contractor(s) appointed early through competitive tender process (Stage 1) as the client works to develop and refine design – including contribution of constructability, staging, cost planning and supply chain inputs<br>• Upon completion of design, tender documents are prepared and issued to contractor(s) to tender a fixed-price construction cost (Stage 2)<br>• Client measures contractor's tender response against pre-tender estimate prepared by quantity surveyor and an affordability threshold<br><br>**b. One stage approach**<br><br>• Contractor appointed early through competitive tender process as client works to develop and refine design, including contribution of constructability, staging, cost planning and supply chain inputs<br>• Contractor then delivers project as per Construct Only model | • Team approach, experience and knowledge harnessed early<br>• Shorter delivery time<br>• Increased innovation opportunities<br>• Better integration of construction methods and input from the Council-procured operator and maintenance provider<br>• Potential for early procurement of materials<br>• Fewer expected variations | • Reliant on good design processes / design management by the client<br>• Requires significant involvement of senior staff time in the early stage of delivery to clearly articulate expected project outcomes that ECI is targeting<br>• Additional costs are incurred through 'optioneering' by contractor and designer ideas<br>• Contractor is appointed on capability rather than price. Requires open-book pricing and sufficient public-sector expertise (or involvement of independent cost estimators) to prevent higher prices resulting from non-competitive increases to price<br>• Recent experience has shown that this option often results in higher cost outcomes relative to Construct Only procurement models |
| **Alliancing** | A relationship-style arrangement that brings together the client and one or more parties to work collaboratively as an integrated team to manage key project delivery matters, sharing project risks and rewards (e.g. 'open book' approach to contract pricing).<br>• A fully integrated project team deals with planning, design and build<br>• Incentivises parties to work together in good faith, act with integrity, and make best-for-project decisions<br>• Generally best used where project scope and risks are highly uncertain, requiring flexibility and potentially innovative solutions | • Enables early go-to-market before project scope and details are finalised which could help to demonstrate concrete progress early on<br>• Parties have shared responsibility<br>• Incentives between client and contractor are aligned (pain/gain shared)<br>• Can be used to deliver highly complex projects<br>• Cost of adversarial conduct and claims minimised due to 'no blame' culture<br>• Promotes innovation<br>• Integrated planning, D&B process with early contractor and consultant involvement | • High establishment costs, requiring setup of joint client/consultant team project boards, governance, and decision-making and dispute resolution processes<br>• Less price competition<br>• Relies on success of relationships between parties<br>• Requires ongoing involvement and commitment of leadership<br>• Client bears cost risk although it is often shared with contractors/consultants<br>• Design and fit-for-purpose risks lie with client<br>• Lack of focus on lifecycle costs and considerations<br>• Not common for vertical builds and not well understood by the market |

| Procurement model | Description | Advantages | Risks |
|---|---|---|---|
| **Design, Build and Maintain (DBM)** | • Public sector engages private sector to conduct a detailed design and construction of a project on its behalf for an agreed fixed sum. A hard facilities maintenance contract term is added (typically 5 to 7 years)<br>• Applicable for projects where project offers scope for private-sector led innovation and efficiencies<br>• Conceptually midway between a D&B and PPP model, wherein benefits and risks of different design, build, and maintenance approaches are coordinated due to integrated nature of the tender<br>• Is typically used for highly technically complex/proprietary assets | As per D&B model with:<br>• Full integration of design, construction and maintenance leading to increased sustainability<br>• Contractor responsible for maintenance during contracted period<br>• A fixed price for capital cost of facility along with some limited risk transfer of hard facilities maintenance may be achieved<br>• Contract value is known before construction commences<br>• Incentivises consideration of whole-of-life aspects during design and build phases – including less use of lowest cost materials and proactive management of defects encountered | • Inclusion of a maintenance component in the contract will reduce number of capable bidders relative to a D&B tender, and will likely add further time to procurement process and design phase<br>• May require payment of a premium for risk transfer<br>• Success relies on well-defined functional and service specifications<br>• Changes to design or operational requirements incur significant change fees/contract renegotiations |
| **Public Private Partnership (PPP)**<br><br>**Design Build Finance and Maintain (DBFM)**<br><br>**or**<br><br>**Design Build Finance Maintain Operate (DBFMO)** | • Under a PPP, public sector typically engages a consortium of parties to design, build, finance and assume responsibility for facilities maintenance and asset replacement for the project, over a defined period (typically around 25 years)<br>• Operations can also be bundled with the above under a DBFMO model<br>• Applicable for projects where service performance can be measured and where project offers scope for private-sector-led innovation and efficiencies and whole-of-life risk transfer | • Full integration (finance, design, build, maintain)<br>• Greater transfer of risk to private sector at each phase<br>• Transfer of life cycle cost and risk encourages efficient design and quality construction<br>• Less demand on internal resources<br>• Strong financial incentive to deliver on-time as payments only commence upon successful commissioning<br>• Allows contractors to use innovative IP<br><br>A DBFMO also includes operations and allows for integration of the event venue operator. Can provide for design efficiencies, and in some cases result in more event-days. | • Success relies on well-defined specifications and requirements, both for delivery and the ongoing operation with high costs of change if the agreed specifications were inaccurate<br>• Usage profile for an arena is inconsistent and difficult to define<br>• Significant resource effort required for evaluation if more than one design prepared during bid phase (higher client tendering costs)<br>• Resources required for technical and financial assessment, tendering and management<br>• Changes to design generally require contract negotiations<br>• Requires market depth across financiers and contractors to deliver competitive price outcomes<br>• The ability to meet the public sector comparator threshold is dependent on the consortia identifying efficiencies and innovation in delivery<br>• Likely loss of control or influence by the civic entity for one off event for example the “You are Us Benefit”<br><br>The inclusion of operations means that venue operators will not be incentivised to consider the impact of operations on venues city-wide or respond to community needs. |

# 22. Procurement Model Evaluation Criteria and Scoring Scale

A commercial workshop was held on 14 March 2019. This workshop was designed to discuss potential procurement models for the Project, to develop evaluation criteria to assess these models based on the project's procurement objectives, and to assess each model against these criteria to arrive at a recommended procurement model(s). The workshop was facilitated and moderated by EY and was attended by representatives from the Crown and Council including; Development Christchurch Limited, Ōtākaro, MBIE, Aurecon, and Treasury's ITU.

Table 92 summarises the facility that is planned to be procured.

Table 92: Asset Description

| Topic | Key Assumption |
|---|---|
| **Site location** | The CMUA will be located on the site designated for the stadium or arena by the CCRP |
| **Site condition** | Ground conditions have been subject to preliminary investigation, indicating limited contamination, but variable geotechnical quality. The Crown will fund land remediation |
| **Facility ownership** | The Council considers that it will be the owner and likely operator of the facility upon its completion |
| **Operational responsibility** | The Council expect to operate the facility, either directly or indirectly, in a manner consistent with the objectives outlined in the Economic Case |
| **Asset management and facilities maintenance** | The Council expects to maintain the facility, either directly or indirectly, and be responsible for whole-of-life costs |
| **Facility scope definition** | The outcome of the Economic Case is that the facility will comprise:<br>• 25,000 seats plus a 500-person safe standing area<br>• 2,500 premium seats<br>• A covered arena using an ETFE roof and a fixed turf<br>• Capacity to accommodate 5,000 temporary seats in the future |
| **Project capital expenditure** | The facility has a capital cost of $439.4m(EAC methodology) we add our risk adjusted QRA at P85 $33.3M giving us an outturn cost of $472.7M:<br>• The Crown is to contribute $220m to the capital cost of the facility and<br>• The Council is to contribute up to $253m to the capital cost of the facility |
| **Operating and maintenance costs** | The net operating costs, including lifecycle costs, over a period of 30 years are anticipated to be $132m. The Council has allocated $150m over that same period to cover these costs |
| **Project timing** | The CMUA should be construction complete Q2 2024 and in-service by Q3/2024 |

## Procurement Objectives

The procurement model must support the delivery of the investment objectives outlined in the Strategic Case. To realise these investment objectives, multiple procurement objectives were developed. The procurement objectives focus on commercial and delivery-related outcomes, designed to achieve public value by considering project outcomes, risks, timing, innovation, and market capacity, interest, and accountability.

Procurement objectives were compiled to inform and direct the procurement model evaluation criteria and assessment, and include:

- Complexity and scope for innovation
- Time confidence

- Market conditions
- Risk allocation
- Interfaces and stakeholders
- Client involvement and control
- Tangible demonstration of public value
- Flexibility to deal with change
- Cost confidence

## Project Risks

In addition to the procurement objectives, key project risks were identified for consideration as part of the procurement options evaluation. Key project risks are set out in Table 93.

Table 93: Key project risks

| Risk area | Description of risk |
|---|---|
| **Site** | • Adverse ground conditions or contamination on site worse than anticipated, resulting in material programme delays and associated additional cost |
| **Design** | • Disagreements or misunderstanding between design team and contactor result in delays to the project or the assumption of additional risk by the Delivery entity<br>• Client-instigated change in design during procurement or construction stage result in project delays, cost uncertainty and additional risk assumed by Crown and Council |
| **Construction** | • Sequencing of construction is not met due to unexpected complexity of the project or events such as delays in scheduling of materials, trades, design or buildability issues<br>• Adverse weather conditions delay earthworks programme<br>• The site requires greater ground improvement or land remediation work than initially anticipated, despite investigations already carried out, resulting in significant cost overruns |
| **Interfaces** | • Interfaces between project components (construction, operations, facilities maintenance, etc.) adversely affect facility operations, cause delays in construction, or require more resources than anticipated<br>• Project interface with residential areas near the facility creates public resistance to the CMUA delivery |
| **Operating risks** | • Higher than expected operating costs<br>• Higher than expected whole-of-life costs<br>• Lower than expected operating revenue |
| **Timetable** | • Time delays impacting works programme or in-service dates |
| **Market** | • Lack of competition impacts the value for money achieved through the procurement process<br>• Unanticipated inflation and/or cost escalation results in material additional costs through the construction or operations phase<br>• Subcontractors unable to deliver required services within allocated time, quality and budget<br>• Lack of market capacity as a result of timing conflicts with other major vertical or horizontal infrastructure projects results in any of the above three market risks being realised. |
| **Political** | • National or local political influences or agendas impact arena delivery |
| **Asset** | • Asset built is not fit-for-purpose resulting in significant costs and time delays, reduced operating revenue or a facility unable to meet stakeholder needs<br>• The asset is not maintained to an appropriate standard over its estimated life thereby reducing the quality of outcomes |

## Procurement Evaluation Criteria

The procurement and investment objectives form the basis for compiling project-specific procurement evaluation criteria. These support the assessment of the short-listed procurement options and selection of the preferred procurement model.

Nine procurement objectives were tested and agreed with workshop participants, with each objective then prioritised using a pairwise comparison to apply a relative weighting that reflects the objective's significance to

achieving successful outcomes. A pairwise comparison process assesses the relative importance of one objective to all other objectives, and results in weightings that reflect the importance of the group of objectives.

Workshop participants then discussed, moderated and defined evaluation criteria based on the agreed procurement objectives. Table 94 sets out the procurement evaluation criteria, weightings, and the rationale for those weightings used to assess the evaluated procurement options for the project.

Table 94: Project procurement evaluation criteria and weightings

| Procurement evaluation criteria | Weight | Description | Weighting rationale |
|---|---|---|---|
| **1. Complexity and scope for innovation** | 5% | The extent to which the model is suitable given the complexity of CMUA and facilitates best practice and innovation in delivering project outcomes. | The specification of the CMUA build is generally well known and scope for ancillary activities is limited. There is scope to consider some relatively-modest ancillary activities. |
| **2. Time confidence** | 5% | The extent to which the model optimises project timescales and milestone requirements (including procurement, design, and construction) and provides confidence around time to completion. If a project is under time pressure, cost confidence may be less important than delivery speed. | While on-time delivery is important, it was viewed as relatively less important than other objectives like maintaining tight budgetary control, ensuring a robust market response, and involving the community. |
| **3. Market conditions** | 20% | The extent to which the model is attractive, familiar to the market and facilitates a competitive bid process within current market constraints. | The workshop believed there is a lack of capacity and competition in the existing New Zealand contractor market for projects of this scale, although this view was later challenged during market engagement. Experience with previous procurements and project challenges means the procurement and commercial model needs to appeal to the delivery market. |
| **4. Risk allocation** | 10% | The extent to which the model efficiently allocates and manages project risks, i.e. transfers risks to the party best able to manage that risk. | The Crown and Council is comfortable retaining certain risks to ensure a fit-for-purpose delivery that meets community expectations (see Table 101). |
| **5. Interfaces and stakeholders** | 10% | The extent to which the model optimises and makes clear the external interfaces, including facilitating robust governance and effective relationships with external stakeholders. | The relationship with the community, promoters, and sporting/entertainment/cultural stakeholders is critical to the success of the CMUA. The ability to involve the Crown as a key funder is also critical to the project's success. |
| **6. Client involvement, control and capability** | 5% | The extent to which the delivery entity has the internal capacity, capability and maturity to deliver the CMUA under the model, including: resourcing, contract management expertise, procurement timelines, etc. | The Crown and Council may not require direct control in delivery, but it expects significant control over operations, allowing for integration with its other event venues, and to provide a city-wide event experience. |
| **7. Tangible demonstration of public value** | 15% | The extent to which the model encourages cost-effectiveness and drives incentives to seek whole-of-life efficiencies. | Achieving public value and ensuring that incentives are aligned to consider whole-of-life costs are critical to delivery. |
| **8. Flexibility to deal with change** | 10% | The extent to which the model gives the delivery entity the flexibility to deal with variations and changes to design, scope and delivery. | The need to consider changes to scale and scope during delivery is unlikely to be high if the operator is involved during the design phase. Operational flexibility is important in terms of event type, numbers, and the ability to use the facility for community events. |
| **9. Cost confidence** | 20% | The extent to which the option provides cost confidence regarding achieving pre-tender project budgets and the ability to deliver contract price. | The CMUA budget is fixed, and it is assumed that the Crown's contribution cannot be increased. This means that cost confidence for ratepayers is extremely important with little room for unplanned expenditure in capital or operations. |

## Scoring Scale

Following confirmation of the procurement evaluation criteria and weightings, workshop participants determined the scoring scale for evaluating the procurement models against the procurement objectives. The 1 - 5 scoring scale is based on the impact of the procurement option on each procurement evaluation criterion and is displayed in Table 95:

Table 95: Procurement Options Scoring Scale

| Score | Description |
|---|---|
| 5 | Option offers **a distinct advantage** versus other options |
| 4 | Option offers **some advantage** versus other options |
| 3 | Option **does not offer advantages or disadvantages** versus other options |
| 2 | Option **is at some disadvantage** versus other options |
| 1 | Option **is at a distinct disadvantage** versus other options |

# 23. Evaluation and Scoring of Shortlisted Procurement Models

Following the procurement options assessment, six procurement models were shortlisted in the workshop to progress to the evaluation and scoring stage. The evaluated procurement models were:

- Construct Only
- Design and Build (D&B)
- Early Contractor Involvement (ECI) (as applicable to either Construct Only or D&B)
- Alliancing
- Design, Build and Maintain (DBM)
- Public Private Partnership (PPP) – for example, DBFM

Workshop participants evaluated these models by assessing and scoring each procurement model against each procurement objective. Participants then compared the scores of each procurement objective across the evaluated procurement models. Evaluation and scoring focused on the extent to which each procurement model helped achieve the project's procurement objectives. This included views on current market conditions and likely competition for the project, which were subsequently tested through the market engagement phase.

The detailed findings and scoring rationale for the evaluated procurement options are explained below. The unweighted scores by evaluation criteria along with the total unweighted and weighted scores and ranking for each model following the workshop participant's moderation are set out in Table 96.

Table 96: Score by Evaluation Criteria

| Evaluation Criteria | Weighting | Construct Only | Design and Build | Early Contractor Involvement | Alliancing | Design Build and Maintain | Public Private Partnership (DBFM) |
|---|---|---|---|---|---|---|---|
| Complexity / Scope for innovation | 5% | 1 | 3 | 2 | 4 | 5 | 5 |
| Time confidence | 5% | 2 | 4 | 3 | 3 | 4 | 4 |
| Market conditions | 20% | 5 | 3 | 3 | 2 | 2 | 2 |
| Risk allocation | 10% | 2 | 3 | 3 | 4 | 4 | 5 |
| Interfaces and stakeholders | 10% | 4 | 2 | 3 | 3 | 2 | 2 |
| Client involvement and control | 5% | 5 | 4 | 3 | 4 | 2 | 2 |
| Tangible demonstration of public value | 15% | 3 | 2 | 3 | 3 | 4 | 4 |
| Flexibility to deal with change | 10% | 4 | 3 | 4 | 5 | 2 | 1 |
| Cost confidence | 20% | 1 | 3 | 1 | 1 | 3 | 4 |
| Total score unweighted | | 27 | 28 | 25 | 29 | 28 | 29 |
| Total score weighted | | 30.5 | 30.5 | 26.5 | 28.0 | 29.5 | 31.5 |
| Unweighted rank | | 5th | 3rd | 6th | 1st | 3rd | 1st |
| **Weighted rank** | | **2nd** | **2nd** | **6th** | **5th** | **4th** | **1st** |

The ECI approach and Alliance model scored the lowest and were eliminated. ECI was eliminated due to the lack of contractor maturity to handle this form of contracting in the New Zealand market. Previous experience across New Zealand has also shown little benefit in the ECI model, with competitive tension being released from the contracting process early in the procurement process.

ECI also tends to convert to one of the traditional models after a period of early planning: most often to a D&B. The workshop identified two "bundled" models (PPP and DBM) and two "traditional" models (Construct Only and D&B) as highest scoring. A summary of the workshop's rationale for scoring each procurement model against the evaluation criteria is set out in Table 97.

Table 97: Scoring rationale

| Evaluation criteria | Scoring rationale |
|---|---|
| **Complexity/scope for innovation** | • Partnering models such as Alliancing (not commonly used in vertical build in New Zealand), DBM, and PPP offered some advantages relative to other procurement models discussed, as integrated delivery teams have more opportunity and scope to incorporate novel approaches into design and delivery<br>• Opportunities to leverage knowledge and experience of external parties through partnering models were viewed as beneficial given the project's scale |
| **Time confidence** | • Incentives for on-time project delivery inherent in more integrated delivery models were assessed as being more likely to provide on-time delivery, e.g. D&B, DBM or PPP, once the delivery timeframe is agreed. The procurement timeframes are generally much longer in a PPP model, which require efficiencies in delivery to arrive at the same in-service date as more traditional models<br>• Construct Only models were considered to have a fast time to market and require less front-end negotiation time, but depend on strong client management skills to maintain time and budget control.<br>• The delivery timing incentive is particularly strong for PPP models, where there are frequently financial penalties for project delay, and the delay in availability payments means the client does not pay for operations or maintenance until delivery |
| **Market conditions** | • D&B and Construct Only were considered to offer some advantages compared with other procurement models discussed due to the NZ market's familiarity with these models |

| Evaluation criteria | Scoring rationale |
|---|---|
| | • The workshop observed that the existing contractor market is significantly constrained but also is not currently delivering the competitive tension needed for other models. This conclusion was later tested in detail during market engagement<br>• Contractors also report concern about the risks inherent in large infrastructure projects in Christchurch, based on previous experience, which has led to a decreased market risk appetite for public-sector projects in Christchurch<br>• Selection of a suitable design team may help manage the risks of designing an efficient and effective multi-use arena for multiple stakeholder groups, e.g. contractors, subcontractors, operator, audiences, performers, athletes |
| **Risk allocation** | • Key ground risks will have to be managed by the public sector irrespective of the model chosen<br>• Alliancing, DBM, and PPP models were perceived as more efficient models for allocating and managing project delivery risks as they allow for the ability to transfer risks – at a cost – to the delivery entities which can consider creative design and delivery mechanisms to manage risks |
| **Interfaces and stakeholders** | • Construct Only offered an advantage in facilitating effective relationships with external stakeholders over the other procurement models assessed, as the Crown and Council remains in control of the design and delivery of the project |
| **Client involvement and control** | • Construct Only was assessed to offer the delivery entity the most involvement and control, as the client remains in direct control of the design and construction<br>• DBM and PPP were assessed to offer the delivery entity the least involvement and control in delivery, although the client maintains full control of the output specification until contractual close |
| **Tangible demonstration of value for money** | • Operating costs are an important consideration for determining a suitable contract model as Crown funding will only cover the capital expenditure required for the project<br>• DBM and PPP models were considered to encourage optimal value for money outcomes on a whole-of-life basis as the maintenance of the facility comprises part of the overall delivery contract<br>• Construct Only was considered a slight disadvantage relative to a PPP, but neutral overall as value for money outcomes depend on client capability to understand, manage, and direct the design to account for the interface between the capital asset, facility manager and operator |
| **Flexibility to deal with change** | • Alliancing and Construct Only models were considered the most flexible to change during delivery<br>• In these models, the client maintains control over design and delivery and can change the specification with change requests during project delivery<br>• PPP models are less likely to be able to accommodate change as the contractual model depends on understanding costs, demand, and interface with maintenance providers at the start of the project |
| **Cost confidence** | • PPP and was considered to provide the greatest cost confidence, though with a price premium.<br>• Availability PPPs, by design, have clear and recurring payments made by the client for the delivery (and operation) of a facility. This cost confidence can come at the risk of inflexibility to change as future uses may not be able to be accommodated by the contract without penalties<br>• D&B was attractive in terms of offering the Crown and Council a single fixed price for delivery of design and construction of the CMUA<br>• DBM models reduce the interface risk between the architect, builder, and maintenance providers which reduces the ability to 'shift' blame for cost-overruns during delivery |

## Procurement Models Recommended for Market-testing

The commercial workshop evaluation demonstrated that several models could meet the procurement objectives of the CMUA. The scoring was close, and the attendees provided perspectives on the market and their experience to support the evaluation. Notably, the evaluation revealed that PPP might be an appropriate model if risks could be transferred and there was enough market interest from a main contractor perspective to provide competitive tension through the procurement process.

Bundled models may be acceptable where the market has enough depth to provide competitive tension. Even in this case, however, the project will require confidence in its ability to maintain operational control and flexibility to respond to community expectations. Construct Only or D&B are strong 'default' models where the market depth for delivery exists and a highly specified design (or design brief) – in concert with an operator – can support cost certainty and control.

To determine the acceptability of these models to the finance, contractor, and operator market, the Council and Crown endorsed an accelerated market sounding process to be undertaken to test several procurement models and the market's appetite for further evaluation. The procurement models tested were:

- Construct Only

- Design and Build (D&B)
- Design Build and Maintain (DBM)
- Public Private Partnership (PPP)

# 24. Market Engagement

Following the commercial workshop, the Council and Crown agreed to undertake an accelerated market engagement process to understand the market depth for different procurement models, and provide some preliminary assurance about the ability of the preferred procurement model to generate a competitive response. The market engagement followed Treasury's ITU best practice principles for engaging potential suppliers when developing a business case for public sector procurement of a major infrastructure project. The market engagement tested different procurement models with local and international companies to gather further insight and feedback on:

- The market's appetite and capability to bid and deliver the project, including that of major subcontractors
- Lessons learnt from relevant projects
- Key constructability and risk allocation issues and approaches to managing and mitigating these
- Contract packaging, sizing, sequencing, timing and duration to suit market conditions and constraints and
- Potential procurement model options.

This market engagement was deliberately exploratory in nature, reflecting the formative stage of the procurement strategy and the information required to support the Investment Case. It is expected that additional market engagement will follow once a preferred procurement model has been developed –those interviewed noted the importance of keeping the market updated on the status of the CMUA, even when only limited information can be provided.

## Market Response Summary

The market engagement produced valuable insight from potential suppliers across a range of issues. Notably, the written feedback provided by contractors suggested a greater interest in bundled delivery than was revealed during individual engagement with contractors. However, the direct conversations during individual engagement sessions showed that contractors believed a D&B procurement model (or ECI leading to a D&B) would provide the greatest competition in the market.

Financers engaged noted that debt and equity are available for a PPP type procurement approach and signalled a strong interest in providing support to a PPP. However, only one had connected to a main contractor while others noted that market competition in New Zealand could present challenges in executing a PPP procurement. They suggested that the project would need to consider a wider and more formal marketing engagement process to encourage the Australian and other overseas firms to consider this a viable option.

The operator and maintenance market feedback noted the need for early involvement during the design process in order to incorporate whole-of-life and buildability considerations into the CMUA. This provided the project team with valuable feedback on the market's appetite and capacity for the project, including suppliers' preferred procurement model(s) that will assist in developing the CMUA's procurement strategy. Table 98 summarises the key findings of the market engagement process.

