

6.0 - REVIEW OF ATTRIBUTES OF THE TWO OPTIONS

"In assessing the options, reality and risk are of great importance."

6.1 Location

"No matter where the new centre is located it will be convenient for some and inconvenient for others – this is because it is a city facility and everyone will use it. This is the same for the city's aquatic centre, Mt Albert Hockey Stadium and the Cycle Velodrome at Hataitai."

6.1.1 COBHAM

The Cobham Drive facility would be located on the Cobham Park playing fields, which is owned by the Council. The site is adjacent to the State Highway 1 route through to Wellington Airport, on the edge of Kilbirnie. The location is very exposed to winds and the sea spray from Wellington Harbour. It is 7.5 kilometres from the CBD.

6.1.2 CONCOURSE

The Concourse facility would be three floors above street level, over the Westpac Stadium car park elevated above the Westpac Stadium's entrance and emergency fire egress.

The location is very exposed to the prevailing north, northwesterly and southerly winds and salt-laden air from Wellington Harbour and environs.

6.2 Site Ownership and Land Cost

"Wherever the centre is located, it is the actual cost of the site that is attributed to the cost of that facility."

The independent review considered the land value at Cobham and the cost to use the airspace above the Westpac Stadium.

6.2.1 COBHAM

In considering the land value at Cobham, it considered the current book value for the land, current independent valuation for the land, the ability of the Council to sell the land, the process the Council would have to follow to sell the land (in total or in part), and the likelihood of the Council declaring the land surplus and for sale.

DTZ New Zealand Limited provided independent advice to the Review (Appendix 8). The Cobham site is made up of 5 separate land titles. It is zoned "Suburban Centre". (See section 5.3.5)

Purchase Price

The Council has owned approximately half the Cobham site for many years. Cobham Park was purchased from the Land Information New Zealand in 2005 for \$3.324 million (excl GST). The purchase was based on the valuation as at 1998 with the zoning of the park being "Suburban Centre". The book value for Cobham Park is currently \$5.5 million which is made up of the area the Council already owned and the area purchased in 2005. There has been no capital expenditure since this time.

Current Valuation

DTZ advise that on 1 April 2009 the current valuation of Cobham Park, as a park, is \$3.0 million excl GST. DTZ further advised that the valuation of Cobham Park as a commercial sale zoned "Suburban Centre" is \$12.0 million excl GST.

Should the Council decide that Cobham Drive Park (or part of it) is surplus sometime in the future the Council would have to follow its formal processes, including community consultation, before it could sell the land. This process would take a minimum of 10 months before the Council could actually put all or some of the land on the market. The costs of disposal (including standard real estate fees) are likely to be in the vicinity of \$300,000.

Standard accounting practice would support the continuing to use the current Council book value when talking about the value of the property.

Would the park be sold by the Council?

While it is legally possible to sell Cobham Park, Council officers advised the independent review that this is not likely.

The land was purchased because of its open space and recreational community values that would benefit future generations. Cobham Drive Park has been used as a sports field for rugby, cricket and soccer for over 35 years. There is a shortage of flat land for sports fields for Wellington City.

Any decision to sell the land on a commercial basis is likely to have strong objection from sports users and the local community (who do not want a commercial complex on the site). If Cobham is not used for the ICSC it has been identified as highly suitable for artificial playing surfaces, which would enable increased use as a sports field. The independent review was provided with the solutions which have already been identified utilising neighbouring school facilities for existing sports activities to continue in the area should the ICSC be built on the Cobham site.

6.2.2 CONCOURSE

CBRE valued the airspace above the Concourse (Appendix 8). As there are no relevant air rights that have been sold on the open market in Wellington, they used case law to assist them finalise a robust valuation approach. The land zoning is in property terms "Active Public" which assumes such activities as an ICSC. The independent review was satisfied with the method CBRE used to value the airspace.

Ownership

The WRST owns the site and has full control over the site operations on all event and non-event days, including the use of the 750 car parks. It is able to sell or lease the airspace above the Concourse.

The WRST is settled by the Council and the Greater Wellington Regional Council (GWRC), who have provided non-recourse loans of \$15 million and \$25 million respectively that are to be repaid out of surplus profits. The beneficiaries of the Trust are the public of the Wellington region.

The Trust Deed would require the Trustees to consult and get agreements with both the Council and the GWRC on the sale or long-term commercial lease of the airspace.

The ICSC is the Council facility, so the Wellington Regional Council will need to consider its position and the position of its stakeholders. There has been no discussion with the GWRC at this stage.

The WRST is run as a commercial enterprise, so any arrangements in regards to the airspace would have to be on commercial terms.

The airspace above the railway track that provides access to CentrePort under the Concourse is owned and administered by RailCorp. Their approval will also need to be obtained. As would any projection into RailCorp airspace along the western side of the concourse.

Westpac own the naming rights over the whole site, including the Concourse, and have contractual rights to signage on the front of the Stadium. The right will prohibit any other naming rights for the indoor centre or this site. Westpac signage rights will need to be accommodated within the design of the ICSC to the satisfaction of Westpac.

Valuation

CBRE valued the airspace for the Concourse at \$3.08 million excl GST.

Feasibility of acquiring the airspace

There would be significant time and legal cost involved in negotiating the purchase or lease of the airspace from WRST. WRST would require agreement on the consultation processes, proposed facility use, design and operations before agreeing to the sale or lease. Separate negotiations would be required with RailCorp. The time involved for all of these processes is estimated to be 6-12 months.

6.3 Design Layout and Functionality

“The things the sports need are courts to the right standard and a DIN-rated floor.”