Table 98: Summary of key findings

| Theme | Feedback |
|---|---|
| **Overview** | • All respondents indicated interest in participating in the project. Unsurprisingly, each supplier's preferred procurement model generally aligned with their own market segment, i.e. equity providers tended to favour PPP while contractors favoured D&B or Construct Only (with ECI also favoured as a variation to these models) |
| **Competition** | • Four construction contractors indicated a clear appetite to tender for the project under a D&B or Construct Only procurement model. Another was still interested however could not commit at the time of the market sounding<br>• All indicated a preference to be involved as early as possible in the design development process<br>• All construction contractors indicated that PPP procurement was not preferred and four were against it. They expressed concerns related to the risk transfer on this project and the contractor margin pressures observed under PPP structure<br>• All noted that the cost of bidding would for alternative procurement models (e.g. PPP) will need to be covered to attract market interest<br>• Of the four equity providers interviewed, only one indicated a firm commitment to tender for the project under a PPP procurement model. The remaining equity providers, while expressing interest, did not identify any potential consortium partners and indicated some uncertainty regarding the interest of most domestic contractors to participate in a PPP consortium<br>• Maintenance providers and operators interviewed all expressed interest in participating in the project and noted they should be included early where possible |
| **Client** | • Participants wanted a high degree of clarity on who the public-sector counterparty, or client, will be for the project<br>• There is currently some market uncertainty around future CMUA governance and ownership arrangements, including how these will be shared between Crown and Council<br>• Participants believed that an active and engaged client throughout the design development and delivery would help remove any barriers and help achieve the desired outcomes<br>• The market is seeking a firm commitment to a procurement model. Recent projects, especially in Christchurch, have seen changes to the procurement mid-way through the procurement process |
| **Project brief** | • Responses highlighted that the project's success relies on a clear, comprehensive and controlled project brief before procurement.<br>• Contractors that preferred a D&B procurement model made clear that a well-developed design and functional brief would be critical for success and that this should include detailed and considered input from the operator and maintenance provider of the CMUA, prior to commencing any procurement process |
| **Design** | • The project must establish a robust design team and design development process to deliver an appropriately detailed design brief to the market. This should include client representatives and O&M providers in an active role to ensure the CMUA design brief meets the project team's requirements and minimises the potential for late (and costly) design changes<br>• A poor interface between the designer and contractor (e.g. under a Construct Only model) was considered to present a risk of programme delays and/or the assumption of additional risk by the project<br>• Design is driven by a capital cost target without enough regard to ongoing operating costs leading to higher than expected whole-of-life costs |
| **Subcontractor market capacity** | • Respondents had varying opinions about the subcontractor market capacity in Christchurch and New Zealand more broadly. Current projects in the Christchurch CBD, including Te Pae, the Metro Sports Facility and the Christchurch Hospital ASB, are expected to be completed or near completion by the commencement of the project. Other large-scale South Island infrastructure projects (e.g.in Invercargill and Dunedin) may impact the Christchurch market. Respondents highlighted that the sooner the CMUA timeline is confirmed, the more prepared the market will be to respond |
| **Subcontractor market capability** | • Respondents indicated that there could be capability constraints given the unique nature of the project (e.g., in delivering the long-span structure and ETFE roof). This extends to the capability of installing the ETFE roof. Offshore subcontractors would need to be procured to fill local market capability gaps |
| **Supply** | • All respondents noted that an offshore supply of some materials will be required, including structural steel and ETFE.<br>• Respondents observed that the earlier a formal procurement process for the project is commenced, the less risk there will be around the procurement of long lead supply chain items. Some respondents noted that embedding contractors early in the design process can lead to cost savings, an example included the procurement of seating, precast concrete and steel |
| **Governance** | • The market's desire for clarity around the public-sector counterparty for CMUA means there is substantial work required to ensure the project has necessary governance and project team expertise established prior to procurement. Part of this has been considered in the Management Case |
| **Community engagement** | • Respondents all observed that the CMUA will attract intense local interest and public scrutiny. Excellent communication, stakeholder engagement and understanding of any adverse public effects must be considered and managed by the project team |

# Reconsideration of the Preferred Procurement Model

## D&B preferred procuremt model

Following the market engagement, the project team recognised that there was substantial appetite from suppliers for a competitive D&B procurement process. This conflicted with the modest score the D&B model received for the market conditions evaluation criteria, which was based on the workshop participants' untested views on current market appetite for D&B procurement. The workshop held on 14 March 2019 reflected a point-in-time assessment, however. Following market engagement, the project team now has stronger confidence that a competitive process for the project can be achieved using a D&B procurement model. While the ultimate recommendation of this Commercial Case is to proceed with a D&B procurement model, there are conditions under which a PPP model might be a reasonable alternative.

## PPP remains possible

The feedback from the market sounding was not unanimous in favour of a D&B. Financiers were clear that there was availability of capital for this type of PPP project, and signalled a strong interest in providing support to a PPP. There are aspects of this project – the high upfront capital cost, the need to closely integrate design, maintenance, operations, and construction, and the long maintenance tail – that suggest a PPP delivery model would be a strong candidate to manage the interface risk and deliver innovation to reduce whole-of-life costs. The challenge is the lack of contractor interest in delivering under a PPP model, and the time and effort required for procurement of a PPP and to build contractor and client capability while maintaining the preferred in-service date.

[redacted] The finance market recommended informally engaging with overseas contractors to promote interest in the CMUA and drive a competitive PPP process. It is possible that further overseas market engagement and market warming could generate interest from the Australian contractor market. This would take additional time, perhaps 3-4 months, putting added pressure on already-tight delivery timeframes; it could contribute to further cost pressures due to escalation during this period. Overseas contactors are expected to need evidence of an ongoing pipeline of major vertical infrastructure before bidding on this project.

Experience with other major facilities has shown that even with additional market sounding overseas, it is far from certain that international contractors would be interested in a one-off project in New Zealand. The vertical infrastructure PPPs that have been delivered in New Zealand (prisons and schools) were viewed as long-term, ongoing commitments.

The client-side project team would require additional skills that are not currently held. These skills include but are not limited to legal, technical and financial assessment, tendering and management skills related to PPP procurement. While these skills can be sourced from the market there would be additional costs and time involved in recruiting the right skills and upskilling a team for PPP delivery, irrespective of the delivery team involved. This introduces client-side risk, and could generate additional delays, likely a further 3-6 months plus the escalation related costs associated with that delay. In parallel, further market engagement and preparation for a PPP model would need to be undertaken, which would include preparing a Public Sector Comparator (PSC) and Proxy Bid Model (PBM). This is significant effort and unbudgeted cost for a procurement model about which the contractor market was at best equivocal.

# 25. Recommendation and Procurement Model Development

This Commercial Case has involved identifying the project's characteristics, understanding the market profile, determining a shortlist of procurements models with consultation from stakeholders, evaluating and scoring the shortlist models and engaging with the market to further short-list the procurement models. Based on the analysis and the best outcomes for the Project, the preferred procurement model is a Design & Build (D&B) model.

## Design and Build Model

The commercial workshop coupled with feedback received from potential suppliers during the market engagement process demonstrated that the D&B model offers a number of key advantages over the other procurement models. These include:

- Interest from four main contractors, giving the best chance for a competitive tender process
- A single procurement process that covers the design and build of the facility, which will include a response from the private sector consortia comprising the skill sets to perform the required services
- Reduced interface risk with the integration of the design and build mitigating some client interface risk
- Potential programme savings from a faster and better-understood procurement process
- Enhanced control of the project delivery from the client-side
- Greater flexibility during the design development phase and options for innovation

There are still be some challenges the project will need to address, but these can be mitigated by having well-defined design requirements and committing to the development of a clear, concise and understandable functional brief prior to procurement. Some of this is already in place, as the scope for the current Technical Team included the production of a Proof of Concept design. Table 99 outlines the advantages and disadvantages of D&B, and an allocation of the risks between the Public and Private sector have been highlighted in Table 101.

Table 99: D&B Advantages & Disadvantages

| | Description |
|---|---|
| **Advantages** | • At least four contractors verbally indicated appetite to participate in this tender process. This is an encouraging sign that a D&B tender process that delivers genuine price tension could be undertaken<br>• The D&B model is common and well-understood by the market<br>• There is an opportunity to use ECI as a means of securing early contractor input into design and innovation, cost and constructability<br>• Fastest start to procurement and construction, with only one procurement phase |
| **Disadvantages** | • Transfer of design risk to the contractor means the project needs to ensure it has well-defined design requirements and is committed to a functional brief prior to procurement<br>• Challenging experiences in NZ market regarding late-stage client-side design changes<br>• Lower opportunity for maintenance and operator input into design, though this effect can be minimised by the project focusing on developing a high quality functional brief with operator and maintainer input<br>• There needs to be a genuine commitment to the procurement process from the contractor, designer and client. Cultural and team differences could have negative impacts on the Project |

While the D&B, operations, and AM/FM contracts will remain separate, a key finding of the market sounding was a reflection that the operator should be involved in the design of the facility. The client will need to oversee this

integration, and the Management Case proposes options for managing the interface and integration risk of the operator in the procurement.

## Proposed contractual structure

The absence of an equity party means that the contractual structure for the D&B model is relatively straightforward. The D&B consortia will contract directly to the delivery entity and will be contracted under a standard NZS3916:2013 contract form. The standard form contract is likely to require a level of redrafting to account for the scale of the project and the nature of the D&B procurement method. It is recommended that the Project Team also manage the interface between the operator and AM/FM provider or an expert consultant team and the D&B consortia. This will ensure that the requirements of the operator and public sector are reflected in the design, and lessens the risk that the design will be compromised in a way that gives rise to operational challenges and costs.

While further detail would be required during the procurement phase, the D&B contract could also include a schedule that requires the contractor to ensure that the facility meets certain availability standards for a period of approximately 3 years post-construction, subject to specified caveats such as damage caused by the AM/FM contractor or the operator. Table 100 illustrates the potential feature of the D&B contract.

Table 100: Features of D&B contract

| D&B Contract | |
|---|---|
| **Counterparties** | • SPV to be defined<br>• D&B consortia |
| **Initial draft** | Initial draft provided by the SPV as part of EOI or RFP documentation. |
| **Contract term** | To cover the design and construction period, together with specified post-construction period of approximately 3 years ("Defects Liability Period" (DLP) and/or 'Steady State' period), acknowledging this represents a longer DLP than is standard in the market. |
| **Key principles** | • To be based off standard framework D&B contracts<br>• D&B consortium to prepare design to preliminary design phase as part of tender response<br>• D&B consortium to provide fit for purpose guarantee<br>• Fixed price contract with contract completion date<br>• Payments to be made monthly on a Cost to Complete basis<br>• Include a schedule detailing the post-construction period obligations of the D&B contractor including DLP bond required<br>• Consideration to be given to D&B contractor obligations beyond DLP (i.e. Steady State)<br>• The availability and extended DLP principles are not current market-standard positions, but may be sought on the basis of facility size |

It is recommended that prior to a formal procurement process, the D&B model is further tested including a second round of market engagement to refine this procurement model. The two-stage procurement process will involve the following key phases

- Expression of Interest (EOI) – designed to confirm the level of market interest and capability and to select a shortlist of potential respondents who may subsequently be invited to submit proposals
- Request for Proposal (RFP) – invites short-listed respondents to respond and, based on the project team's concept design and design brief, submit a fixed-price proposal for the design and construction of the CMUA. The project and its advisors will evaluate submitted proposals to identify a preferred bidders.
- Preferred Bidder – following the evaluation of proposals, the Project will enter into negotiations with the preferred bidder with the objective of securing a signed contract

The procurement process is covered in more detail in the Management Case.

## Payment mechanism

The form of payment to the D&B contractor, AM/FM contractor, and operator needs to be carefully considered in order to achieve the desired level of risk allocation while ensuring the project is sufficiently attractive to encourage competition. The key payment mechanism principles for the D&B contractor is set out below. This will require further work to develop a payment mechanism appropriate to the requirements of the project prior to the request for proposal stage.

There will be no construction financing, and the standard form contract is likely to require a level of redrafting to take into account the scale of the project. A cost to complete or similar methodology will be used to determine payments made to the D&B contractor during the construction phase. The 'Cost to Complete' methodology for assessment of construction cost differs from the more traditional 'Percentage Complete', in that the calculation considers the total cost to complete the works and compares this to the available funding. This approach provides greater client security by ensuring funds are available at any given time to complete the works. This process is typically adopted by quantity surveyors commissioned directly by financiers, who require line of sight to the total project cost, so they can monitor this against the capped funding amount negotiated. Such payments will be fixed upfront to provide cost certainty to the Crown and the Council.

## Project risk assessment

A preliminary assessment has been undertaken to determine the risk associated with the delivery of the project under a D&B model to understand whether the risk is retained by the public sector (through its SPV), transferred to the private sector delivery consortia (the D&B contractor), or shared.

Table 101 below sets out the risk identified together with an initial assessment of the appropriate allocations. The ability to allocate risks on this basis will be subject to final negotiations with the D&B consortia, and the nature of the contracts ultimately entered into.

Table 101: Risks Allocation in a D&B Contract

| Risk | Public Sector | D&B Contractor | Notes |
|---|---|---|---|
| Procurement | ✓ | | This risk includes:<br>• Acceptability and appropriateness of the procurement model to the market<br>• Ability of the procurement model to appropriately allocate and price risk<br>• Market ability to deliver the project, given its scale, given concerns about the capacity of the market to deliver large capital projects, given other planned investments (e.g. Dunedin Hospital, MSF, NMH Hospital, University of Otago Medical School, etc) |
| Funding availability | ✓ | | • This includes risks to the availability and quantum of the ongoing operating subsidies that may be required |
| **Design Risks** | | | |
| Functional brief development | ✓ | | |
| Stakeholder input | ✓ | | This includes:<br>• Managing key content provider (NZRU, promoters) expectations for the facility<br>• Managing public expectations about delivery timing, scale, quality, and cost<br>• Engaging with residential stakeholders on noise impacts |
| Changes to design brief | ✓ | | • Including changes to design brief requested from operators or FM providers or as a result of operational / FM requirements |
| Building Consent | | ✓ | |
| Resource Consent | ✓ | ✓ | • Due to the Outline Plan of Works process, the attribution of responsibility in the design and resource consent process will need to be carefully managed |
| Fitness for purpose (as per brief) | | ✓ | |

| Risk | Public Sector | D&B Contractor | Notes |
|---|---|---|---|
| Design Development | | ✓ | • Aspects of this risk may be shared between the public sector and D&B contractor depending on the degree of design development at the time of tender |
| Design Defects | | ✓ | • The project's scale may warrant a longer defects period from the contractor than is standard. This will be subject to contract negotiations |
| Insurance | | ✓ | • Note that there are instances where it may be financially prudent for the delivery entity to take out insurances on behalf of the D&B contractor for design and construction works |
| Design sign off and governance approvals | ✓ | | • Unclear or misalignment of expectations between interested public sector parties could delay approval and thus main works commencement |
| **Site** | | | |
| Land/site availability & acquisition | ✓ | | • Sites that may be required for the delivery of the CMUA remain to be acquired, this needs to be resolved prior to commencement of main works |
| Site logistics | | ✓ | |
| Road closures | ✓ | | • LINZ and Council will need to close roads prior to major earthworks commencing |
| Demolition and site clearance | ✓ | | |
| Service relocation | ✓ | | |
| Land contamination and remediation | ✓ | | |
| Ground improvement (geotechnical) | ✓ | | • This risk may be transferred if there is sufficient design detail at the time of tender, and if reliance can be placed on geotechnical reports / investigations |
| Utilities relocation | ✓ | | • |
| **Delivery** | | | |
| Design and Main Contractor Coordination | | ✓ | • The local market experience in design coordination has been variable, and this is a key risk element that will need to be monitored by the project team throughout the delivery phase |
| Labour shortage | | ✓ | • This risk includes local capability to handle and install bespoke items such as the ETFE roof |
| Materials shortage | | ✓ | |
| Plant shortage | | ✓ | |
| Compliance with consent conditions | | ✓ | |
| Cost escalation (construction) | | ✓ | |
| Construction defects (during defects liability) | | ✓ | |
| Construction insurance | | ✓ | |
| Force majeure | ✓ | | |
| Industrial Action | | ✓ | |
| Main Contractor Insolvency | ✓ | | • Large contracts in Christchurch have been affected by Main Contractor insolvency risk. The scale of this project intensifies this risk. |
| Subcontractor Insolvency | | ✓ | |

## Operator and Maintenance Provider

It is recommended that the project separately procures /confirms an operator and maintenance provider (or a combination of the two) as early as possible to maximise the value of their inputs into developing the design requirements for the CMUA. Consultant SME's should be engaged to provide appropriate input if the public sector is unable to appoint these immediately. The interface between the operator and D&B consortia should be managed by the project team.

## Operator

Market respondents indicated that early operator involvement during the design and delivery phases of the CMUA is critical to the project's success, to have their requirements incorporated into the design. Examples of operational considerations to include in the design are:

- Accessibility for supply, re-supply, maintenance etc
- Location of hospitality outlets
- Circulation routes
- Ability to 'lock-out' areas, depending on operating mode and attendance, to minimise cleaning, security and other staffing during events
- Logistics
- Storage
- Security
- Functionality of spaces

Additional benefits of early operator involvement include the operator having a detailed understanding of the CMUA to provide time to tailor its processes and procedures well in advance of commissioning. Market participants noted that where this had not previously occurred there were inefficiencies or late changes to the design because the design team did not consider the operators as the end users. The project could benefit from early operator involvement and considering synergies across Christchurch's multiple venues.

Neither the PPP nor D&B models recommend incorporation of operational services.

We note that the Council owned entity Vbase is the potential operator of the facility. It is recommended that the operator be confirmed as early as possible. This will ensure that the operator is on board during the design development phase for the delivery of the CMUA. This recommendation is made irrespective of the procurement model chosen for the main works.

## Maintenance provider

Market respondents indicated that involvement of maintenance contractors during the design and delivery phases of the CMUA is critical to the project's success, so their requirements are incorporated into the design. Examples of maintenance considerations to include in the design are:

- Type and quality/durability of material
- Critical spares
- Storage
- Service level of equipment
- Access for cleaning and maintenance

To maximise the value that the maintenance provider can add to the design and delivery of the CMUA, it is recommended that the project runs a separate procurement process for a maintenance provider as early as possible. This will ensure that the maintenance provider is brought on board throughout the design development phase for the delivery of the CMUA. This recommendation is made irrespective of the procurement model chosen for the main works. Table 102 shows the key risks that are expected to be retained by the private sector and those that are expected to transfer to the AM/FM provider and operator.

Table 102: AM/FM and Operations Risk Allocation

| Risk | Public Sector | AM/FM Contractor | Operator | Notes |
|---|---|---|---|---|
| **AM/FM Costs** | | | | |
| Asset Availability | ✓ | ✓ | | • This risk will be shared depending on the ultimate responsibility for the asset availability failure should it occur. |

| Risk | Public Sector | AM/FM Contractor | Operator | Notes |
|---|---|---|---|---|
| Force Majeure During Operations | ✓ | | | |
| Utilities (volume and price) | ✓ | | | • Based on experience with other NZ arenas |
| Cost escalation | ✓ | | | • Based on experience with other NZ arenas |
| Lifecycle Costs | ✓ | | | • Based on experience with other NZ arenas |
| Change in use | ✓ | | | • Based on experience with other NZ arenas |
| Operator misuse | | | ✓ | • Generally, this risk is insured by the operator and can be integrated with the AM/FM contractor's insurance. The interface must be managed carefully as the causal factor of operator 'misuse' and damage can be sometimes result from ineffective / poor maintenance. |
| **Operations** | | | | |
| Demand risk / income | ✓ | | | • Patronage risk does not appear transferable in in the NZ market under any procurement model |
| Noise Complaints / Regulations | ✓ | | | • See Strategic Risks for a brief discussion of the owners obligations and risks under Section 16 and 17 of the RMA |
| Operational staffing | | | ✓ | |
| Safety and security | | | ✓ | |
| Staff costs | ✓ | | ✓ | |

## Enabling and early works

Contractor participants during the market engagement unanimously agreed on the need to mitigate site risks prior to the procurement of main works. Site preparation is often not dealt with adequately in early stages of major projects, and especially in Christchurch due to the variability of ground conditions. Transferring the ground risk conditions, with upfront due diligence, would help to reduce the contingency allowances and explicit risk pricing for ground risk.

Enabling/early works to consider include:

- Site clearance
- Utilities relocation (and consequential offsite infrastructure changes)
- Consequential (external to site) roading changes
- Geotechnical (ground improvement), if appropriate, given the ideal scenario that ground improvement. foundations and structure are designed as a complete system
- Site contamination and remediation

The practical value of a separate early works package will depend on the project and its technical advisors confirming that early works can be completed prior to the commencement of the procurement of the CMUA main works as noted above. It is recommended that the enabling works be done as soon as possible to help de-risk the main project.

To improve the attractiveness of the CMUA and hence maximise the competitive tension in any procurement process, it is recommended that the project considers tendering a separate early works contract to help mitigate residual ground and site condition risks prior to procuring the main works. This recommendation is made irrespective of the procurement model chosen for the main works.

Christchurch City Council



# The Financial Case

Christchurch City Council

# 26. Purpose

The Financial Case outlines the overall cost and affordability of the on-budget preferred option identified in the Economic Case.

The purpose of the Financial Case is to:

- Quantify the expected annual costs of the CMUA to the public sector
- Define the potential funding sources for the recommended option
- Assess the affordability of the CMUA.
- Consider the capital cost risk envelope on this project, and consider whether the preferred option is affordable at a level where costs are likely to be exceeded only 15% of the time (a P85 level).

# 27. Recommended Option

As noted in the economic case, in order to balance affordability constraints, while still maintaining most of the benefits from the original preferred option, the recommended option is Option 3a **25,000 permanent capacity**. A summary of the configuration, seating capacity and design of the Recommended Option is presented in Table 103 below.

Table 103: Covered Option 3a – Project description

| Option Name | Orientation | Seating | Premium seating | Other information |
|---|---|---|---|---|
| Covered Option 3a | North / South | 25,000 permanent seats | 2,500 | • Scale is sufficient to attract major cultural and sporting events<br>• Lower initial capital cost compared to other options assessed<br>• Design allows for temporary seats to be included later should demand require it, and/or funds allow |

The affordability threshold was defined by the combination of the Long-Term Plan (LTP) funding currently allocated, the Christchurch Regeneration Acceleration Facility (CRAF) contribution signalled by the Crown, the Crown's contribution already made toward acquiring the site, and the allowances by the Council toward operating funding. The option that, in the view of the project team, balanced affordability, optionality, and economic benefit was selected to progress to affordability assessment.

## Whole of Life Cost

The total net whole of life cost for the CMUA is estimated to be **$639.8 million (nominal)** over the 30-year assessment period: a 5-year build period and a 25 year of operating period. Estimated project costs have been assessed over a 30-year period, comprising a build period through to 2024, and 25-years of operations. The total net whole of life cost of the Recommended Option is presented in Table 104 below.

Table 104: Total cost of Recommended Option ($m)

| | Total cost ($m) (nominal) |
|---|---|
| Capital expenditure | $439.4 |
| Capitalised pre-opening costs | $1.2 |
| Lifecycle costs | $76.8 |
| Net operating expenditure (operating expenses less revenue) | $65.5 |

| | Total cost ($m) (nominal) |
|---|---|
| Bid Incentive Fund | $56.9 |
| **Total cost** | **$639.8** |

# 28. Financial Model

## Overview of Approach

The expected annual costs of the CMUA to the public sector were determined through the development of a Financial Model ('the Model'). The costs of the CMUA comprise:

- Capital costs for the development, design and construction of the facility
- Lifecycle costs covering the replacement or refurbishment of CMUA components
- Operating costs and revenues relating to the operation of the facility
- A Bid Incentive Fund to attract high profile events to the CMUA.

The Financial Model was constructed based on cost, revenue, and funding assumptions and estimates obtained from the Christchurch City Council (Council), WT Partnership (WTP), and domestic and international events and arena experts. These costs and revenue assumptions have been further reviewed by Vbase and have been supplemented with other publicly available information. A summary of the key inputs and assumptions in the Model, and their respective sources, are detailed in Table 105 below.

Table 105: Financial Model key inputs and assumptions

| | Assumption | Source |
|---|---|---|
| Construction timing | Enabling works start: Q3 2020<br>Construction completion: Q2 2024<br>Operations commencement: 2024* | WTP, Council |
| Escalation on construction costs | Q1 2020 – Q1 2021: 2.8% per annum<br>Q1 2021 – Q2 2024: 2.75% per annum | WTP, Council |
| Model period | 30 years | Project Team |
| Operations period | 25 years | Project Team |
| Inflation | c. 2% | Treasury |
| Net present value date | Q3 2019 (Council's FY20 financial year) | Project Team |
| GST and tax | Excluded | - |

*Financial modelling based on Q1 2024 opening. The revised programme indicates a Q3 opening which will have a positive financial impact.

## Capital Expenditure and Lifecycle Costs

The construction cost estimates for the CMUA have been prepared by WTP for the Council for the purpose of providing a high-level cost estimate for the CMUA. These estimates build on earlier works undertaken by the Stadium Trust during the pre-feasibility study and test the previous cost planning provisions from emerging information from the Technical Team.

The delivery of the CMUA will be phased over a five-year period as per the schedule in Table 106. All delivery costs are reported in calendar years.

Table 106: CMUA construction timing

| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|
| Construction timing | 0.0% | 4.5% | 15.4% | 36.2% | 37.4% | 6.5% |

A summary of the estimated capital costs using an Escalation and Contingency Methodology (EAC) for the proposed CMUA are provided in Table 107.

Table 107: Capital expenditure ($m) – Construction costs

| Cost | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Total |
|---|---|---|---|---|---|---|---|
| Construction costs (including FF&E) | $0.0 | $14.3 | $48.7 | $114.6 | $118.1 | $20.5 | **$316.2** |
| Professional fees | $0.0 | $1.8 | $6.0 | $14.2 | $14.7 | $2.5 | **$39.2** |
| Consent costs | $0.0 | $0.1 | $0.4 | $0.9 | $0.9 | $0.2 | **$2.4** |
| Legal and insurances | $0.0 | $0.2 | $0.5 | $1.3 | $1.3 | $0.2 | **$3.5** |
| Redevelopment organisation cost | $0.0 | $0.2 | $0.6 | $1.4 | $1.5 | $0.3 | **$4.0** |
| Development contributions | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | **$0.0** |
| Contingency | $0.0 | $1.7 | $5.7 | $13.3 | $13.7 | $2.4 | **$36.8** |
| **Total cost (excluding GST) – Real** | **$0.0** | **$18.2** | **$61.9** | **$145.7** | **$150.2** | **$26.1** | **$402.1** |
| Escalation | $0.0 | $11.3 | $11.4 | $11.7 | $3.0 | $0.0 | **$37.3** |
| **Total cost (excluding GST) - Nominal** | **$0.0** | **$29.4** | **$73.3** | **$157.3** | **$153.2** | **$26.1** | **$439.4** |

## Pre-opening costs

There are some pre-opening costs as part of the build, including consultation with the operator, IT and early maintenance that occur two years prior to the in-service date. Part of the pre-opening costs may be able to be capitalised against the project, particularly those that are critical to opening a functional facility. These costs have been excluded from the base project costs, on the expectation that they would be the responsibility of the operator. There will be some costs (e.g. turf maintenance) that need to occur prior to opening but cannot be capitalised. This Investment Case does not provide advice on the appropriateness of capitalising all pre-opening operator costs. Table 108 provides a breakdown of those pre-opening costs which may be capitalised and those that are classified as operational pre-opening costs.

Table 108: Pre-opening costs ($m) (nominal)

| | 2 Year Total ($m) |
|---|---|
| Capitalised pre-opening costs | $1.2 |
| Operational pre-opening costs | $3.6 |
| **Total pre-opening costs*** | **$4.7** |

* Estimated costs may not sum due to rounding

### Lifecycle costs

The lifecycle cost assessment has been calculated by applying benchmark lifecycle percentages of replacement to the initial capital costs. Lifecycle costs include asset maintenance and asset replacement expenses over the lifecycle of the facility.

WTP estimates indicate that the CMUA is likely to incur **$76.8 million** (nominal) in lifecycle costs over the operating period assessed which amounts to approximately **0.44%** of the CMUA's total delivery value per annum. Whilst this may appear low, WTP have confirmed that due to the large proportion of capital spend that falls outside of the lifecycle (planning costs, structural costs etc.) they are confident this is reasonable.

## Quantitative Risk Assessment on Project Delivery Costs

The Council commissioned WTP to undertake a Quantitative Risk Assessment (QRA) on the project delivery costs. A QRA is a risk quantification tool used to calculate the impact on project delivery cost if certain risks eventuate. Best practice suggests that a QRA be undertaken at each phase of project delivery, although a QRA at this stage of design is somewhat unusual. The Investment Case stage is an early phase, and the range of costs will narrow as risks are better understood. At this stage, WTP have advised that it is not appropriate to use the QRA costs for the purposes of financial planning. Additional work will continue to be undertaken to understand the market and cost-push risks for this project.

WTP have reviewed the risk register provided by the Council and have utilised this information to produce a list of key risks which have been used to produce the QRA. A three-point estimate has then been produced for each risk, representing a high, mid and low cost should the risk eventuate. This high-level approach reflects the current level of design information available for the project, with the seven key risks presented in Table 109 below.

Table 109: QRA risks

| Risk | Description |
|---|---|
| Delays during design stage | Delay to the commencement of the physical works are likely to result in additional costs e.g. if approvals to proceed are delayed.<br>• The Low estimate assumes a delay of 3 months<br>• The Mid estimate assumes a delay of 7 months<br>• The High estimate assumes a delay of 12 months |
| Delays during construction | This risk covers possible extension to the duration of the pre-construction services. This could result from a lack of resources to complete the design work, client delays at gateways and changes to scope.<br>• The Low estimate assumes a delay of 1 month<br>• The Mid estimate assumes a delay of 2 months<br>• The High estimate assumes a delay of 6 months |
| Scope changes | This risk covers changes to scope as the project progresses.<br>• The Low estimate assumes that increased scope increases construction costs by 2.5%<br>• The Mid estimate assumes that increased scope increases construction costs by 5%<br>• The High estimate assumes that increased scope increases construction costs by 10% |
| Escalation | This risk covers the possibility that the rate of inflation is higher or lower than the allowed rate of 2.35% per annum.<br>• The Low estimate assumes a reduction of 5%<br>• The Mid estimate assumes no change |

| Risk | Description |
|---|---|
| | • The High estimate assumes an increase of 10% to the allowance in the estimate |
| Lack of market competition | This risk covers lack of competition in the market resulting in increased costs.<br>• The Low estimate assumes a premium of 2% on the total construction cost<br>• The Mid estimate assumes a 5% premium<br>• The High estimate assumes a 10% premium |
| Design development | This risk covers design development from investment case through to construction. This may result from the final design being more complex than envisaged, or incorrect assumptions made during the investment case stage.<br>• The Low estimate allows a 2% increase in construction costs<br>• The Mid estimate allows a 4% increase in construction costs<br>• The High estimate allows a 7.5% increase in construction costs |
| Exchange rate | This risk covers changes to current rates associated with the cost of imported materials for the development. The approximate cost of imported materials included in the base estimate is $100m.<br>• The Low estimate assumes a 2.5% decrease in construction costs<br>• The Mid estimate assumes a 5% increase in construction costs<br>• The High estimate assumes a 10% increase in construction costs |

The initial QRA assessment WTP conducted resulted in a P85 risk estimate (as requested by the Crown) of $505.3m, meaning that the project is expected to be able to be delivered for less than this cost 85% of the time. However, this was deemed unaffordable as it exceeded the $473m available budget.

This necessitated an affordability review of the preferred option to identify potential saving opportunities to present an on-budget scenario for the CMUA. This would enable the CMUA to be delivered within the **$473m** available budget at a P85 affordability threshold level. These potential savings opportunities produced the most up to date results. This final QRA applies to the costs and revenues presented throughout the financial case:

- The P50 estimate is **$455.9m**, meaning that given the known risks this project can be delivered for less than this cost 50% of the time
- The P85 risk estimate is **$472.7m**, meaning that the project is expected to be delivered for less than this cost 85% of the time.

The available funding therefore exceeds the P85 risk estimate by approximately **$0.3m**. In light of these results, we can expect the project to be delivered under the available funding budget (slightly more than) 85% of the time.

## Operating expenditure and revenue

The operating model estimates the costs and revenues associated with the operation of the CMUA over a 30-year period. This model was informed by domestic and international stadium experts, Council, Vbase, Canterbury Rugby and ChristchurchNZ.

While operating revenue for the CMUA will be generated over a 25-year period following the opening of the arena, operating expenditure will be incurred for salaries, finance and administration and information technology prior to construction completion. This assessment is therefore undertaken over a 30-year timeframe that includes the project delivery and 25-years of operations.

## Events schedule

An indicative event schedule for the CMUA has been used to inform operating cost and revenue assumptions underpinning the operating model. This schedule has been tested with Vbase, Council, ChristchurchNZ and international events experts, and has also been informed by data from key external stakeholders.

The CMUA event schedule will change over time in both the number and types of events held in Christchurch. As a consequence, this is likely to impact on the variability of operating costs and revenue generated over the operating period. The operating expenditure, operating revenue and net operating expenditure the CMUA is presented in the following sections. All operating expenditure and revenues are reported in calendar years.

## Operating expenditure

A summary of the CMUA operating expenditure is presented in Table 110 below.

Table 110: Operating expenditure ($m), 30-year assessment period

| | Average annual cost ($m) (real) | Total cost ($m) (nominal) |
|---|---|---|
| Salary costs | $2.8 | $107.3 |
| Finance & Administration | $0.9 | $34.2 |
| Information Technology | $0.4 | $15.5 |
| Marketing / communications | $0.4 | $13.4 |
| Events and facilities management | $1.7 | $65.1 |
| Stadium Maintenance | $1.8 | $69.0 |
| Council rates and insurance | $2.3 | $86.4 |
| Operational pre-opening costs* | $0.7 | $3.5 |
| Contingency | $0.4 | $14.2 |
| **Total operating expenditure** | **$11.3** | **$408.5** |

*Represents the average annual operational pre-opening costs incurred over the five-year period prior to construction completion.

## Operating revenue

The model also estimates operating revenue. This includes the venue's share of ticket revenue, merchandise, catering, membership and corporate suites, functions and other revenue. It also includes the commercial rights sold from the arena, which has been benchmarked against similar domestic and international facilities.

The total operating revenue for the CMUA is generated from a number of sources, as presented in Table 111 below.

Table 111: Operating revenue ($m), 30-year assessment period

| | Average annual revenue ($m) (real) | Total revenue ($m) (nominal) |
|---|---|---|
| Ticketing income and royalties | $1.5 | $55.2 |
| Fixed venue hire | $1.7 | $64.6 |
| Merchandise | $0.2 | $7.5 |
| Catering | $1.2 | $44.9 |
| Commercial rights | $1.2 | $46.3 |
| Membership and corporate suites | $2.9 | $110.0 |
| Functions and other revenue | $0.4 | $14.6 |
| **Total** | **$9.1** | **$343.0** |

## Net operating expenditure

The total operating revenues less costs means that the facility generates a net deficit of **$65.5m** over the 30-year assessment period as shown in Table 112. This excludes lifecycle costs.

Table 112: Net operating expenditure ($m), 30-year assessment period

| | Total cost ($m) (nominal) |
|---|---|
| Operating expenditure | $408.5 |
| Operating revenue | $343.0 |
| **Net operating expenditure** | **($65.5)** |

## Bid Incentive Fund

Incentive funds are an important part of the event attracting landscape. To support the CMUA in hosting a diverse range of events throughout the year, an incentive fund is likely to be required to attract All Blacks tests, large-scale concerts and events, international rugby league and football fixtures and other events content (non-sporting) to the arena. The fund is comprised of:

- An incentive package that includes incentive payments to promoters to attract events to the arena. This payment is essential to ensure the CMUA is competitive with other arenas in New Zealand and the Asia-Pacific region
- A small amount for top-up costs are paid by the arena to some content providers that derive revenue from seated events to compensate some content providers for the relatively smaller scale of this facility (e.g. 25,500 versus 30,000+). Using incentives as 'top ups' means that the venue can be of a size that is appropriate for most Christchurch events, and where an arena of 30,000+ would be seen as too large, however it allows for the opportunity to attract events that normally would only play at venues with larger capacities

The average incentive payments required to attract events to Christchurch for each event are summarised in Table 113 below. These incentives have been benchmarked against other similar New Zealand venues, and have been provided by stadium experts in New Zealand and Australia. The incentives required for each individual event are likely to be lower than what is required for the current facility, but to provide a full product offering the total incentive fund will be larger than that currently deployed. These amounts do not include other advertising or events promotion for other venue, or what is undertaken as part of marketing for Christchurch overall.

An incentive fund will be required two years prior to the opening of the CMUA in order to attract events to the venue once the CMUA is operational. In line with the international landscape, it is anticipated that the average incentive payments required to attract premium content to Christchurch will increase in the years following the opening of the CMUA. This is likely to occur as a direct result of the increasingly competitive landscape for major events in New Zealand, with the bid incentive fund allocation to be continually assessed on an ongoing basis.

Table 113: Bid Incentive Fund ($) (real)

| Event | Incentive payment per event ($m) |
|---|---|
| Large concerts | $0.2 |
| Mega events | $0.4 |
| All Blacks tests (Tier 1) | $0.6 |
| Football and rugby league | $0.1 |

| Event | Incentive payment per event ($m) |
|---|---|
| Other event content (non-sporting) | $0.1 |

Table 114 provides a summary of the total incentive payment required over 25-years of operations and two years prior to opening to attract major sporting events, concerts and cultural events.

Table 114: Bid incentive fund ($m) (nominal)

| | Total incentive payment ($m) |
|---|---|
| Large concerts | $16.9 |
| Mega events | $2.2 |
| All Blacks tests | $23.5 |
| Soccer and rugby league | $8.6 |
| Other event content (non-sporting) | $2.6 |
| **Total** | **$53.8** |
| Pre-Operating Bid Fund | $3.1 |
| **Total Bid Incentive** | **$56.9** |

Cash incentives can also be supplemented with additional in-kind incentives such as reduced venue fees or a marketing co-investment and city activation around a major event. However, activities also carry costs that need to be accounted for. Further consultation with ChristchurchNZ is required to understand the likely strategy with respect to an integrated marketing plan for Christchurch and Canterbury that includes the arena.

If cash is the primary mechanism for attraction, the Bid Incentive Fund is estimated to require **$1.4m per annum** to attract major events to Christchurch. Further discussion will be undertaken with ChristchurchNZ and the Council to understand if and how this incentive fund can support existing incentives that are currently being used to attract events to Christchurch. Depending on the plan and the funding already available, the net funding requirement for this incentive scheme may be lower. A detailed review of Council's funding of ChristchurchNZ is planned as part of the FY21 LTP. This needs to considered in the context of the planned operational subsidy from the CMUA (refer to Section 29).

# 29. Funding Sources

Funding for the CMUA will need to be met through a combination of

- Capital funding from the Christchurch City Council and the Crown
- Operating revenues and, if required and feasible, other commercial opportunities
- Funding through an operating subsidy provided by the Christchurch City Council
- Regional rates will also be investigated following the Christchurch City Council's approval of this Investment Case.

The total available funding sources available to the CMUA are summarised in Table 115.

Table 115: CMUA funding sources (nominal, 30-year assessment period)

| | Funding ($m) |
|---|---|
| **Capital funding available** | |
| Christchurch City Council | $253 |
| Christchurch Regeneration Acceleration Facility (CRAF) | $220 |

| | Funding ($m) |
|---|---|
| **Operating expenditure funding available** | |
| Operating subsidy ($4.1m p.a. adjusted for inflation) | $150 |

# Capital Funding Contribution

## Christchurch City Council (Council) contribution

The proposed phasing of the proposed Council capital expenditure is based on the latest capital works projections prepared by WT Partnership. This is as presented in Table 116. The Council has allocated **$253 million** towards the construction of the CMUA below, some of that funding may not be required for the capital build of the facility and is represented as an unallocated capital contribution. Note that this phasing supersedes that which has been assumed as part of Council's latest annual planning. These phasing changes will have a slight impact on the timings of rates adjustments (and will be revised annually as part of Council's Annual Plan / Long Term Plan updates).

Table 116: Christchurch City Council funding contribution ($m) (nominal)

| | 2019 FY | 2020 FY | 2021 FY | 2022 FY | 2023 FY | 2024 FY | Total |
|---|---|---|---|---|---|---|---|
| Council contribution | - | - | - | 39.8 | 172.9 | 30.0 | **242.7** |
| Unallocated Council Contribution | | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | **10.3** |
| **Total Council Contribution** | | **2.06** | **2.06** | **41.86** | **174.96** | **32.06** | **$253.0** |

## Crown contribution – Christchurch Regeneration Acceleration Facility

The Council has agreed to allocate **$220 million** from the CRAF towards the construction of the CMUA following the approval of an Investment Case. This Investment Case assumes that CRAF funding can be accessed alongside Council funding – that is, the Council's funding allocation does not need to be exhausted prior to accessing the CRAF. It is to be noted that the Crown expects to contribute [redacted] towards the cost of the land for the CMUA. An estimate of the proposed phasing for drawdown of the CRAF funding is presented in Table 117 below. The Crown's capital funding contribution is reported in financial years.

Table 117: Crown contribution ($m) (nominal)

| | 2019 FY | 2020 FY | 2021 FY | 2022 FY | 2023 FY | 2024 FY | Total |
|---|---|---|---|---|---|---|---|
| Crown contribution | - | 20.9 | 71.3 | 127.8 | - | - | **220.0** |

## Regional Contribution

The financial impact of a regional contribution has not been included as the territorial authorities within the Canterbury region have requested the opportunity to review the approved Investment Case prior to formally considering their contribution. The expectation is that contributions would be forthcoming, on the basis that the facility will benefit not just the residents of Christchurch but the surrounding region. It is anticipated that these additional funds could potentially be utilised to enable design enhancements to be added to facility, or to further de-risk the project to financial exposure.

## Operating Subsidy

As is frequently the case for public infrastructure projects, the operating costs for the CMUA exceed operating revenues in all years of operations. This difference will be closed through an operating subsidy provided by the Council.

Prior to the preparation of this Investment Case, the Council allocated **$4.1 million** per annum (real FY20 dollars) to cover operating and lifecycle costs or losses from the CMUA. This allocation is intended to cover lifecycle and net operating losses incurred by the CMUA over the 30-year assessment period. The Council's annual operating subsidy is presented in Table 118 and is reported in financial years. Demands on this subsidy vary depending on the year – and are driven by fluctuations in demand and lifecycle requirements. Council advises that it can manage operating cashflow fluctuations over time.

The cashflow for the facility is included in Appendix E.

Table 118: Council operating subsidy ($m) (nominal, 30-year assessment period)

| | 2019-2022 FY | 2023 FY | 2024 FY | 2025 FY | 2026 FY | 2027 FY | Total |
|---|---|---|---|---|---|---|---|
| Council operating subsidy | 0 | 0.2 | 4.4 | 4.5 | 4.6 | 4.8 | **149.8** |

## Potential Commercial Opportunities

The scope and scale of the Recommended Option for the CMUA, combined with the size of the chosen CMUA site, leaves scope for further commercial opportunities to be explored and accommodated on the site, either directly or indirectly complimentary to the CMUA.

For the purposes of the Financial Case it is assumed that any commercial opportunities will be fully funded by the private sector. The Council project team has been provided guidance about the types of ancillary activities that may be included in the arena, including:

- Sports museum
- Restaurant / food outlets for event attendees
- Fan experience / fan zone
- Conferences and events
- Community events venue
- Art and sculptures
- Fan shop
- Fitness centres
- Arena tours

Some potential revenue sources (e.g. hotels, hospitality, and office) have been excluded for the reasons outlined in the Economic Case. Notably, these uses would adversely affect existing private investment in the area and could undermine the catalytic effect that this investment is supposed to have on the central city.

Other opportunities that could generate modest rental revenue such as a museum, fan shop and gym may be considered during detailed design. Following this, further analysis may be required to determine whether each commercial opportunity is likely to generate a material revenue stream over and above the anticipated capital and operating costs.

# 30. Affordability of the CMUA

## Capital Cost Affordability

The estimated EAC capital expenditure estimate sits at **$439.4m** (excluding capitalised pre-opening costs). The Council and Crown are anticipated to commit **$473.0m** to the facility (excluding land), leaving a capital surplus of **$33.6m**. The capital cost affordability against Council and Crown funding contribution is presented in Table 119 below.

Table 119: Capital cost affordability ($m) (nominal, 30-year assessment period)

| | ($m) |
|---|---|
| Estimated capital expenditure | $439.4 |
| Total Council and Crown funding available | $473.0 |
| **Capital funding surplus (shortfall)** | **$33.6** |

While the QRA estimate for Option 3 delivered an estimated shortfall of **$3.4 million** under the P85 assessment, Option 3a (on-budget scenario) delivers an estimated surplus of **$0.3m**.

Table 120: Capital cost affordability ($m) (nominal, 30-year assessment period)

| | ($m) |
|---|---|
| Estimated P85 capital expenditure | $472.7 |
| Total Council and Crown funding contribution | $473.0 |
| **Capital funding surplus (shortfall)** | **$0.3** |

## Operating Expenditure Affordability

The CMUA incurs average annual operating losses of **$4.2m** per annum in real terms (including lifecycle costs) this would create exposure of $0.1m when compared to the $4.1m currently budgeted to cover operations. This implies the need for an additional $0.1m per annum of Council subsidy, which would have an ongoing additional rates impact of approximately 0.02%. Additionally, depending on the timing of pre-opening costs, a one-off additional subsidy may be required to be brought forward into FY23 (up to c. $1.4m - a one-off rates impact of up to c. 0.25%). Table 121 presents the total ongoing operating surplus per annum in real terms.

Table 121: Operating expenditure affordability ($m) (per annum in real terms))

| | ($m) |
|---|---|
| Estimated net operating expenditure per annum (including lifecycle costs) | $4.2 |
| Total Budgeted Council Contribution (operating subsidy) per annum | $4.1 |
| **Surplus / (Deficit)** | **$(0.1)** |

## Impact on Council Finances

An assessment was undertaken to determine the impact on Council debt and rates were the stadium to either not proceed as planned or was cancelled (excluding the additional costs that would arise from continuing with the temporary stadium).

## Impact on Debt

The main impact from the CMUA is during the construction period, and its impact on gross council debt. If the facility proceeds, it is estimated that the current expected Council debt will be $2.768b following the completion of the CMUA in 2024. If the CMUA were to not proceed, Council debt will drop by $246m to $2.522b, which includes some $7m of principal repayments that will have already been made.

Table 122 displays the impact on debt if the CMUA proceeds relative to a scenario wherein the CMUA is not delivered.

Table 122: Impact of the CMUA on Council Debt ($m) (nominal)

| Item | ($m) |
|---|---|
| Debt if CMUA proceeds | $2,768 |
| **Reduction in debt if the CMUA does not proceed** | **($246)** |
| Debt if CMUA does not proceed | $2,522 |

## Impact on Council rates

The facility will also affect Council rates. The expenditure for the facility, and the ongoing operating costs have already been factored into the Council's Long-Term Plan. Should the CMUA not proceed, rates savings of approximately 2.9% (spread across the FY23 – FY25 financial years) could be made.

# Summary

An overall summary of the affordability of the CMUA is presented in Table 123 below.

Table 123: Affordability Summary ($m)

| Item | ($m) |
|---|---|
| **Capital expenditure (nominal, 30 year assessment period)** | |
| Capital expenditure | $439.4 |
| Capital Funding | $473.0 |
| **Surplus (Deficit)** | **$33.6** |

| **Operating expenditure (per annum in real terms)** | |
|---|---|
| Estimated net operating expenditure per annum (including lifecycle costs) | $4.2 |
| Total Budgeted Council Contribution (operating subsidy) per annum | $4.1 |
| **Surplus / (Deficit)** | **$(0.1)** |

# Next steps

To further advance this programme, the critical next step is to obtain approval from funding parties to proceed forward with the recommended option as outlined in the Management Case.

# The Management Case

# 31. Introduction

This Management Case describes the processes and arrangements that are required to support the successful delivery of the CMUA. This includes:

- Governance and project team establishment
- Capability and skills required for successful project delivery
- High-level procurement planning
- Stakeholder management and communications
- Benefits management planning
- Risk management planning

Following the completion of the market sounding undertaken for the CMUA, the project team has more confidence in the market's ability to respond positively to a Design and Build (D&B) procurement model and therefore has selected this as the preferred procurement model. The project team considers that D&B will attract the strongest response from the market, while still providing opportunities to transfer cost risk, integrate design with physical works, and incorporate insights from operators. This means that design will need to be progressed sufficiently to specify requirements to the D&B consortia. If market conditions change and further engagement is undertaken to attract overseas contractors/consortia, then it may be necessary to consider other procurement options. As such, it is reasonable to consider alternative procurement models as part of a 'fall back' risk mitigation strategy.

The remainder of this Case details the relevant structures, tools, and techniques that should be established to manage identified risks and plan for the successful delivery of the CMUA.

# 32. Project Governance

The governance solution needs to address the project delivery requirements, risk tolerance, and control expectations of the funding parties. The governance structure should provide avenues for funders to gain assurance about the project's delivery and to make decisions about changes to the project as it progresses. The ability to attract and retain the appropriate skill-sets for the project delivery is an important factor in establishment of the governance and organisational structure.

The arrangements discussed are for the project's capital delivery phase only. It is anticipated that the Council will be the ultimate owner and operator of the facility, either directly or indirectly through a third party.

The project delivery model needs to:

- Provide confidence that the parties exposed to delivery risks (for example, cost overrun and delivery timing) can control those risks
- Provide public sector funders with visibility over expenditure, and sufficient assurance about and control over the CMUA delivery, to enable the benefits outlined in the Investment Case to be achieved
- Provide the expertise and capability necessary to guide and direct the delivery of the CMUA
- Provide confidence that the entity managing the delivery can attract individuals with the right skill-sets
- Represent the interests of the ultimate operator, ongoing funder, users, tenants and Cantabrians as primary patrons and funders of the facility.

In considering how to meet these objectives, three structures for the project delivery of the CMUA were considered:

- **Option 1:** Joint governance and delivery
- **Option 2:** Council governance and delivery
- **Option 3:** Joint Crown and Council sponsorship, Council governance and delivery entity **(proposed option)**

All three options are feasible, but the governance model has implications for how risk is managed and where responsibility and accountability for delivery rests.

## Option 1 – Joint Governance and Delivery (Special Purpose Vehicle)

This option would involve a joint delivery arrangement, with the Crown and the Council sharing delivery responsibilities and risks utilising a Special Purpose Vehicle (SPV) arrangement.

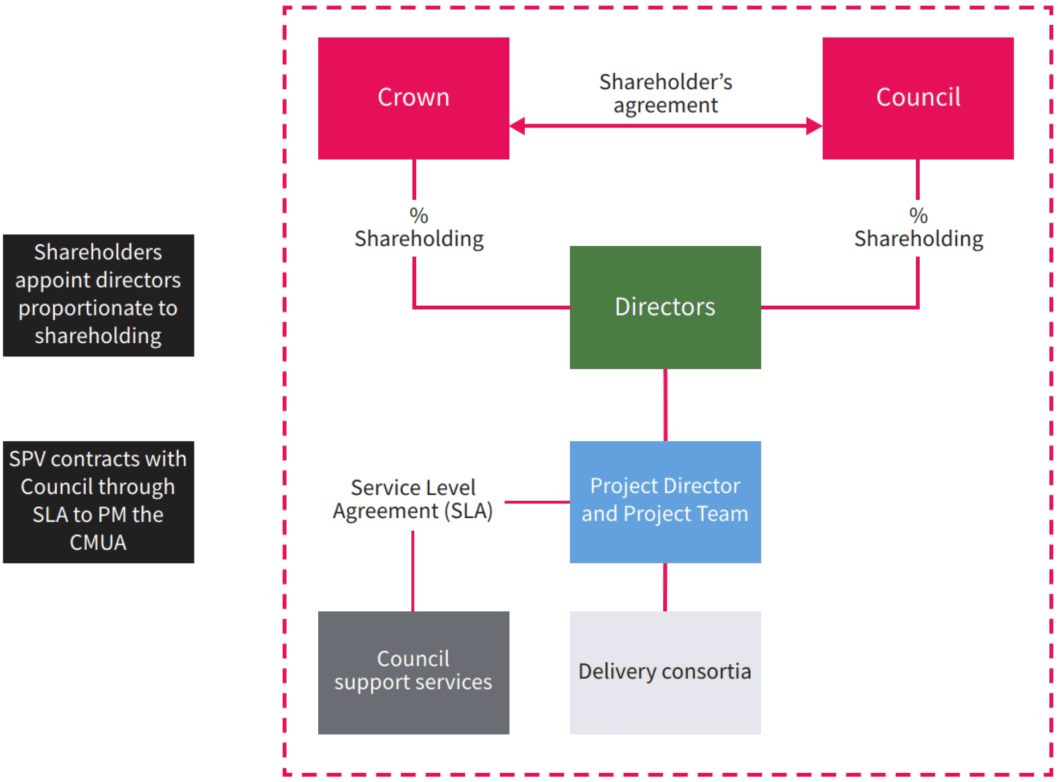
It would provide both funding partners with control and visibility over project delivery, and risk would be shared across the Crown and Council. This option recognises that the Crown has a reasonable expectation of involvement given its significant financial contributions and recommends that the Crown should be the minority shareholder. It allows for political 'ownership' of the CMUA across central and local government.

This structure would utilise the project delivery expertise across Council and Crown entities, using secondments as a mechanism to recruit those with the greatest capability and experience.

This model would involve establishing a separate company with joint shareholding between the Crown and the Council. Council has considered three structures for an SPV: Company, Trading Trust, and Joint Venture. The analysis of these options is included in Appendix B. This company structure would allow for independent governance and financial control over the delivery of the CMUA, and its management would provide assurance over the project management of the CMUA's delivery.

The proposed structure under this option is presented in Figure 21.

Figure 21: Shared Governance and Delivery




The roles and responsibilities of each party are summarised in Table 124.

Table 124: Key Roles for SPV

| Group | Description |
|---|---|
| **Council and Shareholding Ministers** | The primary role of shareholding Ministers and the Council would be to set the expectations for the SPV's operations. As shareholding parties, they would receive quarterly updates on the Project's progress, and would have all the rights of shareholders.<br><br>The Council and the Crown would be shareholders. This shareholding would entitle the Council and Crown to Board appointments.<br><br>The Council and Crown would appoint the SPV's Directors on advice from officials, and may delegate such appointments as they deem appropriate to ensure that the Directors have the appropriate skill-sets and political independence to function effectively as a project delivery board. |
| **Directors of SPV** | The Directors of the SPV would be responsible for the governance of the SPV and ultimately accountability for the delivery of the CMUA. The Directors would be independent and experienced. This means they should have experience in vertical builds of $200M+, experience in stadium / arena operations, and have diverse experience across venue types, scales, and commercial structures.<br><br>They would make governance decisions with respect to project delivery, including but not limited to:<br>• Recruiting and appointing a Project Director with the appropriate skill-sets to develop, enforce, and control a service level agreement with the project management entity<br>• Considering any significant change in cost or scope in relation to delivery<br>• Reviewing and approving the contract for the delivery consortia<br>• Seeking and receiving advice on arena operations and operators, maintenance providers, etc., as appropriate to be informed about the strategy for delivering the facility<br>• Acting in the best interest of the company in the manner legally required of Directors.<br><br>The SPV would be responsible and accountable for the on-time, on-budget delivery of the project. To achieve this the SPV will directly contract with the relevant project delivery partners (e.g. contractor/consortia, operators, etc.)<br><br>The SPV would dissolve following project completion, with the ongoing benefits and risks of ownership and operations transferring to the Council and its operator. |
| **Project Director** | The Project Director would provide management oversight and control over the project team and the delivery consortia. They would control project expenditure, facility scope changes, and decisions with respect to the procurement and engagement of the delivery consortia.<br><br>The Project Director would be appointed by and be accountable to the Directors (Board) for project delivery. The Project Director would not be a member of the Board.<br><br>The Project Director would act as the day-to-day project manager of the CMUA project. |
| **Delivery Consortia** | This is the design and build consortia contracted to deliver the CMUA. It would be contracted by the SPV and would be ultimately accountable to the SPV for its performance. It would take day-to-day instruction from the Project Director. The consortia would include, but is not limited to; arena architects, engineers, design manager, main contractor etc. |
| **Operator** | The operator would be involved in ensuring the facility is built in a manner that allows for efficient, practical operations. |

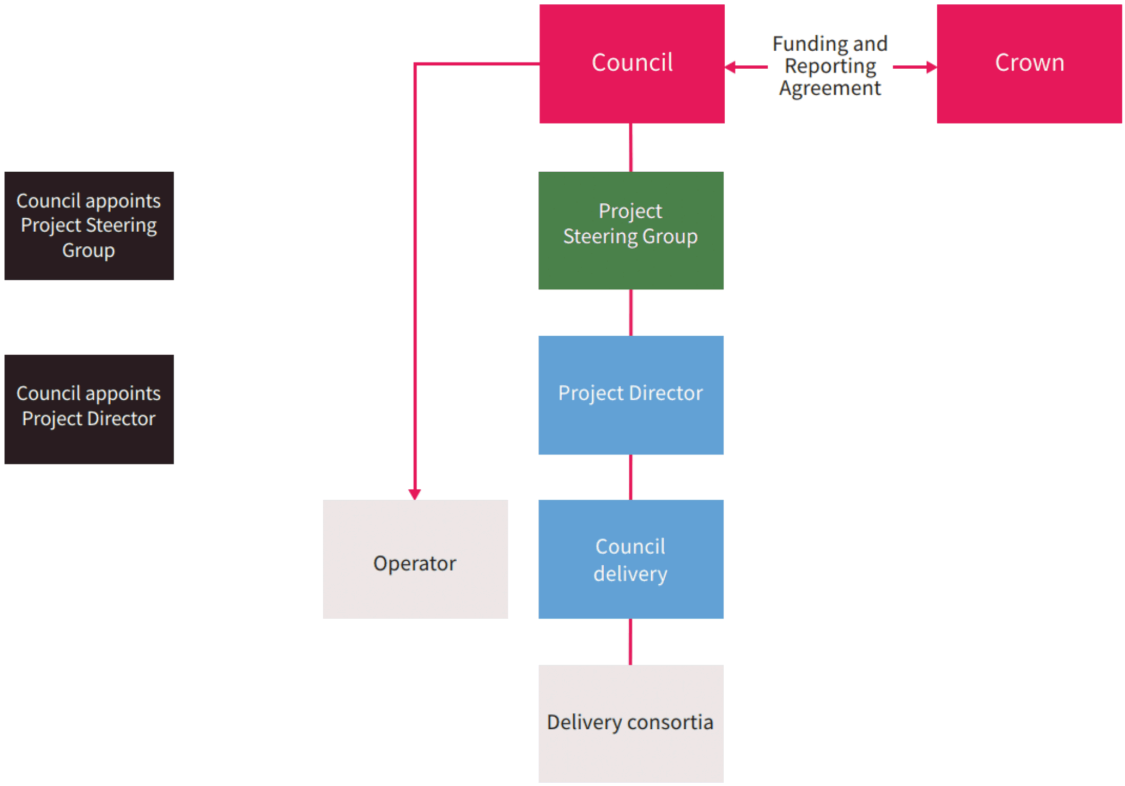
Council is best placed to take accountability for the project given the Council's lead on other aspects, including work on affordability, scope and risk. Council is better placed to lead engagement with other councils. Option 2 and 3 are based on this understanding.

## Option 2 – Council Governance and Delivery

This option would involve direct Council delivery and governance, with the Council assuming delivery responsibilities and risks. This option would give the Council complete control and visibility over project delivery and outcomes, but would also expose the Council to virtually all the risks that are not transferred to the private sector D&B consortia.

As the ultimate operator, the Council would have the strongest incentive to focus on achieving whole-of-life efficiencies in design. This model could be established quickly with consequential time and cost savings. It would not require the establishment of a separate company (SPV). The structure for this model is shown below.

Figure 22: Council Delivery




In this model:

- The Council would establish a Project Steering Group (PSG) within the Council
- The PSG would appoint a Project Director (PD)
- The PSG and PD would establish the council project team (Council delivery entity)
- The Council would contract with the D&B delivery consortia
- Crown would receive reporting from the PSG on the progress of the Project
- Council would be responsible and accountable for the on-time, on-budget delivery of the project. To achieve this, Council would contract with the relevant project delivery partners (e.g. contractor, consortia, operators, etc).

The Crown's contribution would be capped at whatever money is sought through the Christchurch Regeneration Acceleration Facility (CRAF) (excluding land, and the other funding agreed through global settlement). Risk would sit with the Council because the Council would have all the levers to control and manage that risk.

The roles and responsibilities of each party are summarised below.

Table 125: Key Roles, Council Delivery

| Group | Description |
|---|---|
| **Mayor and Council**<br><br>**Ministers** | Council would provide for ultimate governance for project. It would receive regular updates on project progress from the Project Steering Group, and could exert some control over the design and procurement process. Alternately, they may choose to delegate the decision-making power for letting the construction contract to Council Management.<br><br>Ministers would receive regular updates from Council, and would be advised of build progress, budget, and use of Crown's contribution. |
| **Project Steering Group** | The Project Steering Group would act to govern the Project up to the delegated authority of the Chief Executive. In this role it will be responsible for:<br>• Agreeing final project scope and design within delegated control<br>• Setting and approving changes in project requirements and scope<br>• Approving additional costs or changes within agreed scope |
| **Project Director** | The Project Director would be appointed by Council and would be responsible for day-to-day decision making and accountability for project delivery. The Project Director would be part of the Project Steering Group, would oversee the project team, communicate with senior stakeholders and own the delivery programme/process. |
| **CMUA Delivery Team** | A Council delivery team would act as the day-to-day project manager of the CMUA project. It will be responsible for:<br>• Recommending final design parameters<br>• Preparing and recommending changes in scope to the PD, PSG, and Council<br>• Recommending/identifying required variations<br><br>This team could include staff from Council and Crown entities (seconded to the project), but it could also recruit new resources where current capability is lacking. It would include Legal, IT, QS, and financial advisors employed/appointed by the Council. |
| **Delivery Consortia** | This is the design and build consortia contracted to deliver the CMUA. It would be contracted by the SPV and would be ultimately accountable to the SPV for its performance. It would take day-to-day instruction from the Project Director. The consortia would include, but is not limited to; arena architects, engineers, design manager, main contractor etc. |
| **Operator** | The operator would be involved in ensuring that the facility is built in a manner that allows for efficient, practical operations. This operator would be appointed by the Council, but would provide advice to the Delivery Consortia, and Council Delivery Team. |

## Option 3 – Joint Sponsorship, Council Governance and Delivery Entity

This option would involve joint sponsorship by Crown and Council. Both funding partners /sponsors would have visibility and a level of control over project delivery. There would be a quarterly Crown/Council Sponsors Forum to discuss the quarterly reporting provided by Delivery Entity and ensure both Sponsors are informed on a "no-surprises" approach on progress of project delivery.

The Council would be accountable for the delivery of the Project. It would control project design and scope decisions and assume the delivery responsibilities and risks that are not transferred to the Board/SPV and the private sector D&B consortia.

As the ultimate operator, the Council would have the strongest incentive to focus on achieving whole-of-life efficiencies in design.

This model would involve establishing a Project Board, appointed by the Council in consultation with the Crown. The Council could decide to form a SPV, for example a company.

The Crown would:

- act as a joint sponsor for the Project, supporting the successful planning, design and delivery of the Project;
- cap its contribution at whatever money is sought through the CRAF (excluding land, and the other funding agreed through global settlement) and not take on additional risk.

The Council would:

- act as joint sponsor, owner and accountable agency for the delivery of the Project, responsible for securing the funding for the project, specifying the project outcomes and design requirements, ensuring that the project remains strategically aligned and viable, and that benefits are on track to be realised
- establish a Project Board /SPV to manage, deliver and complete the Project
- provide the Crown with the information required to satisfy its funding criteria and meet accountability requirements for expenditure of public monies.

The Board would have responsibility for ensuring the project is:

- successfully delivered on time and within budget and scope
- executed in accordance with the approved Letter of Expectation
- able to achieve all the project objectives, as defined by Council. This includes responsibility for optimising value, managing risk, ensuring timely delivery, meeting project performance requirements and determining remedial action if required.

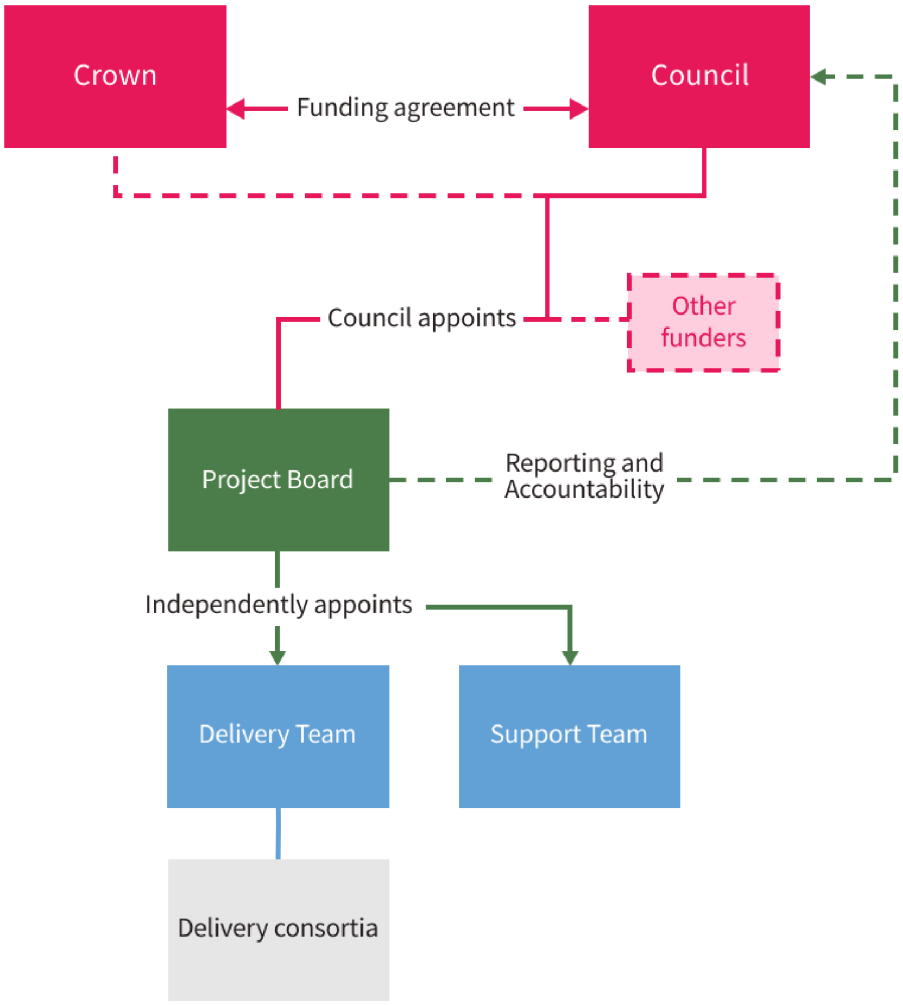
The Board, through the delivery team, would:

- provide for highly skilled, dedicated management of this project that can add to and support the capability of the project delivery team
- provide all parties assurance over the Project's delivery.

A funding agreement between Crown and Council would be developed to reflect the funding relationship.

The proposed structure under this option is presented below.

Figure 23: Shared Governance and Delivery




Appropriate project governance for a project of this scale is critical. The ability to attract and retain the appropriate skill-sets for the project delivery is an important factor in establishment of the governance and organisational structure. A skills matrix is provide in Appendix D.

Table 126: Key Roles for SPV

| Group | Description |
|---|---|
| **Council and Ministers** | The Council would be the accountable agency for the delivery of the Project, responsible for securing the funding for the project, specifying the project outcomes and design requirements, ensuring that the project remains strategically aligned and viable, and that benefits are on track to be realised<br><br>The Council would appoint the SPV's Directors in consultation with the Crown. The Council would set the expectations for the SPV's operations.<br><br>Accountable Ministers would receive regular updates from Council, and would be advised of build progress, budget, and use of Crown's contribution. |
| **Directors of SPV** | The Directors of the SPV would be responsible for the governance of the SPV and ultimately accountability for the delivery of the CMUA. The Directors would be independent and experienced. This means they should have experience in vertical builds of $200M+, experience in stadium / arena operations, and have diverse experience across venue types, scales, and commercial structures.<br><br>They would make governance decisions with respect to project delivery, including but not limited to:<br>• Recruiting and appointing a Project Director with the appropriate skill-sets to develop, enforce, and control delivery<br>• Considering any significant change in cost or scope in relation to delivery<br>• Reviewing and approving the contract for the delivery consortia<br>• Seeking and receiving advice on arena operations and operators, maintenance providers, etc., as appropriate to be informed about the strategy for delivering the facility<br>• Acting in the best interest of the company in the manner legally required of Directors.<br><br>The SPV would be responsible and accountable for the on-time, on-budget delivery of the project. To achieve this the SPV will directly contract with the relevant project delivery partners (e.g. contractor/consortia, operators, etc.)<br>• The SPV would dissolve following project completion, with the ongoing benefits and risks of ownership and operations transferring to the Council and its operator. |
| **Project Director** | The Project Director would provide management oversight and control over the project team and the delivery consortia. They would control project expenditure, facility scope changes, and decisions with respect to the procurement and engagement of the delivery consortia.<br><br>The Project Director would be appointed by and accountable to, the Directors (Board) for project delivery. The Project Director would not be a member of the Board.<br><br>The Project Director would act as the day-to-day project manager of the CMUA project. |
| **Delivery Consortia** | This is the design and build consortia contracted to deliver the CMUA. It is contracted by the SPV and is ultimately accountable to the SPV for its performance. It would take day-to-day instruction from the Council delivery entity. The consortia includes, but is not limited to; arena architects, engineers, design manager, main contractor etc. |
| **Operator** | The operator would be involved in ensuring the facility is built in a manner that allows for efficient, practical operations. The operator would be contracted by the SPV, but would provide advice to the delivery consortia, Council delivery entity, and SPV as appropriate. |

## Option comparison

The different governance models imply different risk allocations. The table below provides a summary of the party responsible for the ownership of the asset, funding source, delivery agency and core responsibilities in the delivery and operations phase for each model.

Table 127: Risk Allocation

| | | Option 1<br>Joint governance and delivery | Option 2<br>Council governance and delivery | Option 3<br>Joint sponsorship, Council governance and independent delivery |
|---|---|---|---|---|
| Asset owner | | Council | Council | Council |
| Delivery Responsibility | | SPV | Council | SPV |
| Funding source | | Council / Crown | Council / Crown | Council / Crown |
| Appointment of governance members (Board or PSG) | | Council / Crown | Council | Council |
| Risk | Design | Council / D&B Consortia | Council / D&B Consortia | Council / D&B Consortia |
| | Ground Contamination | Council/Crown | Council/Crown | Council/Crown |
| | Ground (Geotechnical) Conditions | Council / D&B Consortia | Council / D&B Consortia | Council / Crown / D&B Consortia |
| | Utilities | Council | Council | Council |
| | Functionality | D&B Consortia | D&B Consortia | D&B Consortia |
| | Procurement | SPV | Council | Council/SPV |
| | Construction | D&B Consortia | D&B Consortia | D&B Consortia |
| | Cost Escalation | D&B Consortia | D&B Consortia | D&B Consortia |
| | Unavoidable Cost Overrun | Council /Crown | Council | Council |
| | Cost Overruns Due to Council Requested Scope Change | Council | Council | Council |
| | Asset Management / Facilities Maintenance | Council | Council | Council |
| | Operations | Council | Council | Council |
| | Operating costs | Council | Council | Council |

| | | | | |
|---|---|---|---|---|
| Responsibility | Delivery phase | • Joint project delivery between Council and Crown through the SPV<br>• SPV agrees on preferred procurement model<br>• SPV agrees on preferred operator<br>• Cost overruns are shared between Council and Crown during delivery phase. | • Council responsible for all decision making during the delivery phase e.g. selection of procurement model and operator<br>• Council may consult with the Crown, local iwi and other stakeholders to inform decisions<br>• Council is solely responsible for cost-overruns as it is the entity responsible and accountable for delivery. The Crown provides only its fixed contribution, plus any contamination remediation funding agreed. | • Council responsible for all decision making during the delivery phase e.g. selection of procurement model and operator<br>• Council may consult with the Crown, local iwi and other stakeholders to inform decisions.<br>• Council is solely responsible for cost-overruns as it is the entity responsible and accountable for delivery. The Crown provides only its fixed contribution, plus any contamination remediation funding agreed. |
| | Operations phase | • All responsibility resides with Council as the asset owner, following delivery. | • All responsibility resides with Council as the asset owner, following delivery. | • All responsibility resides with Council as the asset owner, following delivery. |
| Ease of implementation | | • Will require the recruitment of a project team with capability in delivering vertical assets of the CMUA scale and managing / overseeing significant design integration.<br>• Slower to setup than option 2, but the project timeline risk can be partially mitigated through moving forward with the existing Council structure to engage with contractors early on the procurement process and creating a functional brief<br>• Requires Director costs from the project budget, which is currently unallocated<br>• Establishment would require agreement on funding agreement. | • Will require the recruitment of a project team with capability in delivering vertical assets of the CMUA scale and managing / overseeing significant design integration<br>• Quickest to stand up, but wouldn't allow joint project ownership between Crown and Council<br>• Establishment would require agreement on funding agreement. | • Will require the recruitment of a project team with capability in delivering vertical assets of the CMUA scale and managing / overseeing significant design integration.<br>• Slower to setup than option 2, but the project timeline risk can be partially mitigated through moving forward with an interim Project Director.<br>• Requires Director costs from the project budget, which is currently unallocated.<br>• Establishment would require agreement on funding agreement. |

## Recommended Project Governance Structure

All three options presented are feasible, but each model has implications for how risk is managed and where responsibility and accountability for delivery rests.

A joint governance and delivery model through an SPV would allow both Crown and Council to share the input into the governance and delivery of the CMUA. Council is best placed to take accountability for the project given the Council's lead on other aspects, including work on affordability, scope and risk. Council is also better placed to lead engagement with other councils. Option 2 and 3 present structures that reflect this.

Option 2: Council governance and delivery would be the fastest to establish.

Option 3 better reflects the financial investment made by the crown. Under this option the Council would be accountable for the delivery of the project, with the recognition that the delivery entity is accountable to Council for delivery. The key additional risks adopted by Council (rather than jointly) are essentially around design, utilities, and procurement. Council would decide the entity form that is best 'fit for purpose'. The Crown's contribution would be capped at whatever money is sought through the CRAF (excluding land, and the other funding agreed through global settlement).

The SPV would ensure independent experienced project governance required for a project of this scale. All options would require the formation of a specialist project delivery team with the right capability and experience in delivering vertical assets of this scale.

Option 3 is the option proposed in this Investment Case.

### Establishment Timeframes and Costs

An SPV/company would require a slightly longer establishment time, and it would necessitate the activation of a shelf company structure, the development of shareholders' agreements, the necessary corporate controls and the appointment of the Chair and Directors.

The costs are unlikely to be significant, and will be dominated by legal costs and director fees and indemnities. Council will seek independent legal advice regarding the company and indemnification. It is intended that the SPV is housed in civic offices to avoid rental and associated costs. These costs are not accounted for as part of the core project costs.

The longer lead time needed to establish an SPV can be partially mitigated by the project moving forward with an Interim Project Director with the authority to develop a detailed procurement plan, secure the client-side design team, and engage the market on the various work packages needed to secure the site and manage the enabling and possibly an early works programme as appropriate.

# 33. Capability and Skills

## Introduction

The right capability at the governance level is critical for the successful delivery of the CMUA. The Ministry of Business, Innovation & Employment (MBIE) promotes matching the capabilities of key stakeholders to the complexity of the project environment in its *Planning Construction Procurement* guidance documents. Assessing project complexity and current capability is performed in three steps:

1. Assess project complexity
2. Assess project capability
3. Develop plans to access capability

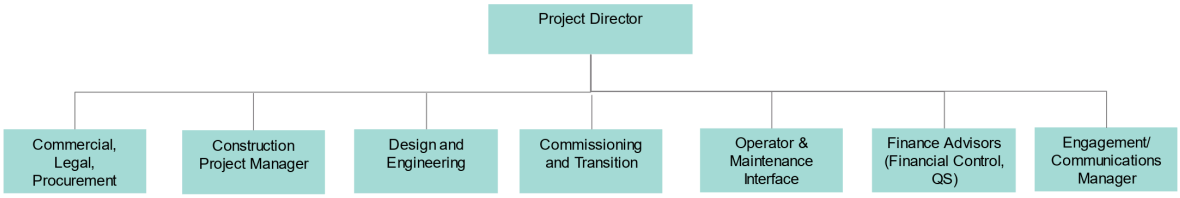
### Project capability

The attitudes and impressions of stakeholders, and the public and investor response will define success for the CMUA project. Key organisational roles with suitable capability will ensure that the needs of each stakeholder are addressed.

The team structure is shown in Figure 24 and

Table 128 describes the roles and skills required for the project delivery team.

Figure 24: Project Delivery Structure




## Delivery capability and experience required

Identifying the appropriate individuals to lead each workstream is a critical aspect of ensuring the delivery of the CMUA proceeds efficiently. An overview of key skills, capabilities and experience required for each Workstream Lead is outlined in

Table 128. As noted, to the extent individuals cannot be identified for certain roles, external resources should be contracted / seconded to ensure there are no material gaps in the required capabilities.

Table 128: Roles and Experience

| Role | Required Capabilities and Experience |
|---|---|
| Project Director | • Experience in construction of a $200m+ vertical build<br>• Leadership, negotiation and stakeholder management skills<br>• Should be sufficiently senior to ensure that any significant project issues and decision points are raised with key stakeholders in a timely manner<br>• Should understand the machinery of government or establish a team that can navigate the project through the various governance forums<br>• Required experience includes managing the procurement of large government projects/contracts and leading commercial negotiations with medium to large contractors across design, build and maintenance components |
| Financial Manager | • Experience in management and oversight of delivering construction projects of a $200m+ vertical build<br>• Should understand the machinery of government to navigate the project through the various governance forums<br>• Strong financial skills with the ability to support a vertical construction project<br>• Experience with Board reporting |
| Project Manager/s | • Development/project management skills are essential, in particular the ability to coordinate and integrate the different workstreams with a wide range of external advisors to manage<br>• Capabilities should complement those of the PD to ensure oversight of all workstreams between the two lead individuals<br>• Major project procurement experience |
| Commercial and Legal Advisor | • Experience in developing procurement strategies (including EOI/RFP documentation, tender evaluations and negotiations) and project initiation documentation for major capital projects<br>• Experience supporting budget approval processes, including working with cost consultants (QS) in project budgeting<br>• Experience with major commercial negotiations on large D&B contracts on projects over $200m+ |
| Construction Project Manager | • Prepare a master schedule for the programme, including schedule risk, contingency, critical path analysis and interfacing programmes<br>• Prepare a capital cost plan. Capital cash flow forecast, including escalation and contingencies. Manage the capital expenditure of the programme<br>• Undertake risk management, document control and reporting<br>• Establish internal and external programme specific reporting mechanisms to monitor and control the performance of activities<br>• Develop, manage and reporting on Key Performance Indicators (KPIs) to provide measurements to allow the programme to be managed proactively<br>• Secretariat role for governance forums |

| Role | Required Capabilities and Experience |
|---|---|
| Design and Engineering | • Track record in project direction and strategic leadership of major vertical infrastructure projects<br>• Strong technical background in relevant design, construction, and risk management activities<br>• Possess experience in the preparation and drafting of performance based technical specifications<br>• A strong understanding of the New Zealand and Christchurch construction markets including market skillsets and supply chain capacity<br>• The ability to develop robust project timelines and work breakdown structures<br>• The capacity to interpret pricing data and assess value for money considerations |
| Commissioning and Transition | This role would be appointed later in the delivery, and require:<br>• Experience with managing the shakedown of large-scale multi-use facilities<br>• A strong understanding of commissioning requirements for new arenas<br>• Strong understanding of contract management, including contractor disputes over defects<br>• Experience in establishing operational and maintenance teams<br>• Relationships across the multiple event facilities in Christchurch |
| Engagement/ Communications Manager | • Develop, deliver and implement a clear communications strategy about the development, timing, and event expectations for the CMUA<br>• Engage with key interested stakeholders including content providers to understand how they can / are willing to support the arena's ongoing success<br>• Set and manage public and resident expectations about the CMUA's development and operations<br>• Provide marketing and branding guidance to the operator where required |
| Operator and Maintenance Interface | • Experience in the operation and management of large-scale multi-use arena in sport and event facilities<br>• A strong understanding of market/user trends and impacts on facility planning, design and operation<br>• Strong understanding of facilities planning and operation including:<br>  • Modes of operation across both community and event usage<br>  • Financial considerations inclusive of revenue and cost drivers<br>  • Staffing models for various modes of operation<br>  • OH&S and life safety considerations<br>  • Flexibility and change of use considerations<br>• An understanding of broader network considerations and impacts on facility planning<br>• Relationships with facility suppliers and sport and recreation networks<br>• Experience working with and managing facility tenants and users<br>• The ability to plan facilities to maximise revenue from both core and non-core activities |
| Financial Monitoring | • Demonstrated capability and experience managing financial reporting, monitoring, and expenditure on major construction projects<br>• QRA, cost to complete, and financial negotiation skills<br>• QS expertise to provide an independent view on the expenditure for each stage of the project |

# 34. Procurement Plan

Procurement for the CMUA project is designed to simultaneously achieve Council policy objectives and CMUA project objectives. The procurement process will be split into several stages in line with the structure of the selected procurement model.

## Policy context

The Council's objectives are aligned to the Crown's procurement rules. The procurement model and the CMUA's delivery will be guided by the procurement objectives summarised in the table below.

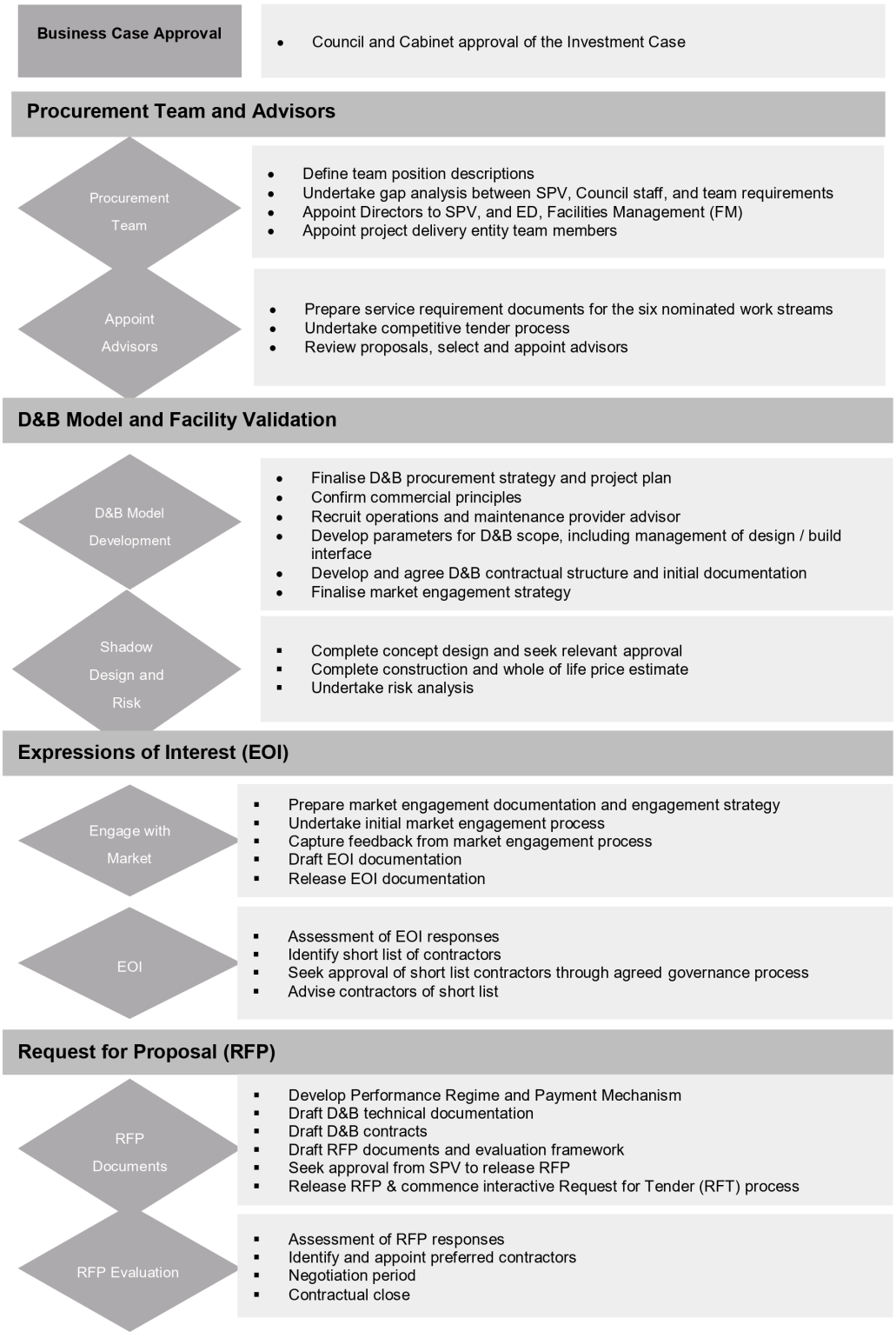
Table 129: Procurement Objectives

| Objective | Description |
|---|---|
| **1. Value for money** | • Provide the best value for money for the citizens of Christchurch, considering whole of life costs and benefits, and sustainable outcomes |
| **2. Environmental sustainability** | • Environmental costs and benefits will be considered as part of any procurement decision-making process with the Council looking to promote environmental sustainability through procurement. Consideration and recognition is given to procurement that provides environmentally sustainable benefits |
| **3. Social responsibility** | • Social costs and benefits to Christchurch will be considered as part of any procurement decision-making process with the aim for Council procurement to be socially responsible. Consideration and recognition is given to procurements which provide social benefits to Christchurch |
| **4. Economic benefit** | • The impact on the Christchurch economy in terms of business sustainability, capacity and capability building will be considered as part of any procurement decision-making process with the Council looking for its procurement activity to promote local business success. Consideration and recognition is given to procurements which provide economic benefit to Christchurch |
| **5. Ease of doing business** | • Provide a framework for Council procurement that promotes consistent, transparent and efficient procurement practices to high professional standards |
| **6. Build and maintain a reputation for ethical behaviour and fairness** | • The Council's procurement processes will apply sound ethical considerations and provide equitable and fair opportunities for procurement |
| **7. Achieve the Council's strategic aspirations** | • Ensure procurement principles and processes are aligned to the Council's vision, Community Outcomes and Strategic Priorities and promote efficient and effective delivery of Long Term Plan and Annual Plan work programmes and levels of service |
| **8. Promote opportunity, innovation and participation** | • Fundamental to the achievement of the Council's strategic aspirations is for Christchurch to have a 'can do' attitude and an ethos of anything being possible. The Council will look to use its procurement activity to promote this approach |

## Procurement stages

The Project Management planning for Procurement will reflect the procurement procedures and steps that need to be adopted to prepare the project for execution. These processes are summarised in further detail in Figure 25 below.

Figure 25: Procurement Process



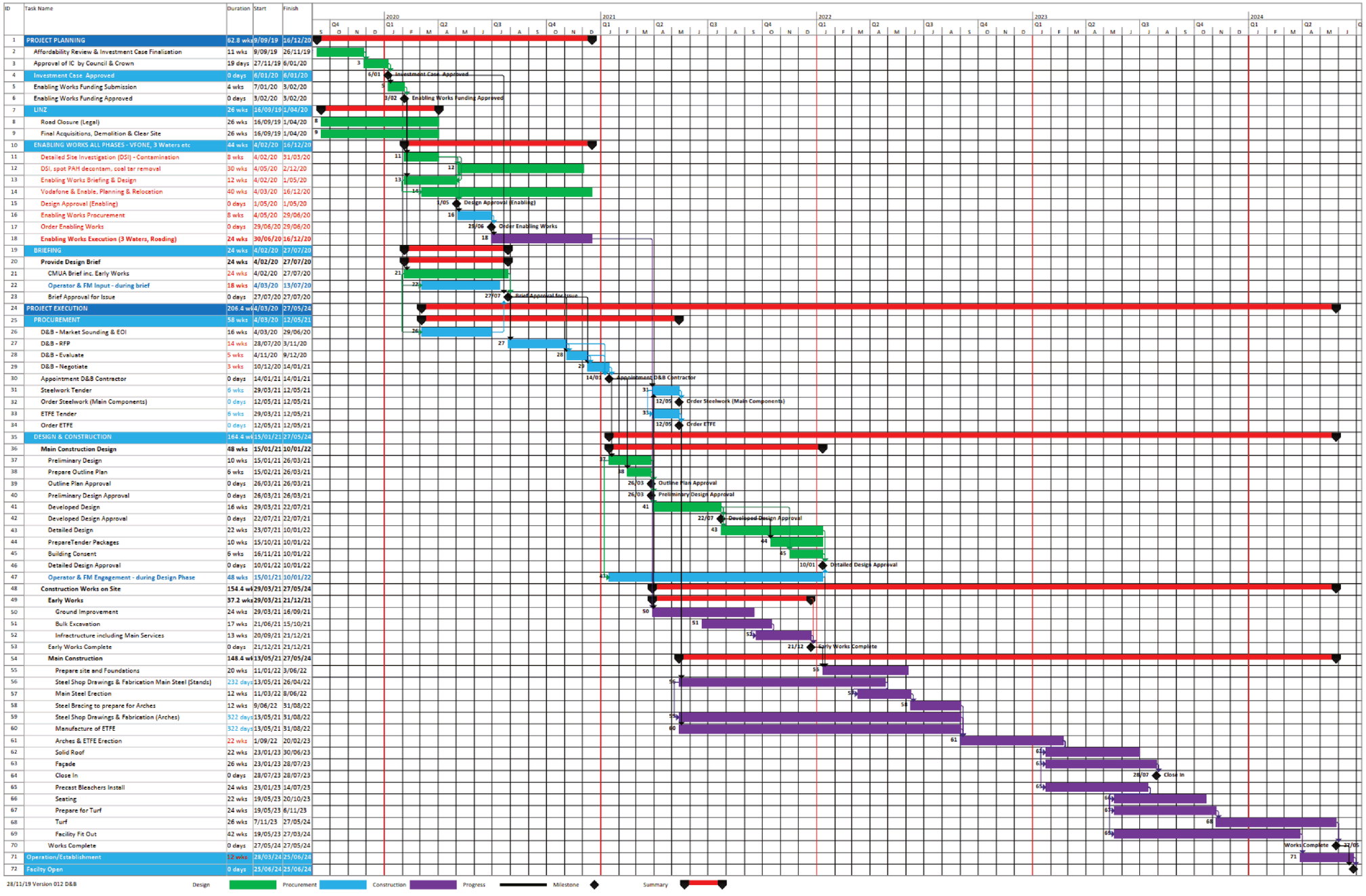
## Project plan

The following is the indicative project timeline for the delivery of the project as provided by Council's major facilities team. This timeline reflects the status of the project as at 28 November 2019 and is still subject to a number of approvals including Council and Cabinet approval by early January 2020. This is based on a Council delivery model, if an SPV delivery model is chosen, it could add additional front-end establishment time.

## Construction Programme

### CMUA - Draft Construction Programme - Design & Build Procurement Option

| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 1 | PROJECT PLANNING | 62.8 wks | 9/09/19 | 16/12/20 |
| 2 | Affordability Review & Investment Case Finalisation | 11 wks | 9/09/19 | 26/11/19 |
| 3 | Approval of IC by Council & Crown | 19 days | 27/11/19 | 6/01/20 |
| 4 | Investment Case Approved | 0 days | 6/01/20 | 6/01/20 |
| 5 | Enabling Works Funding Submission | 4 wks | 7/01/20 | 3/02/20 |
| 6 | Enabling Works Funding Approved | 0 days | 3/02/20 | 3/02/20 |
| 7 | LINZ | 26 wks | 16/09/19 | 1/04/20 |
| 8 | Road Closure (Legal) | 26 wks | 16/09/19 | 1/04/20 |
| 9 | Final Acquisitions, Demolition & Clear Site | 26 wks | 16/09/19 | 1/04/20 |
| 10 | ENABLING WORKS ALL PHASES - VFONE, 3 Waters etc | 44 wks | 4/02/20 | 16/12/20 |
| 11 | Detailed Site Investigation (DSI) - Contamination | 8 wks | 4/02/20 | 31/03/20 |
| 12 | DSI, spot PAH decontam, coal tar removal | 30 wks | 4/05/20 | 2/12/20 |
| 13 | Enabling Works Briefing & Design | 12 wks | 4/02/20 | 1/05/20 |
| 14 | Vodafone & Enable, Planning & Relocation | 40 wks | 4/03/20 | 16/12/20 |
| 15 | Design Approval (Enabling) | 0 days | 1/05/20 | 1/05/20 |
| 16 | Enabling Works Procurement | 8 wks | 4/05/20 | 29/06/20 |
| 17 | Order Enabling Works | 0 days | 29/06/20 | 29/06/20 |
| 18 | Enabling Works Execution (3 Waters, Roading) | 24 wks | 30/06/20 | 16/12/20 |
| 19 | BRIEFING | 24 wks | 4/02/20 | 27/07/20 |
| 20 | Provide Design Brief | 24 wks | 4/02/20 | 27/07/20 |
| 21 | CMUA Brief inc. Early Works | 24 wks | 4/02/20 | 27/07/20 |
| 22 | Operator & FM Input - during brief | 18 wks | 4/03/20 | 13/07/20 |
| 23 | Brief Approval for Issue | 0 days | 27/07/20 | 27/07/20 |
| 24 | PROJECT EXECUTION | 206.4 wks | 4/03/20 | 27/05/24 |
| 25 | PROCUREMENT | 58 wks | 4/03/20 | 12/05/21 |
| 26 | D&B - Market Sounding & EOI | 16 wks | 4/03/20 | 29/06/20 |
| 27 | D&B - RFP | 14 wks | 28/07/20 | 3/11/20 |
| 28 | D&B - Evaluate | 5 wks | 4/11/20 | 9/12/20 |
| 29 | D&B - Negotiate | 3 wks | 10/12/20 | 14/01/21 |
| 30 | Appointment D&B Contractor | 0 days | 14/01/21 | 14/01/21 |
| 31 | Steelwork Tender | 6 wks | 29/03/21 | 12/05/21 |
| 32 | Order Steelwork (Main Components) | 0 days | 12/05/21 | 12/05/21 |
| 33 | ETFE Tender | 6 wks | 29/03/21 | 12/05/21 |
| 34 | Order ETFE | 0 days | 12/05/21 | 12/05/21 |
| 35 | DESIGN & CONSTRUCTION | 164.4 wks | 15/01/21 | 27/05/24 |
| 36 | Main Construction Design | 48 wks | 15/01/21 | 10/01/22 |
| 37 | Preliminary Design | 10 wks | 15/01/21 | 26/03/21 |
| 38 | Prepare Outline Plan | 6 wks | 15/02/21 | 26/03/21 |
| 39 | Outline Plan Approval | 0 days | 26/03/21 | 26/03/21 |
| 40 | Preliminary Design Approval | 0 days | 26/03/21 | 26/03/21 |
| 41 | Developed Design | 16 wks | 29/03/21 | 22/07/21 |
| 42 | Developed Design Approval | 0 days | 22/07/21 | 22/07/21 |
| 43 | Detailed Design | 22 wks | 23/07/21 | 10/01/22 |
| 44 | PrepareTender Packages | 10 wks | 15/10/21 | 10/01/22 |
| 45 | Building Consent | 6 wks | 16/11/21 | 10/01/22 |
| 46 | Detailed Design Approval | 0 days | 10/01/22 | 10/01/22 |
| 47 | Operator & FM Engagement - during Design Phase | 48 wks | 15/01/21 | 10/01/22 |
| 48 | Construction Works on Site | 154.4 wks | 29/03/21 | 27/05/24 |
| 49 | Early Works | 37.2 wks | 29/03/21 | 21/12/21 |
| 50 | Ground Improvement | 24 wks | 29/03/21 | 16/09/21 |
| 51 | Bulk Excavation | 17 wks | 21/06/21 | 15/10/21 |
| 52 | Infractructure including Main Services | 13 wks | 20/09/21 | 21/12/21 |
| 53 | Early Works Complete | 0 days | 21/12/21 | 21/12/21 |
| 54 | Main Construction | 148.4 wks | 13/05/21 | 27/05/24 |
| 55 | Prepare site and Foundations | 20 wks | 11/01/22 | 3/06/22 |
| 56 | Steel Shop Drawings & Fabrication Main Steel (Stands) | 232 days | 13/05/21 | 26/04/22 |
| 57 | Main Steel Erection | 12 wks | 11/03/22 | 8/06/22 |
| 58 | Steel Bracing to prepare for Arches | 12 wks | 9/06/22 | 31/08/22 |
| 59 | Steel Shop Drawings & Fabrication (Arches) | 322 days | 13/05/21 | 31/08/22 |
| 60 | Manufacture of ETFE | 322 days | 13/05/21 | 31/08/22 |
| 61 | Arches & ETFE Erection | 22 wks | 1/09/22 | 20/02/23 |
| 62 | Solid Roof | 22 wks | 23/01/23 | 30/06/23 |
| 63 | Façade | 26 wks | 23/01/23 | 28/07/23 |
| 64 | Close In | 0 days | 28/07/23 | 28/07/23 |
| 65 | Precast Bleachers Install | 24 wks | 23/01/23 | 14/07/23 |
| 66 | Seating | 22 wks | 19/05/23 | 20/10/23 |
| 67 | Prepare for Turf | 24 wks | 19/05/23 | 6/11/23 |
| 68 | Turf | 26 wks | 7/11/23 | 27/05/24 |
| 69 | Facility Fit Out | 42 wks | 19/05/23 | 27/03/24 |
| 70 | Works Complete | 0 days | 27/05/24 | 27/05/24 |
| 71 | Operation/Establishment | 12 wks | 28/03/24 | 25/06/24 |
| 72 | Facilty Open | 0 days | 25/06/24 | 25/06/24 |

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Design | Procurement | Construction | Progress | Milestone | Summary

## Enabling and Early Works Strategy

The Council and its SPV will progress with enabling and possibly early works packages prior to the appointment of the D&B consortium. Most construction elements will be within the scope of the D&B consortium's responsibility except for the enabling works. Enabling works comprise construction processes that are inherently associated with site preparation and the readying of infrastructure. The enabling works scope includes works such as:

- LINZ to work with Council to acquire any further sites required and manage the demolition or integration of buildings (if any) that are currently on the site designated for the CMUA
- Council to clear sites of existing redundant horizontal infrastructure services including relocation as necessary
- Further detailed site investigation if required, including geotechnical testing that can be provided to the consortia with reliance
- LINZ to work with Council to undertake legal and physical road closures and establishment of new services to serve affected properties
- Transport network infrastructure modifications

The interface with the D&B consortium will need to be carefully managed. For example, some land remediation may not be required depending on the level of contamination (e.g. encapsulation may be viable). This will be determined in the procurement phase.

These works packages can be delivered early, as soon as a go/no go decision is made. The completion of these works also reduces the project's delivery risk profile. A decision on whether to undertake ground improvement prior to D&B contractor engagement requires further consideration, as it is generally desirable that ground improvement, foundations and structure are addressed holistically as a complete system.

## Design and Build Appointment

### Initial workstreams

There is further work required to be undertaken by the SPV, Council, and its advisors to finalise the D&B structure, prior to issue of the EOI and RFP. Initially, advice will need to be commissioned on:

- Establishment of the governance structure (SPV)
- Resource planning for the delivery entity
- Validation of commercial principles
- Development of project plan with procurement team
- Review and testing the risk assessment and affordability
- Planning and undertaking ongoing market engagement
- Finalisation of procurement process and timelines, refining all required stages and milestones
- Development of EOI document and evaluation plan

The project team estimates that from the time of appointment of the key advisors, completion of the Detailed Procurement Planning will take between 2-4 months. As a result, appointment of the key advisors has a major flow-on effect for the timing of all subsequent stages for the CMUA should appointment be delayed.

Note that the working assumption for the Management Case is that the D&B procurement will be based upon a concept and performance criteria, to maximise ECI and the innovation that comes with that, with particular respect to the design and erection methodology for the long span roof structure and integration with the ETFE. It is acknowledged that the Delivery Agency may prefer to procure using a preliminary design to maintain more design control, while accepting that this may reduce innovation and delivery lead times. Table 130 below sets out key actions to progress.

Table 130: Key actions

| Action | Scope / Issues |
|---|---|
| Council/Crown approval of Investment Case | Endorsement of the CMUA Investment Case. |
| Procurement of Advisory Team | Procurement of legal, independent QS, financial, technical and other specialist advisors |
| EOI / RFP Development | Develop timeline and content for market engagement process to support the EOI and RFP |
| Further Site Investigations | Complete site investigations, and provide a complete geotechnical analysis with reliance if possible to the project Partner |
| Procurement of Enabling and Early Works | Procurement of enabling and early works contractors to deliver utilities moves, land remediation, etc. Some early works may be left to the main contractor |
| Procurement of Design & Build Consortia Team | Procurement of design and build consortia for the preparation of initial design packages |
| Release EOI and RFP documentation | Develop and implement approved procurement procedure |
| Site Planning Strategy | Development and implementation of project consenting strategy |
| Development and ongoing ownership of communications strategy | Managing transition from Investment Case engagement to project delivery communication and engagement |
| Development and ownership of Benefit Realisation Plan | Develop a benefit realisation plan<br>Prioritise and agree key KPIs |
| Additional Stakeholder / Community Engagement | Regular updates to key stakeholders to manage timing and delivery expectations. Community engagement on proposed uses of the CMUA outside of key performance and sporting events |

Once the preparatory works for procurement have been completed, a full procurement process can then commence for the D&B consortia. This will involve:

- Expressions of Interest
- In-depth Market engagement process
- Request for Proposal for D&B Provider
- Evaluation, negotiation and appointment of preferred provider.

## Expressions of interest

The EOI document will contain a comprehensive description of the project (including process and timetable), project objectives / outcomes and the structure of the D&B model.

The EOI document will request the following general details from respondents:

- Identity of the proposed bidding parties (consortium)
- Certain financial information
- Confidentiality, conflicts and probity certificates.

The following information specifically focused on the respondent's capability and capacity will be requested and assessed based on:

- Demonstrated experience of successful participation in and delivery of significant, relevant vertical infrastructure projects
- Demonstrated ability to co-ordinate or establish consortia to deliver complex infrastructure projects, including significant sub-contracts likely involving international suppliers
- Demonstrated ability to draft JV interface contracts defining the roles and responsibilities and risk sharing agreement of the parties
- Track record and experience of forming multidisciplinary teams, and in particular sourcing internationally-recognised design teams working alongside local designers with experience of procuring and working alongside contractors
- Relevant skills and experience of key personnel in co-ordinating multi-purpose / multi-disciplined procurement solutions and managing bidding processes
- A maximum five-page commentary on any issues or observations in respect to the D&B procurement model (including how it can successfully support project and procurement objectives).

An evaluation team will assess responses against agreed evaluation criteria. The most capable respondents will be asked to participate in the RFP stage outlined below.

## Request for proposal

The overall objective of this RFP will be to enable the Project Team to appoint a Preferred Bidder, who:

- Demonstrates a vision and strategy to facilitate achievement of the Project and investment objectives
- Provides innovative and value for money design, construction and service solutions
- Bases its approach on robust evidence and methodologies that provide a foundation for its solution
- Has the ability and capacity to execute and deliver the Project
- Is supported by appropriate governance and structured to ensure success.

The RFP requirements and associated evaluation will focus on the following design, build and facility maintenance components. The RFP will be evaluated on:

- Design and Operational Fit
    - The consideration of a whole of life solution including operational and maintenance considerations integrated with design
    - The design meeting stated facility requirements
- Impacts on Asset Management and Operations
    - Operations interface
    - Performance expectations
- Construction Approach
    - Construction methodology and schedule
    - Supply chain relationships

- Build quality
- Health and safety

The level of information contained in the RFP will be targeted to enable development of a response that is complete, compliant, certain and structured in a manner that allows for ready assessment at the evaluation stage. Through the RFP Stage, the Project Team will seek:

- To provide clear direction regarding the overarching vision and objectives for the project
- To interact with the market to ensure that it can clarify the requirements of the RFP
- To provide data and background information on operations to assist in the preparation of the Proposal
- To maintain, and adhere to, strict probity requirements

An evaluation plan will be developed prior to release of the RFP. The plan will include descriptions of the evaluation process, the key participants in the process and their roles and responsibilities (including the approvals process), and the approach to scoring, evaluating and short listing. Following selection of a Preferred Bidder, they will be invited to enter negotiations with the Project Team through to contractual close.

## Appointment of design and build provider

Following the appointment of the preferred bidder, the project team and the preferred bidder will move into the negotiation stage. A negotiation strategy will be compiled that sets the approach taken to negotiate an acceptable final position with the preferred bidder. The negotiation strategy will reflect the outcome of the RFP evaluation and contain:

- Guiding principles for the negotiation
- Parameters that will guide the project team's negotiation, beyond which further approvals will be needed
- Approval processes, including the requirement for statutory approvals and delegations
- Structure, roles and responsibilities of the personnel involved in the negotiation
- Key milestones for the negotiation phase
- Overview of the negotiation approach
- Protocols and rules of engagement governing the negotiation
- Negotiation team and resources
- Key level issues and themes for negotiation.

The negotiation strategy will include a schedule of issues that need to be addressed or clarified to the Project Team's satisfaction prior to entering into the project agreement.

The core negotiation team will consist of a small group of principal negotiators with responsibility for the actual negotiation and finalisation of the project agreement. They will be supported by a number of technical work streams who will be required to progress specific work in support of the negotiations.

Following successful resolution of negotiations, the Preferred Bidder and SPV will move to contractual close. Protocols defining this process will be agreed between the Council, Crown, Project Team, and the Preferred Bidder.

## Probity Considerations

The overarching objective of the Probity Plan is to ensure, through the identification of key risks and the adoption of a set of guiding principles and specific controls, that probity issues are considered and appropriately managed throughout the procurement process.

A probity plan will be put in place to ensure that that probity is managed in an appropriate manner. This will include the appointment of a Probity Auditor from Audit New Zealand by Council to be present at certain times during procurement evaluations, supplier presentations and pre-contract negotiations and other relevant stages throughout the project.

# 35. Process and Programme Management

## Project Development Process

### Design management

The Construction Project Manager will co-ordinate all design issues within the Project Team and report to the Project Director. Key criteria for Design Management include:

- An affordable design solution is accepted by the client and stakeholders for any short-listed option
- The progress is monitored, and cost managed and dates achieved by all parties
- The information produced is agreed, co-ordinated and has the right level of detail based on each stage of the process
- The user groups are provided with relevant time to review and comment on the design team's proposals and provide commentary
- Rationale for changes are documented and made available to the project team
- Governance and approval processes need to be in place to help the Project Team's successful delivery of a design within the agreed parameters.

### Change management

The SPV will own the overall change control process and manage all aspects to ensure continuity of the consultant's brief in line with contract requirements.

Any changes to the scope of the CMUA delivery will be subject to a rigorous procedure to understand the reason and justification of the proposed change, before they will be accepted. They will be costed and the level of impact to the works assessed.

In order to efficiently track and monitor changes on this programme, a pro-forma for 'Change Control' will be used by all team members.

Changes in the scope/brief of the scheme will fall under the change management procedures. This will:

- Challenge the need to change
- Cost the change, including the relative associated costs
- Evaluate programme implication

- Evaluate risk of change
- Provide a recommendation
- Instruct change (where appropriate)
- Manage implementation of the approved change

### Quality management

Council is committed to continual review and improvement. Delivery of Services for the CMUA will be controlled and managed in line with AS/NZS ISO 9001:2008.

The Project Execution Plan (PEP) forms an integral part of the project quality control procedures through clearly outlining the project control strategies, governance structure and project objectives. The PEP is a live document that is to be reviewed at various milestones to ensure relevance to stakeholder expectations and project system performance. An outline of the content of the Quality Management Plan is provided in Table 131.

Table 131: Quality Management Plan components

| Component | Description |
|---|---|
| Methodologies and Standards | • Examination of which proven methodologies and standards will be used to ensure that materials, products, processes and services are fit for their purpose. Examples in this context include project management methodology, procurement guidelines, relevant business domain driven standards, relevant standards developed by Standards etc. |
| Monitoring and Reporting | • Deciding which procedures will be utilised to ensure effective monitoring of project progress? What review and acceptance procedures will apply for example in the management of the Project Business Plan. |
| Risk Assessment and Management | • Deciding how, to whom and how frequently risk status be reported as well as who is responsible for the Risk Management Plan and Risk Register |
| Issues Register Management | • Deciding who will be responsible for managing and maintaining the Issues Register as well as how often it will be updated.<br>• Deciding who will have input into the register and how major issues will be escalated, and to whom |
| Information Management | • Determine and implement document protocols for records management<br>• Implement systems for the registration of all official documents |

## Project Management

### Objectives

The project management structure for this project is designed to achieve the following objectives:

- Identify high risk, and long lead activities, such that they can be procured early
- Monitor progress through all phases of the CMUA delivery to track progress against committed time, and forecast expected time to complete
- Minimise or mitigate issues by re-evaluating programme logic, resourcing, etc.

### CMUA delivery programme

The full CMUA Delivery Programme (or Master Programme) will comprise an overall coordination programme updated as necessary to reflect the latest information. This programme will have all elements and sub-programmes noted on the Programme, with other programmes then summarised and rolled up from this Master

Programme for specific tasks, participants or specific elements of work. The Master Programme will expand upon the Draft Delivery Programme.

The Draft Delivery Programme has been prepared from Council information. As consultant appointments are made, more detail on milestones and deliverables will be inputted by the Project Director to create the Master Programme. The consultants are responsible for inputting into the development of the Programme and providing a status against approved programmes on a monthly basis. Input into other sub-programmes may be required and the consultants will be proactive in working with the project team. The Master Programme will be updated on a monthly basis to provide accurate commentary on progress to date.

### Monitoring of progress

The Project Director shall report to the Board on a monthly basis highlighting the programme status against the master programme. Progress reports received from relevant consultants and contractors will be reviewed.

The Project Director shall monitor the status of all work elements and contracts, prepare progress reports and expedite progress as necessary. The Project Director shall detail any slippage to the Programme and recommend to the Consultants and Contractors appropriate ways to recover the slippage at each monitor and shall report on action being taken.

### Programme changes

Changes to the programme are to be recorded as revisions and highlighted to the Board In order to anticipate problems and instigate corrective action, all team members are requested to immediately highlight areas of concern to the Project Director and be proactive in working with the project team to identify and mitigate risk.

## Stage Gate Reviews

The Stage Gate Review Process is an assurance methodology for major investments. It is a review process that examines projects at key decision points in their lifecycle to provide assurance that they can progress successfully to the next stage.

# 36. Benefits Management

## Benefits management strategy

A process will be put in place to ensure that the project benefits are measured over the short, medium and longer term. The level of monitoring effort, frequency and audience for regular reporting will be appropriate for the scale, complexity and risks of this project. This process will culminate in a Benefits Realisation Plan.

The individual participants in the project will all participate in the assessment and measurement of the project benefits.

Successful realisation of benefits will be dependent on:

- The timing of project implementation and delivery
- The level of consequential private sector investment that the project creates
- The amount of coordination between public sector bodies and stakeholders
- Appropriate monitoring processes being established and implemented

A number of benefits that will accrue from the CMUA have been identified in this Investment Case. The investment benefits and Key Performance Indicators (KPIs) are presented in Table 132. These KPIs used to assess the options will continue to be used and enhanced throughout the implementation of this project.

Table 132: Key Performance Indicators

| Benefits | Detailed Benefits | Key Performance Indicator (KPI) | Source |
|---|---|---|---|
| **1. Investment and economic growth to the region** | Economic impact of increased tourism in Christchurch | • Increased yield (dollar spend) per visitor | • Council<br>• Statistics NZ (Retail Trade Indicator) |
| | Increased average length of stay in the Canterbury region | • Increased duration of visit to Canterbury for workers, visitors and residents | • CERM survey – secondary spend<br>• ChristchurchNZ<br>• Sport tourism research |
| | Increased economic impact of major events in the region | • Increased number of visitors in the central city | • Council<br>• Statistics NZ (Retail Trade Indicator) |
| | Improved attraction and retention of visitors, workers and residents in the central city | • Increased number of visitors in the central city<br>• Increased duration of visit to the central city | • ChristchurchNZ<br>• Sport tourism research |
| **2. Christchurch is an attractive place to work, study, live and visit** | Creation of a legacy asset and focal point in the central city | • Improved customer satisfaction | • Residents Survey, Residents Opinion Survey |
| | The existing sport culture in Canterbury is enhanced and supported | • Improved civic pride | • Residents Survey, Residents Opinion Survey<br>• Sport tourism research |
| | Improved attraction and retention of workers and residents in the central city | • Increased number of workers and residents in the central city | • ChristchurchNZ<br>• |
| | Improved perception of Christchurch as a tourism destination for local, national and international visitors | • Increased number of visitors in Christchurch | • ChristchurchNZ<br>• |
| | Increased visitor numbers, average length of stay and average visitor spend | • Increased number of visitors in the central city<br>• Increased duration of visit to the central city | • ChristchurchNZ<br>• |
| **3. Accelerated levels of investment, and relocation of businesses in the CBD** | Improved progress of the rebuild and revitalisation of the inner city | • Decrease of vacant sites in the central city<br>• Increased number of visitors in the central city | • Residents Survey, Residents Opinion Survey<br>• Council |
| | Enhanced opportunities for retail, commercial and hospitality activity | • Increased amount of ancillary service providers adjacent to the CMUA (e.g. hospitality, services) | • Council<br>• Statistics NZ (Retail Trade Indicator) |
| | Creation of commercial opportunities within the central city, along with opportunities for capital recovery | • New commercial relationship and partnerships within the central city<br>• Increased number of private developments adjacent in the central city<br>• Increased sales turnover of businesses in the central city | • Council<br>• Statistics NZ (Retail Trade Indicator) |
| **4. Christchurch has more major entertainment events accessible to families and other residents** | Enhanced social and community value | • Improved civic pride | • Residents Survey, Residents Opinion Survey |
| | Residents can easily access and participate in a full range of events | • Increased sport and event attendance | • Residents Survey, Residents Opinion Survey |

The Benefits Realisation Plan will be further developed during the procurement stage of the project. It will set out an agreed process (by Council) for the ongoing management and monitoring of benefits, drawing on the long-list of key performance indicators identified through this Investment Case process. This will include agreeing baseline targets and timing of achievement of targets, frequency of monitoring and responsibility for monitoring.

# 37. Risk Management

Project risk management is a process by which stakeholders in a project identify, categorise and manage the risks of that project. Project risk is recognised as, 'an uncertain event or condition that, if it occurs, has a positive or negative effect on a project's objectives'. The objective of risk management is to keep a project's risk exposure at an acceptable level, by mitigating the impacts and effects on the project.

A risk analysis has been undertaken for the proposed project option (Option 3) to identify key risks and mitigation strategies. The purpose of the following discussion is to understand the nature of various risks, primarily whether or not risks are capable of definition and pricing.

## Risk management process

Risk management procedures have been established in the development of the project to date and reporting has been undertaken in accordance with the Council's programme wide risk management strategy and reporting framework. The risk management process (RMP) undertaken for the CMUA is presented in Table 133 below.

Table 133: Risk management process

| Stage | Description |
|---|---|
| **Stage 1: Risk Management Planning** | Prior to the initiation of risk management, activities in the proposed baseline (scope, schedule, and cost) are evaluated to determine their potential for risk. This evaluation (or risk screening) assesses all activities against a set of screening categories typically in the areas of construction, interface control, safety, regulatory and environmental, security, design, resources, space migration, etc. Activities which are identified as project risks will be tracked within the RMP. |
| **Stage 2: Risk Identification** | Identify risks that may impact the successful completion of the project. Risks are identified for the entire life cycle of the project. Risk associated with scope, cost, and schedule are identified by systematically challenging the assumptions, logic, and scope of the project and examining the identified uncertainties associated with each stage. |
| **Stage 3: Risk Assessment** | Assess the risks to determine their likelihood and impact on the project's cost, schedule, and/or work scope. This includes a qualitative and quantitative assessment of the consequences (impact) of the risks as well as the risk's probability of occurring. |
| **Stage 4: Risk Handling** | Determine the risk-handling strategy, whether (in order of preference) it is to eliminate, transfer, prevent, mitigate, or assume (accept) the risk. |
| **Stage 5: Risk Management Impact and Control Actions** | Assess the risk impact on the project and the effect of the risk handling strategies. Risk handling strategies will be reflected in the project's baseline, whereas residual risks will be reflected in the project contingency. |
| **Stage 6: Risk Reporting and Tracking** | Risk reporting and tracking is the documentation of the risk management process. |

The Council has established specific roles and responsibilities to support the project risk management processes and control over the life cycle of the project. For this project, the risks and benefits will be shared between the SPV and the delivery entity. The specific responsibilities of the Project Director and Project Risk Manager are presented in Table 134 below.

Table 134: Risk management responsibilities

| Responsible owner | Responsibility |
|---|---|
| Project Director | The Project Director is responsible for managing cost and schedule contingency, consistent with the change control process and thresholds in the Project Evaluation Plan. The objectives are to maintain contingency commensurate with project risk through to project completion and to ensure that the full project scope is achieved on schedule and on budget. |
| Project Risk Manager | The Construction Project Manager will undertake the role of the Project Risk Manager. The Project Risk Manager is assigned responsibility for implementing the overall Risk Management Program and ensuring that it meets the intent, and is assigned responsibility for working with risks, quality and safety subject matter experts to execute the risk |

| | |
|---|---|
| | management process. The Project Risk Manager is also the Risk Manager Points-Of-Contact (POCs) of the project. The Project Risk Manager is responsible, but not limited to, the following:<br>• Identifying risks, logging risks in the Risk Register<br>• Performing analyses, reporting on risk exposure to Project Director<br>• Identifying abatement strategies, abatement actions and tracking their effectiveness at reducing risk exposure<br>• Reporting abatement results to the Project Director |

## Summary of key project risks

Based on the consequence and likelihood score, each risk is placed in a category that is outlined in Table 135 below.

Table 135: Risk categorisation matrix

| | Likelihood | | | | |
|---|---|---|---|---|---|
| **Impact** | **Very Unlikely 10-40%** | **Unlikely 10-40%** | **Possible 40-70%** | **Likely 70-90%** | **Almost Certain >90%** |
| Extreme | High | High | Very High | Very High | Very High |
| Major | Medium | High | High | Very High | Very High |
| Moderate | Medium | Medium | High | High | High |
| Minor | Low | Low | Medium | Medium | High |
| Insignificant | Low | Low | Low | Medium | Medium |

A summary selection of those risks which demonstrated a residual risk rating of Medium or greater by the project team are presented in Table 136. Further risks and uncertainties for the CMUA are defined within the Project Risk Register held by Council. The Risk Register will continue to be updated to proactively and systematically identify and manage risks associated with the project.

Table 136: Summary of Key Project Risks

| Name | Description | Outcome | Factor | Likelihood Without Controls | Impact Without Controls | Risk | Current Status | Mitigation Action | Risk Owner | Mitigation Effectiveness | Probability with Controls | Likely Impact with Controls | Residual Risk |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Direction to Fast Track Project** | Direction from Governance to 'Fast Track' Project results in activities taking place concurrently that would be better sequential, resulting in mis-directions and rework, when imperative is to 'get it right' | Delay in completion of deliverables to sufficient standard (ie lack of design coordination), increased costs incurred for variations | Reputational/Image Customers/ Delivery Project Delivery Financial | *Likely* | *Moderate* | *High* | About to enter delivery phase | Procurement model to be selected to reduce this risk. PM to identify critical activities in PEP and concentrate resources on these (briefing, enabling works etc). Identify areas of concern and detail specific mitigation actions | MN | Effective | *Unlikely* | *Minor* | *Low* |
| **Lack of Scope Clarity (or Incorrect Technical Scope)** | Lack of defined scope for consultant (or D&B) briefs | Undefined Scope leads to design changes and therefore increased programme & costs, or poor WOLC | Reputational/Image Customers/ Delivery Project Delivery Financial | *Likely* | *Moderate* | *High* | Proof of Concept undertaken and scope defined | Build on Proof of Concept. Include operational and FM input | MN | Effective | *Unlikely* | *Minor* | *Low* |
| **Credibility of Investment Case** | Credibility of Investment Case undermined by quality of documentation previously produced or assumptions previously made. | IC not approved by CCC &/or Crown | Project Delivery Financial | *Possible* | *Major* | *High* | Base Option ('do nothing') and up to 8 longlist options considered. Four shortlisted options, with one recommended | Extensive review of Five Cases | MN | Effective | *Unlikely* | *Minor* | *Low* |
| **Engagement** | Lack of appropriate engagement and consultation with stakeholders during delivery (especially Design Phase) | No Public buy-in to the project | Reputational/Image Customers/ Delivery Project Delivery | *Possible* | *Major* | *High* | Communication strategy and plan have been drafted with Engagement Specialist | Include a detailed Communications Strategy and Plan within PEP that is developed in conjunction with Engagement Specialist | DK | Effective | *Unlikely* | *Moderate* | *Medium* |
| **Team Roles & Expectations** | Project Team & Sponsor do not understand process. Expectations misaligned | Project delivery is delayed, more costly than necessary, or fails to meet stakeholder expectation | Reputational/Image Financial Project Delivery | *Likely* | *Moderate* | *High* | Direction provided in Management Case. Draft PEP developed | PM to complete PEP as first step involving Key Project Team Members | MN | Effective | *Unlikely* | *Minor* | *Low* |
| **Escalation Costs** | Risks that affect the delivery programme of CMUA are not identified or appropriately treated by team | Issues that materially delay the project and effectively reduce the budget available for physical works (scope cuts) | Customers/ Delivery Financial | *Possible* | *Moderate* | *High* | Risk register updated for delivery phase | Risk Management process to be adopted from outset of delivery. All team responsible for identifying queries on RFI register. Also specific risks, raising in appropriate timeframes and adding to R&I Register | MN | Effective | *Unlikely* | *Moderate* | *Medium* |
| | | | | | | | | | | | | | |
| **Political** | Changes to personnel within coalition government, or changes to Mayor &/or Councillors within Council (Local Body elections this year). | Delayed or cancelled design &/or build phases due revised perspectives or focus | Delivery of Design or Build phases | *Possible* | *Major* | *High* | No change to Mayor, but six new Councillors within Council from Local Body elections. | New Council provided with weekly updates on the Investment Case (IC), access to project documentation to support current IC status. | DPMC/ CCC | Partially Effective | *Unlikely* | *Moderate* | *Medium* |
| | | | | | | | | | | | | | |
| **Delivery Phase Budget** | Insufficient Budget to deliver expected scope | Project loses public support due to scope cuts | Reputational/Image Customers/ Delivery Financial | *Likely* | *Major* | *Very High* | Affordability Review carried out and options to achieve P85 estimate (per QRA) have been identified if required. | QS and stakeholder input during Concept design to steer and inform design recommendations as well as concept estimate produced. Stakeholder expectations to be managed. | QS/ Engagement | Effective | *Unlikely* | *Moderate* | *Medium* |
| **Turf Growing Conditions** | Climate control within Arena unable to promote sustainable turf growing and playing conditions (especially 'greenhouse' effect of transparent roof during Nor'west) | Mechanical shading or ventilation (alternative design solutions) required which fail to meet stakeholder expectations or exceed budget | Customers/ Delivery Project Delivery Financial | *Possible* | *Moderate* | *High* | Modelling of daylight (growth), ventilation (disease), temperature (midsummer heat) completed. Turf able to grow within the 'Proof of Concept' with minor assistance from grow lights. If Affordability Review option to move Level 1 concourse to the ground level is adopted, mechanical ventilation fans may be required (cost included in Affordability Review options). | Use specialist technical input and modelling early and allow this information to feed into the design. Achieving turf environment is number one design consideration. | Turf | Effective | *Unlikely* | *Minor* | *Low* |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Land Contamination** | Significant quantum of contaminated material over precinct | Increased costs & time for decontamination | Financial/Project Delivery | *Possible* | *Minor* | *Medium* | Testing (PSI only) completed to quantify for cost estimates. No significant contamination expected. DSI to be undertaken once Enabling Works funding released. | Propose early decontamination of critical areas to be included in programme to run concurrently with design. Land remediation included in Global Settlement. | LINZ/ MN | Effective | *Unlikely* | *Minor* | *Low* |
| **Archaeological Investigations** | Time consuming and extensive Archaeological Investigations required | Increased costs & time for investigations | Financial /Project Delivery | *Likely* | *Minor* | *Medium* | Archaeologist has undertaken desktop studies, plus attended any site investigations (pits). Not a major/significant indigenous site. No significant finds during site investigations | Maintain archaeologist involvement. Expedite invasive Enabling Works and monitor for any issues | MN | Effective | *Unlikely* | *Minor* | *Low* |
| | | | | | | | | | | | | | |
| **Contractor Capability and Capacity (Construction Phase)** | Need several large capable contractors to provide price tension | Increased cost to build if limited contractor options | Project Delivery Financial | *Likely* | *Major* | *Very High* | Market sounding undertaken indicates that there are a number of Main Contractors with capacity/capability who are interested in D&B for this project and the market is competitive. | Provide procurement option that increases market for construction. Market Sounding indicates that Design & Build is the preference with Main Contractors. | TBC | Effective | *Unlikely* | *Moderate* | *Medium* |
| **Seismic Hazard & Resilience (Post Occupation)** | Varying ground conditions lead to differential settlement after a large seismic event.<br>Note: this risk applies during construction also.<br>Also refer Ground Improvement Risk ID27 (below) | Requirement for demo and rebuild | Financial Loss of Service | *Possible* | *Major* | *High* | Basic design is to IL3 for life safety. Geotech and Structural have reviewed options (with implications and costs) for increased Resilience ie become 'readily repairable' through better ground improvement (more resilient) and more accessible structure for repair | Include options within brief for basic IL3 (life safety) and also 'resilient (repairable) options' for CBA. This risk would be medium if 'resilience' cost included in scope. Key briefing item | TBC | Effective | *Possible* | *Major* | *High* |
| **Flooding (Ops phase)** | Floor levels too low, flooding from large rain events or climate change | Major repairs, loss of use for some events | Financial Reputation/ Image Loss of Service | *Possible* | *Major* | *High* | Desk top study undertaken and required floor levels specified | Floor levels set accordingly in brief | TBC | Effective | *Unlikely* | *Insignificant* | *Low* |
| **Economic, Financial, Social outcomes** | Key community outcomes not met by recommended solution | Disappointment and resentment by stakeholders | Reputation/ Image Customers/ Delivery | *Possible* | *Moderate* | *High* | Investment Case has identified project is aligned with community outcomes. | Incorporate these values into Design Brief and complete Stageway Reviews | TBC | Effective | *Unlikely* | *Minor* | *Low* |
| **Procurement of long lead items** | Failure or inability to place timely orders for long lead items such as bespoke steel, ETFE, cladding and bleachers | Slow or delayed delivery of critical items to site, causing construction delays | Project Delivery Financial | *Possible* | *Major* | *High* | Long lead items recognised and noted in risk register | Provide procurement option that allows early procurement of orders (eg. D&B). Define clear procurement responsibility for these items within the Procurement Plan and Main Contract as necessary | TBC | Effective | *Unlikely* | *Moderate* | *Medium* |
| **Delayed Completion of Enabling Works** | Enabling Works not completed prior to Main Contract commencing | Delays to Main Contract | Project Delivery Financial | *Possible* | *Moderate* | *High* | Technical Reports have identified the extent of enabling works required. Delivery programme acknowledges this work. Detailed design to be completed. | Closely monitor programme. Procure these works separately to the Main Contract | TBC | Effective | *Unlikely* | *Moderate* | *Medium* |
| **Ground Improvement during Delivery Phase** | Actual encountered site conditions demonstrate further ground improvement required.<br>See also Seismic Risk ID 20 (above) | Potential delay to programme and additional project costs | Project Delivery Financial | *Possible* | *Moderate* | *High* | Preliminary investigations have been undertaken to determine feasible solution(s) and cost estimates for both IL3 and 'Added Resilience' options. NOTE: Current estimate assumes compliant IL3 option only.<br><br>Note; Concept Designers recommend that Ground Improvement, Foundation and Structure be designed as a complete system (this may limit ability to undertake Ground Improvement as Early Works) | Consider Site Specific Spectra Investigation.<br><br>Liaison between ground improvement, foundations and structure during design. Detailed evaluation of proposed ground improvement methodology. Undertake pre-production trials. | TBC | Effective | *Possible* | *Minor* | *Medium* |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Poor Operator and AM/FM Engagement** | Missed opportunities for operational efficiencies | Suboptimal design solution | Operation Financial | *Likely* | *Moderate* | *High* | Aware of issue | Operators and FM included in stakeholder engagement during briefing phase. If not appointed (preferred), then use independent operator. | TBC | Effective | *Unlikely* | *Moderate* | *Medium* |
| **Governance (Set Up)** | Complex Governance structure (if SPV) will take time to agree and set up | Delayed decision making | Project DeliveryFinancial | *Likely* | *Moderate* | *High* | Management Case promotes a Special Purpose Vehicle for delivery to achieve balanced funder/risk provision. This set up is not provided for in current programme. | Attempt to simplify. Attempt to get delegations to proceed with current (expanded) team during set up phase | TBC | Partially Effective | *Likely* | *Moderate* | *High* |
| **Governance (Delivery)** | Complicated governance structure with multiple Project Sponsors | Protracted decision making. Additional cost to maintain, plus potential delays to decisions | Project Delivery Financial Reputation/ Image | *Possible* | *Major* | *High* | Management Case promotes a Special Purpose Vehicle for delivery to achieve balanced funder/risk provision. Additional cost to maintain. | Develop clear terms of reference and simplify governance processes | TBC | Effective | *Possible* | *Moderate* | *High* |
| **Delivery Team Resource** | Inadequate or inappropriate team resource applied to or available for project | Slow or poor decisions or actions impacting on time &/or cost | Project Delivery Financial | *Possible* | *Moderate* | *High* | Project Team currently resourced for IC only - Delivery entity not confirmed | Define key resource requirements and update PEP for delivery phase | TBC | Effective | *Unlikely* | *Minor* | *Low* |
| **Product Procurement - Fit for Purpose (D&B model)** | Poor product/material selection or access methodology | Increased WoLC &/or Operational compromises | Operational cost | *Possible* | *Moderate* | *High* | Aware of issue | Robust Client brief in respect to operational requirements (see also risk 28). Engage appropriate reviewers for technical submissions | TBC | Effective | *Unlikely* | *Moderate* | *Medium* |
| **Contractor's ability to manage & co-ordinate design (D&B)** | Unsuitable management of design to marry with budget and methodology | Design and Procurement delays, increased WoLC | Project Delivery Operational cost | *Possible* | *Moderate* | *High* | Aware of issue | Robust EOI and RFP with appropriate weight on personnel and relevant design management experience | TBC | Effective | *Unlikely* | *Moderate* | *Medium* |
| **Supply Chain &/or Subcontractor capacity** | Insufficient capacity to deliver, fabricate or install key elements | Late delivery or installation of key elements especially bespoke Steel, ETFE, Precast | Project Delivery (Increased Risk cost by Main Contractor) | *Possible* | *Moderate* | *High* | Aware of issue | Undertake targeted market engagement to include key sub-contractors, and ways to manage risk [eg by consortia] included in procurement strategy | TBC | Effective | *Unlikely* | *Moderate* | *Medium* |
| **Internal Climate** | Main bowl has no mechanical heating or cooling systems. Ventilation openings required for turf health | Patron comfort in terms of expectations (main bowl) are not met | Reputation/ Image | *Possible* | *Moderate* | *High* | Modelling undertaken for both winter and summer conditions to determine climate relative to external ambient. Arena will be warmer than ambient, but may still be cool… | Continue modelling through design. Consider control systems to ventilation to improve patron comfort. Clearly signal that arena is not 'air-conditioned'. | TBC | Effective | *Unlikely* | *Moderate* | *Medium* |
| **Unknown Services Encountered** | Unexpected services found which require relocation | Delayed main works | Project Delivery | *Likely* | *Moderate* | *High* | All key Services/Utilities mapped, and consequences of terminating through services investigated and costs estimated. | Terminate or relocate all known services as part of Enabling Works (including consequential works) to de-risk main project. Enabling Works will improve chances of finding any other services | TBC | Effective | *Unlikely* | *Minor* | *Low* |
| **Bid Incentive Fund** | An appropriate bid incentive fund does not materialise, or is applied in an uncoordinated fashion across Council's network of venues leading to suboptimal community and revenue outcomes. | Reduced ability to attract major events | Customers/ Delivery Financial | *Likely* | *Moderate* | *High* | Appropriate funding mechanism for Bid Incentive Fund to be considered by Council as part of LTP (through evaluation of ongoing ChristchurchNZ support). | Review of Council's wider approach to Bid Incentive funds to ensure what is agreed is sufficient to activate the CMUA's potential. Additional funds may need to be committed by Council. | CCC | Partially Effective | *Unlikely* | *Moderate* | *Medium* |

Risks will be recorded in the Project Risk Register, and recorded risks will be managed through regular and accurate reporting to the CMUA governance groups and other governance bodies as necessary.

The Project Director will prepare the project status report for distribution to the SPV Board. The report will list all new and closed risks during the period, and any risks that have a notable change in their Risk Rating. Focus is usually given to risks with a rating of High or above.

# 38. Stakeholder Engagement and Communication

A stakeholder engagement and communications plan has been developed that sets out a clear framework for developing and managing communications and relationships with internal and external stakeholders regarding the CMUA project.

## Stakeholder Engagement Principles

The project involves a large number of internal and external parties with varying interests and an overarching stakeholder engagement and communications action plan has been developed. The guiding principles behind CMUA's stakeholder management will be:

- **Purpose:** Begin every engagement with a clear understanding of what you want to achieve
- **Inclusion:** Identify relevant stakeholders and make it easy for them to engage
- **Timely involvement:** Involve stakeholders from the start and agree on when and how to engage
- **Transparency**: Openly communicate with stakeholders about their respective concerns and contributions and set clear expectations
- **Respect:** Acknowledge and actively monitor the concerns of all stakeholders and take their interests appropriately into account in decision-making and operations
- **Consideration:** Listen to the stakeholders about the risks that they assume because of their involvement on the project.

## Key Objectives

The key objectives of the communication strategy are to achieve a structure for communications which can:

- Share information with the community, partners and stakeholders
- Facilitate effective communication flow through the project organisation
- Assist in ensuring all project team members are suitably informed and empowered in their areas of responsibility

The communications and engagement objectives of this strategy are to:

- Ensure the people and Canterbury and key stakeholders have clear information about the process underway to progress the development of the Canterbury Arena.
- Ensure key stakeholders are identified and offered appropriate opportunities to take part in and influence the preparation of the investment case.
- Identify appropriate channels, mechanisms and opportunities for stakeholders to become involved with and engaged in the process – these will vary depending on the needs of the various stakeholders.
- Develop shared messaging to ensure all communication is clear and aligned, along with an agreed approach to engagement and tactics to support objectives.
- Determine appropriate mechanisms to manage media interest in the project.

The stakeholder engagement process is summarised in Figure 26.

Figure 26: Stakeholder Management Process


## Stakeholder Analysis

An analysis of key stakeholders by level of influence and support (as illustrated in Figure 27 below) will be undertaken to guide the type and frequency of activity to effectively engage with stakeholders over the course of the project. This enables the SPV and Project Director to:

- Ensure that the right people are involved at the right time in the process
- Empower the owners of the relationship with the key stakeholders with the right tools and materials to effectively manage stakeholder group(s)
- Encourage stakeholders to provide feedback and voice concerns.

Stakeholders are classified and mapped by their level of interest in the project and their potential levels of influence and impact. The frequency and type of communications and engagement activities will be targeted appropriately, according to the stakeholders' classification. Figure 27 illustrates the classification of stakeholders and lays out the appropriate engagement activities for each category of stakeholder. Table 137 on the following page classifies the key CMUA stakeholders and the appropriate level of engagement.

Figure 27: Segmentation Analysis of Key Stakeholders

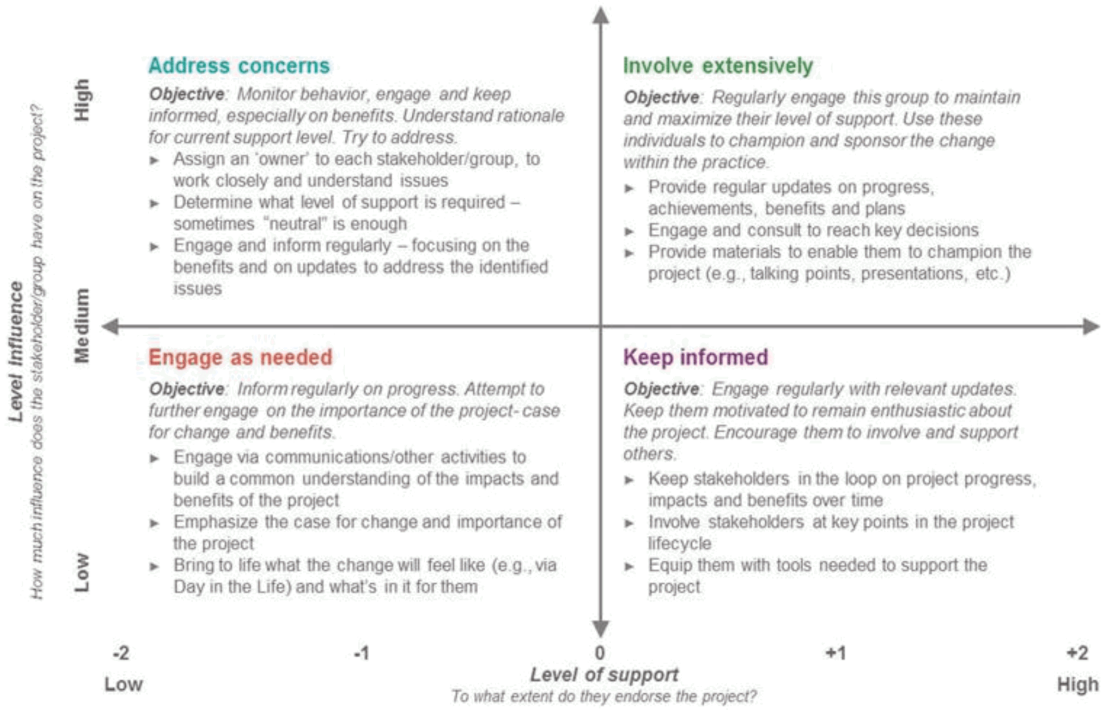


Table 137: CMUA stakeholders

| Interest group | Key stakeholder | Level of influence | Level of support required | Level of engagement/action |
|---|---|---|---|---|
| Central Government | Minister for Greater Christchurch Recovery | High | High | Involve extensively |
| | Members of Parliament | Medium | Medium | Address concerns |
| | Department of Prime Minster and Cabinet (DPMC) | High | High | Involve extensively |
| | Treasury | High | High | Involve extensively |
| | Ōtākaro Ltd. | Low | Medium | Engage as needed |
| | Ministry of Business, Innovation & Employment (MBIE) | High | Medium | Address concerns |
| Local Government | Christchurch Mayor | High | High | Involve extensively |
| | Christchurch City Council Elected Members | High | High | Involve extensively |
| | District Councils | Low | Medium | Engage as needed |
| | Environment Canterbury | Low | Medium | Engage as needed |
| Strategic Partners | Ngāi Tahu | Medium | High | Address concerns |
| | ChristchurchNZ | Medium | High | Address concerns |
| | Christchurch International Airport Ltd. | Low | Low | Engage as needed |
| | Multi-Purpose Arena Trust/Christchurch Stadium Trust | Medium | High | Address concerns |
| Sports Groups | Canterbury Rugby | High | High | Involve extensively |
| | Crusaders Ltd | High | High | Involve extensively |
| | Other Sporting partners including Mainland Football, Canterbury Rugby League | Medium | High | Engage as needed |
| | Sport Canterbury | Medium | High | Address concerns |
| Event Organisers | Vbase | Medium | High | Involve extensively |
| | Team Event | Medium | High | Involve extensively |
| | Tenth Dot Management | Medium | High | Involve extensively |
| Promoters | Splore | Medium | High | Involve extensively |
| | Powerstation | Medium | High | Involve extensively |
| | TEG Dainty | Medium | High | Involve extensively |
| | Frontier Touring Company | Medium | High | Involve extensively |
| | Livenation | Medium | High | Involve extensively |
| Venue Operators | Vbase | Medium | High | Involve extensively |
| | Event Hire | Medium | High | Involve extensively |
| | Central City Business Association | Medium | High | Address concerns |

| Interest group | Key stakeholder | Level of influence | Level of support required | Level of engagement/action |
|---|---|---|---|---|
| Local Business | Canterbury Employers Chamber of Commerce | Medium | High | Address concerns |
| | Developers | Medium | High | Address concerns |
| Site Neighbours | Commercial Landlords | Low | Medium | Engage as needed |
| | Business owners | Medium | Medium | Keep informed |
| | Residents | Medium | High | Address concerns |

## Communication Strategy

Communication is critical to the success of a project and must be actively managed, controlled and documented at all points throughout the contract duration.

It is important to ensure that the appropriate information, messaging and planning is undertaken so that stakeholders are involved as appropriate and understand the rationale and benefits of the project. Table 138 below summarises the different stakeholders and engagement approach for communicating with these groups.

Table 138: Stakeholder communication engagement approach

| Stakeholder/audience | Engagement approach |
|---|---|
| Minister, Mayor, Christchurch City Council elected members | • Briefings – face-to-face and briefing papers as required. Quarterly Sponsor meetings. |
| Other elected members and Canterbury MPs | • Briefings – face-to-face and briefing papers as required |
| Strategic partners | • Regular updates to representatives of these partners through inclusion in newsletters and updates at the existing Strategic Partners Communications forum<br>• Regular contact through meetings, emails, telephone calls<br>• No surprises approach and early engagement on major matters |
| Multipurpose Arena Trust, Christchurch Stadium Trust | • Receive all communication before information goes into the public arena |
| Sporting codes / event promoters/ other users | • Face-to face targeted direct information<br>• Regular updates on progress via email |
| Developers | • Briefings to groups such as the Council's development forum<br>• Regular updates to the sector |
| Business sector | • Newsletters<br>• Speakers at group meetings |
| Arena site neighbours | • Face-to-face<br>• Mail drops<br>• Community papers e.g. The Star |
| Youth representatives | • Regular updates<br>• Stakeholder briefings as required |
| People of Christchurch | • Multiple channels<br>• Newsline stories<br>• Media<br>• Website<br>• Social media<br>• Public displays |

# 39. Project Assurance

A Quality Assurance process should be conducted over the life of the engagement with the right level of expertise at each stage of the project.

The objectives of the initiation and definition of the Quality Assurance Plan are to:

- Provide a fact-based assessment of the status and progress of CMUA
- Identify critical risks to Project and Programme Management in time to make informed decisions
- Provide on-going monitoring and review of the CMUA
- Verify and assess CMUA management processes, controls and framework effectiveness
- Review progress and reporting against plan, milestones, financials, dependencies and resourcing including communications to key stakeholders.

The approach for the review of CMUA will be as detailed in Table 139 below:

Table 139: Project Assurance

| Project Phase | Areas of focus |
|---|---|
| Initiation | • Scope of the project<br>• Project governance and management structures<br>• Project delivery framework<br>• Project reporting requirements<br>• Risk management (including assessment) |
| Definition | • Investment Case and associated requirements<br>• Scope of the project<br>• Quality processes and governance<br>• Change control<br>• Contract performance management<br>• Financial management and reporting<br>• Procurement planning, execution and management<br>• Project reporting<br>• Financial management and reporting |

The objective of the on-going QA role is to:

- Provide a fact-based assessment of the status and progress of CMUA for the lifecycle of the project
- Provide on-going monitoring and review of the CMUA activities

The Initiation and Definition IQA process was conducted by Independent Quality Assurance New Zealand and has been completed and reviewed by Council. Workstreams are now developing from this report based on the recommendations provided. The next stage of the QA will focus on the planning, execution, and close-out stages.

# 40. Project Closure

## Handover to client

An Organisation Change Management Plan will be used to prepare the Operator for transition to the new operational environment that will exist once the project team has handed over the outputs, the Team has been disbanded and/or the project is closed.

Elements of the Plan will include:

- Transition planning and timetable
- Communications
- Training
- Maintenance
- Performance measurement indicating how success or otherwise will be measured

The Business Owners will be required to create and maintain the Organisational Change Plan, and report on progress toward the achievement of project outcomes to the SPV and senior management.

## Post project evaluation plan

There are three stages of post-project evaluation as described in the Table 140 below.

Table 140: Post project evaluation plan

| Stage | Scope | Owner | Timing |
|---|---|---|---|
| **Project evaluation review (or Post Occupancy Evaluation)** | Assessment of:<br>• If objectives have been met<br>• Expected quality has been delivered<br>• Projects have been handed over to the owner and operator effectively<br>• Measures and responsibilities are in place to ensure benefits are realised<br>Lessons learned are documented and communicated to the project team | Project Director | Following hand-over to operator |
| **Post-implementation review** | To determine if the project has delivered its anticipated improvements and benefits | The owner and operator | To align with benefits realisation plan |
| **Opportunities for improvement** | Part of the evaluation will cover opportunities for improvement if the project, or part thereof, were to be repeated. This will include:<br>• Discussion of any areas that were problematic or where possible improvements have been identified and what actions could be implemented to prevent these issues recurring<br>• Identify any processes or best practices that were established during the Project and describe how these practices will be formalised and how any possible improvements will be utilised in the future | Project Director | Post contractual close |

## Project close-out

To gain formal acceptance of project outputs, and confirm the realisation of the outcomes, the closing down of a project should be planned to use the following formal project closure steps:

1. Business Owner(s) acceptance of project outputs
2. Issues Management
3. Risk Management
4. Project team disbandment
5. Financial management

6. Asset management
7. Post-project responsibilities
8. Post-project review
9. Formal closure by Project Sponsor/SPV

Closure of the project will be undertaken using a Closure Plan that will be developed for the consideration of the SPV. Timing is not defined at this stage.

# Appendices

# Appendix A: CMUA Affordability Review

## Canterbury Multi Use Arena (CMUA) Affordability Review – November 2019

### Purpose

The CMUA project team was asked to demonstrate an affordable option for the CMUA could be constructed within the $473m available budget using a Quantitative Risk Analysis (QRA) at a P85 affordability threshold level.

### Background

A detailed technical 'Proof of Concept' that fulfils (possibly exceeds) the core scope criteria was prepared and detailed cost estimates for the 'Proof of Concept' were prepared by WT Partnership Quantity Surveyors/Cost Consultants.

The available project budget is $473m ($220m from the Christchurch Regeneration Acceleration Facility) and $253m from the Christchurch City Council.

The Estimate at Completion (EAC), based on the fundamental design elements, was $483.8m ($10.8m or 2% over budget) and the project team believed that this was within an acceptable margin of error at concept stage and cost reductions could be made as required during the design phase to maintain the project within the available budget.

A Quantitative Risk Analysis (QRA) at a P85 level (considered 85% likely that the actual project costs will be delivered at or below this value) was also completed by WT Partnership and peer reviewed by Rawlinsons Quantity Surveyors/Cost Consultants. The P85 estimate increased the estimated cost to an unacceptable $505m.

A number of potential opportunities to decrease this cost were then identified and the project team proceeded to identify an affordable option for the CMUA which could be constructed within the $473m available budget using a QRA at a P85 affordability threshold level.

### Affordability Review

Populous (Stadium Architect), Aurecon (Engineering Consultant) and WT Partnership were all involved in the Proof of Concept and worked through the design/cost impacts for around 30 potential saving opportunities. These were presented at two workshops with representatives from the Christchurch City Council, Populous, Aurecon, Vbase, Crusaders Rugby, WT Partnership and EY on 14 October 2019 and 8 November 2019.

Each potential option was reviewed for feasibility by the workshop members. Some were eliminated as they were based on speculation of unit rates, or were assessed as reducing quality and/or increasing operational cost. Others were eliminated because they were perceived as diminishing the operational or customer experience aspects to too great an extent.

The workshops agreed to include the following saving opportunities in the Affordability Review (numbering refers to the option number in the Affordability Review):

**6a. Reduction in façade area**

There is the potential to reduce the total area of façade and roof by around 1,000m2 by tightening up the form of the arena.

Reshaping the façade will bring it in tighter to the building edge by curving the stadium roof columns to partially pass back under the upper tier of the main stands. This would reduce the overall footprint of the raft foundation. An indicative section of the proposed option is shown in Figure 1 below.

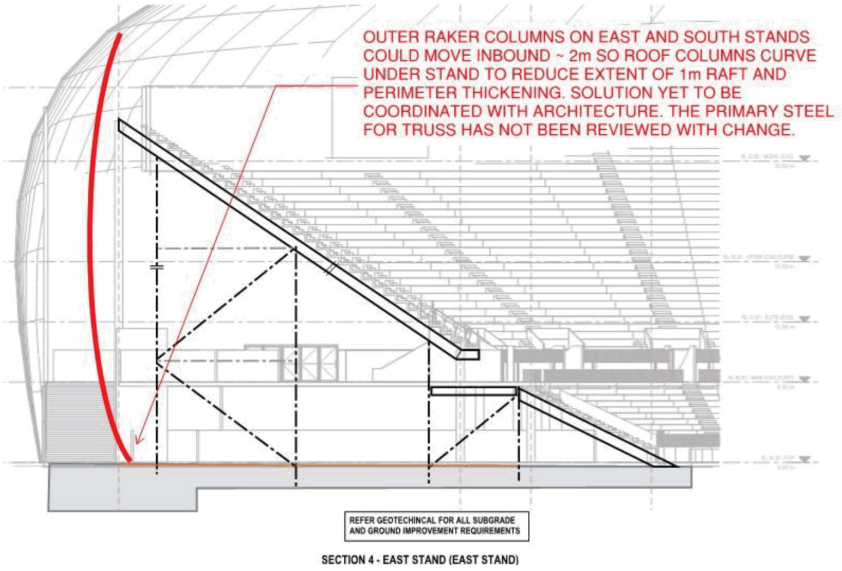



Figure 28 Sample reshape of roof stadium structure.

A reduction in façade and roof would change the overall form of the arena and likely make it slightly squarer and less curved / organic.

**The reduction in façade and roof area provides a [redacted] saving.**

**15. Relocate raised concourse to ground level**

There is the potential to remove a large area of the Level 1 suspended slab by dropping a large portion of the General Admission concourse to ground level. The western premium concourse cannot be dropped as it is sitting above the players' facilities, main kitchen and maintenance facilities. Populous have recommended that the raised southern concourse also be retained, as it will be the area most used for multi-use activities in the arena. Part of the eastern concourse will also be retained for structural (bracing) reasons and patron circulation.

The consultants have investigated the impact of a reduction of an area of the Level 1 concourse in the Eastern Stand Building. They have coordinated a new arrangement such that the Food and Beverages (F&B) outlets, toilets and plantrooms are moved from Level 1 to be located on the ground floor concourse. This has allowed a reduction of the Level 1 structure in the Eastern Stand, including the required changes to the structural scheme for the building (revised locations of Cross Bracing Frames (CBFs) and updated member sizes associated with this scheme).

This will have an impact on the free area available at ground floor for the natural ventilation through the Eastern Stand building. There is also likely to be impacts on disabled access in this part of the arena. Populous has indicated that there is potential to have the natural ventilation flow path above the F&B/toilet spaces, though

this has not been modelled by the Engineers. Therefore, while it is likely that there will be no issue for fresh air circulation, there may be negative impacts on the low level air velocity needed to maintain turf health.

As a consequence, a mechanical fan system may be required to assist the ventilation of the pitch area with the inclusion of the toilets and concessions filling the space along the eastern side of the bowl at ground level and this has been included in the estimate. The fan control system will allow the fans to be operated in forward or reverse depending on the temperature inside the arena compared with the temperature outside. On hot days, the fans will draw air in from outside and discharge it into the arena at low level and discharge warm air out through the roof at high level. On cold days, outside air will be drawn in via the high-level fans and vented from the arena at low level.

The inclusion of a mechanical assisted natural ventilation system at this concept stage in the project is considered prudent, and, if provided, will provide additional assurance and resilience for turf health and the potential for better climate control for patron comfort within the seating bowl. During the detailed design phase, it may be determined that this system is not needed and it can be deleted.

**The relocation of the raised concourse to ground level provides a [redacted] saving, offset by an additional cost of [redacted] for the mechanical fan system, to give a net saving of [redacted].**

**20. Change mixed use external activation zone to soft landscaping**

There is 9,330m$^2$ of mixed use external activation zone across the site.

This was originally allowed as "hard" landscaping, e.g. paving, to enable frequent event 'overlays', but has been changed to "soft" landscaping, e.g. grass.

This option has a high degree of acceptance, as the final decision can be deferred until late in the construction process, depending on funding availability. If additional savings have been achieved during the detailed design/tender/construction stages, and/or the project risks have been less than envisaged, the preference would be to add the "hard" landscaping back before the work is carried out. Alternatively, it could also be retrofitted in the operational phase if necessary.

**Changing the mixed use external activation zone to "soft" landscaping provides a [redacted] saving.**

**21. Alternative procurement option for the two replay screens & ribbon board control system**

There is the potential to partner with a technology firm such as PMY to procure a portion of the ICT infrastructure (two replay screens and ribbon board control system) through a design, build and operate procurement option.

Under this arrangement, the technology investor would offer an investment partnership with the Council/CCO where the investor would fund the Capex and share the revenue over a fixed term.

The remaining ICT for the building (ICT switches, fibre optic backbone cabling, racks etc.) would still be provided as part of the construction project.

We understand that PMY have a similar arrangement at Marvel Stadium in Melbourne, amongst others. While there is a perceived drop in revenue, there are also advantages in that a specialist provider may be able to secure more advertising at higher rates, leaving the arena operator to focus on its core business.

Should a deal not be reached with PMY or another technology investor, and further savings not be identified during the detailed design phase, additional capital investment would be required prior to the completion of the arena. It is acknowledged that the financial risk of any further investment would sit with the ultimate delivery agent.

**Using an alternative procurement option for the two replay screens and ribbon board control system provides a [redacted] saving.**

**25. Reduce overall building footprint**

The footprint of the building has increased since the Pre-Feasibility reporting. There is scope to reduce this footprint by 1,085m$^2$, including the reduction in floor area by reshaping the façade as shown in "6a. Reduction in façade area" above.

Any reduction would be focused on the relocation of part of the raised concourse to ground floor level and will be limited by the footprint of the bowl over. The maximum footprint reduction available based on the seating bowl over is 1,515 m$^2$. Some items to note include:

- The increase in footprint since the Pre-Feasibility reporting is primarily based on the concourses being 6m above ground level. In a typical design, the field of play would be below grade, which would result in a lower concourse, tucked further in under the bowl. This of course is not practical in Christchurch, due primarily to the high ground-water table.
- Whilst we can potentially remove 1,515 m$^2$ of footprint based on the seating bowl, we are unable to take this full reduction in area due to an inability to position the desired minimum concourse, food and beverage and amenities areas under this bowl. The actual potential saving is therefore limited to 1,085 m$^2$.

**Reducing the overall building footprint by 1,085m$^2$ provides a [redacted] saving.**

**Other options considered**

As noted earlier, a large number of other options were considered including removing the façade below concourse level, reducing sightlines, reducing concourse areas, reducing the percentage and the width of the premium seats, reducing the number of amenities (urinals, WC pans, basins), reducing the size of the Function Room and the number of corporate suites, reducing the number of F&B outlets and removing the northern façade.

While the amenities provided and the concourse space per patron in the Proof of Concept are generally at the upper end when compared to other arena facilities, it was felt that reducing these would be very detrimental to patron experience. Therefore, these items were not recommended by the workshop attendees and were not considered as part of the Affordability Review.

# Summary

| | |
|---|---|
| 6a. Reduction in façade area | [redacted] saving |
| 15. Relocate raised concourse to ground level | [redacted] saving |
| 20. Change mixed use external activation zone to soft landscaping | [redacted] saving |
| 21. Alternative procurement option for the two replay screens & ribbon board control system | [redacted] saving |
| 25. Reduce overall building footprint | [redacted] saving |
| | [redacted] **saving** |

This [redacted] saving has reduced the overall QRA at a P85 affordability threshold level to $472.7m i.e. around $0.3m under the $473m available budget. At the P85 QRA level, the estimated cost includes around 17% Contingency which is considered appropriate for this stage of the project.

The preference would definitely be to retain the raised concourse at Level 1. A continuous concourse is optimal for navigation around the arena, patron experience, and for crowd management and control. It also improves the live experience and any compromise to this may impact the competitiveness on the arena experience with the in-home experience, particularly for sporting events. The raised concourse also provides additional available space at ground floor level, which of course provides future potential revenue streams from leasing arrangements.

Every endeavour will be made during the detailed design phase to retain the Level 1 concourse as the design is developed and the risks, such as ground improvement and ground remediation, are reduced. It is preferable and likely that the ground remediation and other enabling/early works will be completed while the detailed design is underway. If the risk allowances that tie back to ground conditions, and other enabling works such as service relocations can be reduced to provide a 'clean' site, the overall QRA cost for the project may well be reduced which will potentially allow the concourse to be retained at Level 1.

It is therefore strongly recommended that final investigations (such as Detailed Site Investigations associated with ground contamination/remediation) and Enabling Works be expedited, not only to reduce risks associated with unknown conditions, but also to expedite the overall programme.

# Appendix B: Commercial Structure Comparison

**Company**

A company is a legal entity in its own right and generally has the rights and obligations of a natural person. It is capable of holding assets in its own name. It has full capacity to sue and be sued, to carry on or undertake any business or activity, to do any act, or to enter into transactions.

| Advantages | Disadvantages |
|---|---|
| • Limited liability is the single most significant attraction of using a company. Unlike a trust, it is the company that is responsible for its debts and obligations, not the individual persons.<br>• The flexibility associated with a company includes the ability to:<br>  ○ Incorporate with relative ease at a low cost;<br>  ○ Ensure continuity of the company<br>  ○ Separate ownership and management<br>• The company structure is well understood by contractors which means they are less likely to build in a risk element for this issue in their pricing. | • Higher set-up costs and time to establish than an internal project at Council<br>• Ongoing administration in accordance with the Companies Act 1993<br>• Duties imposed upon company directors may mean it is unattractive for appropriate professionals with construction experience to willingly be directors<br>• If Council controls more than half of the shares of a company or has the ability to appoint the majority of the board, that company will become subject to the obligations imposed on a Council Controlled Organisation as set out in the LGA 2002 |

**Trading Trust**

A trust is not a separate legal entity. The essential elements of a trust are; one or more trustees (who are the legal holders of the trust property), trust property, one or more beneficiaries, an equitable obligation on the part of the trustees to deal with the trust property for the benefit of the beneficiaries.

| Advantages | Disadvantages |
|---|---|
| • Separate ownership and management.<br>• A creditor of a trading trust will generally have no direct claim against the beneficiaries of the trust, since any party contracting with a trading trust will be contracting with the trustee, rather than the beneficiaries or a separate legal entity. | • Higher set-up costs and time to establish than an internal project at Council<br>• No limited liability – trustees may be personally liable for all trust debts, since trusts are not separate legal entities. This aspect can be mitigated against<br>• More complex structure than a company<br>• Due to the more complex structure the costs and time to establish are typically greater than a company<br>• High standard of care imposed on trustees may mean it's unattractive for appropriate professionals with construction experience to willingly be trustees<br>• Unlike dividends that may be paid by a company to shareholders at the election of the board, trustees are subject to less flexible trust law in making distributions to beneficiaries<br>• The lack of creditor certainty may be unattractive to potential contractors who will see contracting with a Trust as more complex than a company. This might be a disadvantage. |

**Joint Venture**

Joint ventures are governed by contracts between the parties. These contracts typically cover; ability to appoint Directors, define how decisions of a JV are to be made, define how a deadlock in the decision making of the joint venture is to be dealt with, define the requirements for the provision of services, employees and secondees, define the on-going funding obligations of the parties, define exit options, define ownership of the joint venture assets (including new intellectual property).

The level of decision making authority a party has in a joint venture would typically be proportionate with its economic interest.

Two types of joint ventures have been investigated:

1. **Incorporated joint venture** - a new company is formed and the joint venture partners each have a shareholding reflecting their economic interest in the joint venture. A joint venture agreement is agreed and signed.

| Advantages | Disadvantages |
|---|---|
| • Limited liability is the single most significant attraction of using a company. Unlike a trust, it is the company that is responsible for its debts and obligations, not the individual persons.<br>• The flexibility associated with a company includes the ability to:<br>  ○ Incorporate with relative ease at a low cost;<br>  ○ Ensure continuity of the company<br>  ○ Separate ownership and management<br>• The company structure is well understood by contractors which means they are less likely to build in a risk element for this issue in their pricing. | • Higher set-up costs and time to establish than an internal project at Council<br>• Ongoing administration in accordance with the Companies Act 1993<br>• Duties imposed upon company directors may mean it is unattractive for appropriate professionals with construction experience to willingly be directors<br>• If Council controls more than half of the shares of a company or has the ability to appoint the majority of the board, that company will become subject to the obligations imposed on a Council Controlled Organisation as set out in the LGA 2002 |

***Unincorporated joint venture*** – the joint venture would be directly between the parties and there would not be any new "legal entity". The joint venture would simply be formed by the joint venture agreement which is entered into. As such, an unincorporated joint venture cannot hold assets itself so usually a nominee company is set up to hold legal title to the joint venture assets on behalf of the joint venture parties.

| Advantages | Disadvantages |
|---|---|
| • Simpler to setup than an incorporated Joint Venture and a Company<br>• An unincorporated joint venture would not be subject to tax – but rather the joint venture parties themselves would be taxed. This is particularly important where the joint venture may require significant initial capital expenditure but be loss making for a number of years.<br>• An unincorporated joint venture accordingly allows losses to be flowed through to the joint venture parties and not become stranded at the joint venture level. | • The joint venture parties do not get the benefit of limited liability protection.<br>• No legal entity<br>• Cannot hold assets |

# Appendix C: PPP Model

In considering PPP's as a potential procurement option the following key characteristics must be present in the Project Definition.

- A clear specification of the outcomes expected by the public (the service or user outcomes)
- The construction of a new asset to facilitate the delivery of those outcomes (the asset)
- The certainty that the service outcomes can be delivered by the private sector for a defined period (the contract period)
- The efficient allocation of risk between the public and private sector (risk transfer)
- The separation of ownership (retained by the public sector) and financing (provided by the private sector), and
- The application of payment mechanism which incentives the provision of service outcomes and penalises non-performance.

The CMUA project has been assessed as retaining some of the characteristics required to be considered for delivery through a PPP. In particular, the project was assessed against the New Zealand Treasury's hurdle criteria to determine whether a PPP could be considered a viable procurement option. Of relevance for this project is the emphasis PPP procurement places on the realisation of broader project outcomes and consideration of whole of life performance to optimise decisions or activities. The CMUA project's Investment Objectives do reflect an outcomes-based approach with an integrated approach to design, construction and maintenance identified as a desirable objective.

Notwithstanding the suitability of this project for PPP procurement the commercial workshop and market engagement did raise some issues and concerns in respect of the PPP model. These included the need to address the Project Team's capability and capacity to deliver a PPP project within the in-service timeframes identified. Given this project would be the first Local Government PPP this is a significant consideration which would require a collaborative approach between the key public sector agencies in mitigating any process risk.

The commercial work-streams also noted, however, that no procurement model met all the CMUA's procurement objectives. Furthermore, the PPP model would only be pursued if it demonstrated clear value for money over the preferred traditional approach

## Advantages and Disadvantages of PPP Procurement.

The unique nature of the CMUA's joint funding means that any consideration the advantages and disadvantages of PPP procurement will includes elements that are both Project and Agency specific. The following table identifies the accepted advantages and disadvantages of PPP procurement with comment on additional considerations for Council and the Crown.

| PPP Model | Project | Considerations |
|---|---|---|
| **Advantages** | Introduces Design and Construction innovation and efficiencies in delivery phase and provision of services. | A requirement for local service providers can leverage the partnership opportunity with large international firms. |
| | Integration of Facilities Maintenance Services drives improved user experience and whole of life outcomes. | Public Sector should explore potential synergies amongst the network of new facilities delivered in Christchurch. |
| | Value for Money considerations ensure optimal risk transfer between the public and private sector. | The PPP procurement process can drive an upskilling of Local Government capability in specifying and allocating risk. |

| | | |
|---|---|---|
| | Provides budgetary certainty in relation to the delivery and operating phases.<br><br>The private sector is both incentivised to deliver on budget, on time and penalised for poor service outcomes through the payment mechanism.<br><br>The reactivation of the private finance market can create further partnership opportunities with the private sector. | Inclusion of private finance provides a degree of flexibility for Crown and Council capital contributions.<br><br>The public sector will need to ensure effective contract management in extracting value-for-money through the contract period<br><br>The consideration of this aspect as a strategic priority is yet to be determined. |
| **Disadvantages** | PPP model has not been used by local government nor in the delivery of an Arena in New Zealand.<br><br>PPP procurement process and contractual requirements and cost are more complex and costly than conventional process.<br><br>PPP projects "take longer".<br><br>Unbound or Unknown risks are impacting PPP contract negotiations.<br><br>The Market appetite requires validation.<br><br>The private sectors cost of capital is higher than the public sector.<br><br>The structure of the payment mechanism is to be determined. | Council will need to consider how it will resource this project right through the contract period.<br><br>The public sector will need to ensure a clear Project Definition Plan and appropriate resources are available to enable full consideration of a PPP.<br><br>This is true of the procurement phase but mitigated through greater delivery certainty.<br><br>The Construction Accord includes a review of the DBFM contract along with D&B to ensure it is fit for purpose<br><br>Market validation is required for both conventional and alternative procurement approaches.<br>PPP procurement must demonstrate vfm over conventional approaches before proceeding.<br>The Crown and Council will have to agree how the respective funding contributions are allocated to the project. |

The Auditor General has noted that the net effect of the trade-off's and considerations noted above means that the main value for money difference between a PPP and traditional procurement typically arises from the private sector's ability and incentive to drive innovation and efficiency into the project in ultimately improving user outcomes. The public sector uses the private sector to deliver these improved outcomes but must also support this process through clear outcomes specification, a transparent payment mechanism and a commitment to monitoring outcomes through the life of the project. In giving full consideration of a PPP procurement model Council and the Crown will need to ensure the ability to meet these requirements through any evaluation, procurement, delivery and operating phases.

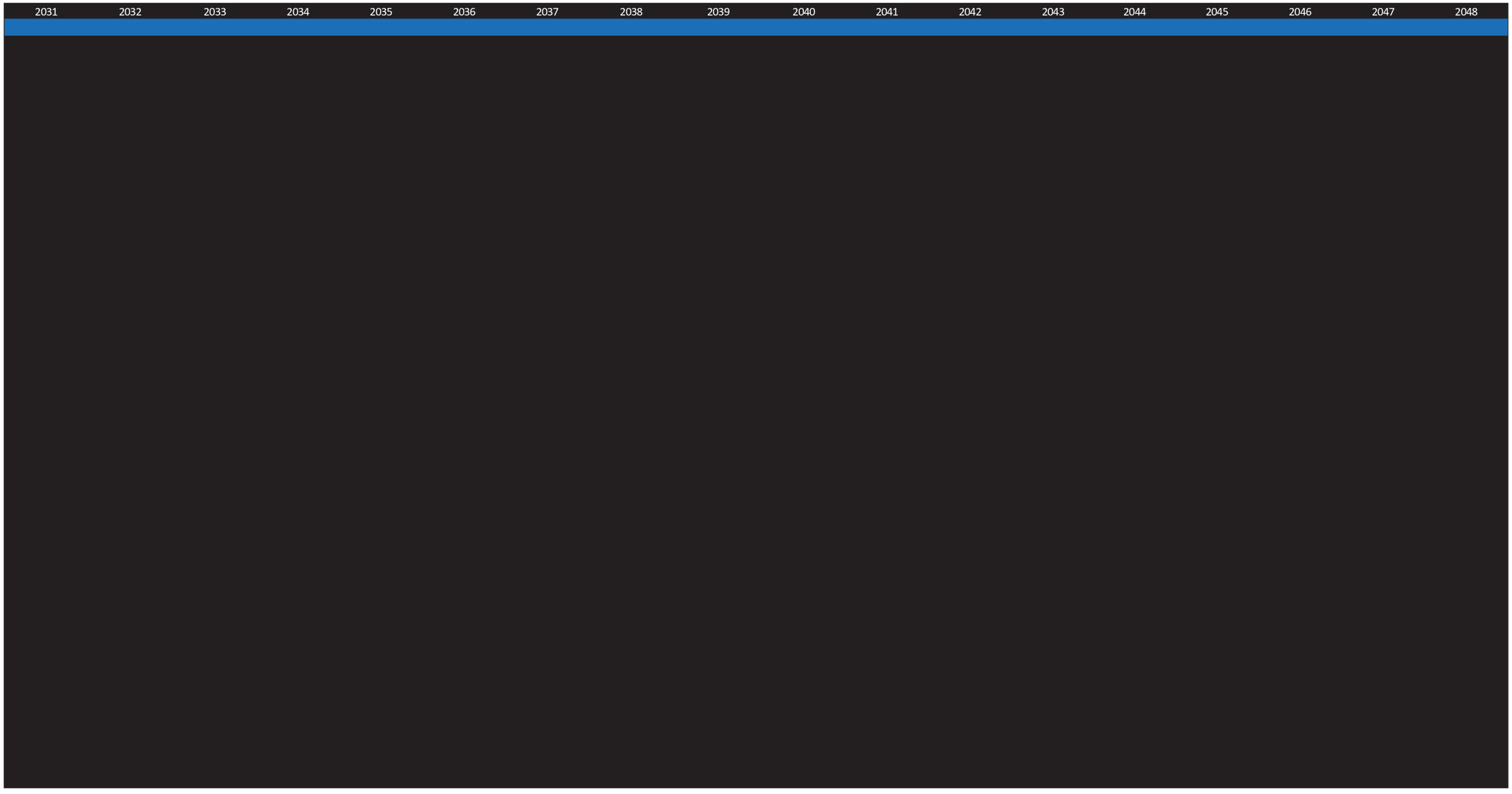
# Appendix D: Project Skills Matrix

| Role | Project Governance | Leading Infrastructure Transactions (end to end) | Business Case Preparation | Procurement | PPP Model | Commercial Advisory | Legal | Construction Sector | Finance Management | Stakeholder Relationship Management | Arena design and operations | Venue marketing and event attraction | Strategic Asset Management | Sustainability | Citizen/City Planning | Local Government | Central Government |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Steering Chair** | ✓✓✓ | ✓ | Exposure | Exposure | Exposure | Exposure | Exposure | Exposure | ✓✓ | ✓✓✓ | | | | ✓ | ✓ | Exposure | |
| **Independent Member 1** | ✓✓ | ✓✓✓ | | ✓✓✓ | ✓ | | | ✓✓✓ | | | | | | ✓ | | Exposure | |
| **Independent Member 2** | ✓✓ | ✓✓ | ✓ | ✓✓✓ | ✓ | ✓✓✓ | ✓✓ | ✓✓ | ✓✓✓ | | | | ✓✓ | ✓ | | ✓✓ | ✓ |
| **Independent Member 3** | ✓✓ | | | | | | | ✓✓ | | ✓✓ | ✓✓✓ | | ✓✓✓ | ✓✓ | | ✓✓ | |
| **Independent Member 4** | ✓ | | | | | | | | | ✓✓ | | ✓✓✓ | | ✓ | Exposure | ✓✓ | |
| **Project Director** | Exposure | ✓✓✓ | Exposure | ✓✓✓ | ✓✓✓ | Exposure | Exposure | ✓✓ | ✓✓ | ✓✓ | ✓ | | ✓ | ✓✓ | ✓ | ✓✓ | ✓ |
| **Project Manager** | | ✓✓ | | ✓✓ | ✓ | | | ✓✓ | | ✓ | | | | ✓ | ✓ | ✓✓ | ✓ |

| Role | Project Governance | Leading Infrastructure Transactions (end to end) | Business Case Preparation | Procurement | PPP Model | Commercial Advisory | Legal | Construction Sector | Finance Management | Stakeholder Relationship Management | Arena design and operations | Venue marketing and event attraction | Strategic Asset Management | Sustainability | Citizen/City Planning | Local Government | Central Government |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Commercial, Legal, Procurement | | ✓✓ | | ✓✓ | ✓✓✓ | ✓✓✓ | ✓✓✓ | | ✓✓✓ | | | | | | | ✓ | ✓ |
| Design Manager | | | | ✓ | ✓✓ | | | ✓✓✓ | | ✓✓ | ✓✓✓ | | ✓✓ | ✓✓ | | | |
| Operations Advisor | | | | ✓ | ✓✓ | | | | | ✓✓ | ✓✓ | ✓✓✓ | ✓ | ✓✓ | | | |

## Appendix E: CMUA Cashflow

| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SUMMARY INCOME STATEMENT | | | | | | | | | | | | |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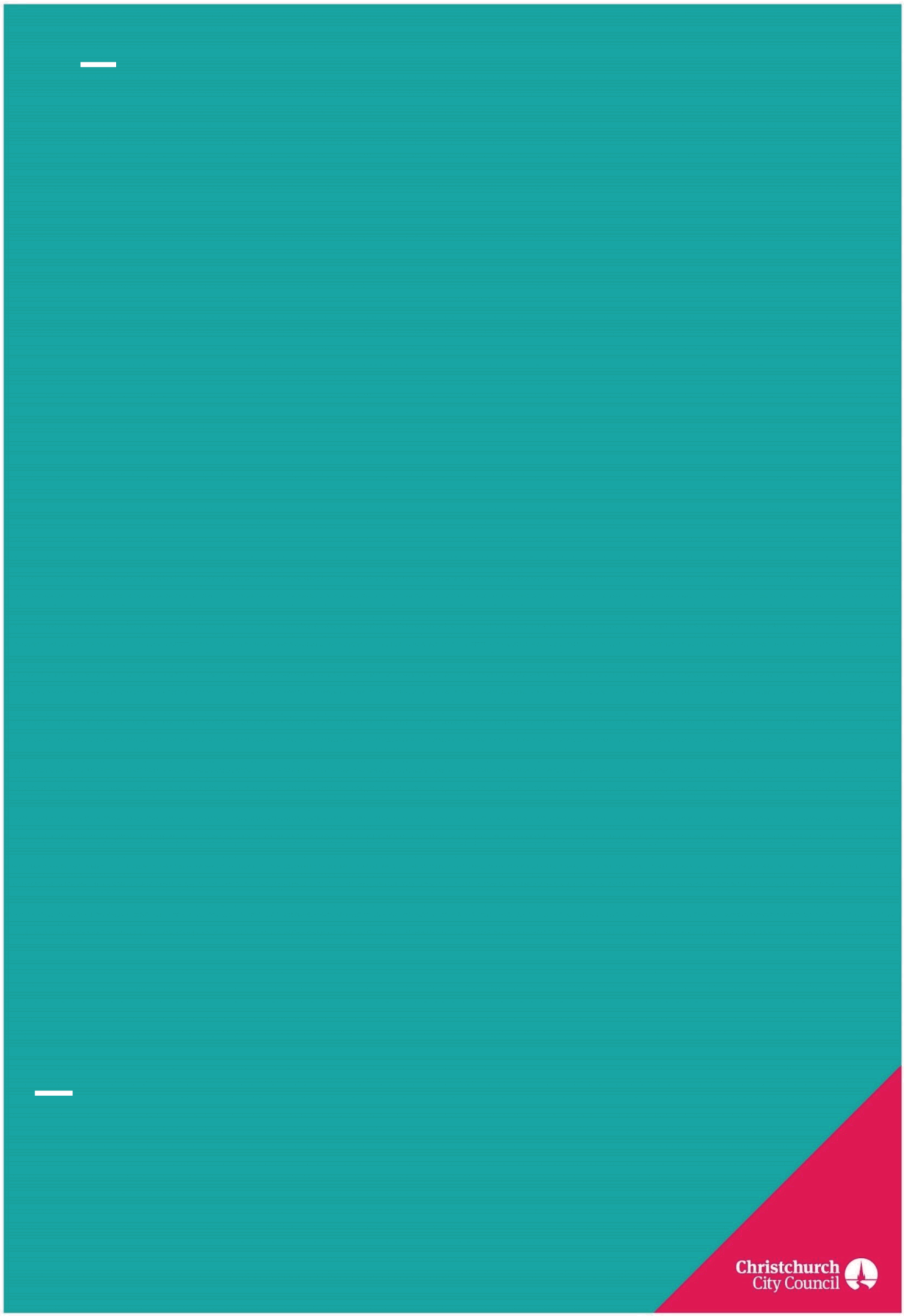
# Appendix F: Operating Expenditure Detail


Christchurch
City Council