Barry Copeland, principal and architect of Copeland Associates, provided independent expert advice on the design and functionality aspects of the two proposals (see Appendix 8). Barry focused on the key architectural points that were different between the Cobham and Concourse options. Barry noted that the design brief for the ICSC was based on a sound and thorough consultation process with the community and sports codes, and was robust in specifying the requirements for a community court-based sports centre.

6.3.1 COBHAM

The Cobham project is very advanced, with resource consent obtained, detailed construction documentation completed, the Building Consent application is nearly completed and is expected to meet all Building Code requirements, and the preferred contractor price to build it has been received. This means that the Cobham option is really ready to start building (see Section 5.3), once the Environment Court resource consent appeal is resolved.

Selection of the Design Team and meeting the Brief

The process to select the design team for Cobham involved a design competition and met the Council requirements for a fair competitive process. This process ensured Cobham had an excellent concept and a competent design team. The design fully meets all the requirements of the Council design brief, including being available 365 days a year, 15 hours a day.

Location

Copeland Associates notes that even though Cobham is not in the CBD it is still in a very central location and that it is more important that the location is easily accessible (as no matter where it is as a facility for the whole city, it will be close for some and distant for others).

Accessibility

The critical elements in regard to a community sports building is safe and secure access, 15 hours a day. The Cobham proposal meets this need well.

Accessible car parking is a key requirement. Other indoor sports centre operators have found 85-95% of users travel to and from community sports centres by car, so convenient onsite parking is important to encourage easy access and use.

Very importantly, children can be dropped off and picked up close to the building's entrance, at a dedicated and secure place on site, in clear view of the building's reception area. There is adequate space for drop-off vehicles in the slip road adjacent to the building, and provision has been made for marshalling pick-up vehicles.

On-site car parking, specifically only for this building's users, is immediately adjacent and it is planned that it is provided free of charge. Disabled parks are provided close to the entrance, either at ground level or under cover in the basement car park close to a lift connecting directly into the reception area. As well as the main entrance, there is another accessible route for wheelchair sports teams at the north entrance.

Bus stops are within easy walking distance and closer than is possible for the Concourse option. Further, it was acknowledged that bus stops and bus routes and frequency could be enhanced if demand demonstrates the need for change once the centre opened.

Both Copeland Associates and the independent traffic engineer believe that the Cobham car park layout could be enhanced to improve the ease of car parking (without comprising the number of car parks available).

A Barrier Free Trust report was completed for community accessibility and concluded that there are no issues that could not be remedied.

Building Functionality for Sports

The brief requires the building meet the local, regional, national and international standards for the main sports codes of netball, basketball and volleyball. Copeland Associates confirms these standards have all been met, although the international height requirements for volleyball cannot be met on all courts. The layout uses curtain dividers to enable more than one sport to be played at one time.

Special Occasions and Events

From time to time, special occasions and events are anticipated in the ICSC, and these have been planned for. This may include a national netball tournament final that might attract up to 2500 spectators and banquets for as many as 4000 people (up to twice a year).

Such large events have particular requirements for access, fire egress and catering. Because of the excellent ground-level access provisions for pedestrians, cars, buses and goods vehicles (including large bay delivery doors), the building is readily able to accommodate this requirement of the brief without significant additional cost.

Response to the Urban Environment

The building has been designed with good quality long-lasting materials to cope with the extreme marine climate of this exposed site. It will act as an important gateway building to the city on the approach route from the airport. A great deal of care has been taken to avoid an industrial appearance and visually signal its community function and importance.

6.3.2 CONCOURSE

Selection of the Design Team and Meeting the Brief

No competitive process was used for the design concept or the design team. The design is only at a concept stage, lacking significant detail. The design meets the brief of 12 courts, but falls short in meeting the brief in terms of being available 365 days a year, 15 hours a day. This is because it is proposed to be multi-use, including being available for corporate sports, supporting Westpac

Stadium events (such as banquets for Bledisloe Cup patrons), as well as the WRST requirements that the ICSC would not open when major events are being held at the stadium.

The following issues have been identified in terms of the proposed design, which also have to be resolved:

- The WRST, which owns most of the land, is not convinced that it will fit with its operation
- Many stakeholders are yet to be consulted
- Significant structural issues exist
- Significant access and egress issues exist
- Resource consent has not been granted
- Significant building consent issues exist
- Significant construction problems exist due to limited site access, live load capacity of the concourse and storage space
- The requirements of RailCorp (who control some of the air space) and adjoining property owners are yet unknown
- Construction would be unlikely to commence before the end of the Rugby World Cup 2011, and would then take around 24 months to complete
- There is lack of certainty that the project is feasible until the detailed design documentation is complete
- Construction will be significantly disruptive to the operation of the Westpac Stadium

Accessibility

A key requirement of the brief is that the building should be safely and securely accessible by the community, 15 hours a day. The issue with the Concourse option is that the main floor level of the building is not at ground level, but at 10.4 metres (three storeys) above the ground. The means of access proposed is as follows.

Car parking will be available on the ground level except during event times when no car parking will be available on site. No alternative car parking has been identified when the latter occurs.

The main entrance is halfway along the east side of the building and accessed at existing Concourse level 5.25 metres above ground. Vehicles are to reach this entrance via the existing vehicle ramp and turning area. Detailed review of this ramp reveals that this is inadequate for drop-off and pick-up vehicles as well as difficult for turning. Current use of the ramp during events is already restricted by WRST, and they have advised that it would not be available for general drop off and pick up for the ICSC. The existing car park layout is shown in Figure 7 and 8.

Figure 7 – Concourse Proposal – Existing Carpark Plan (Ground Level)

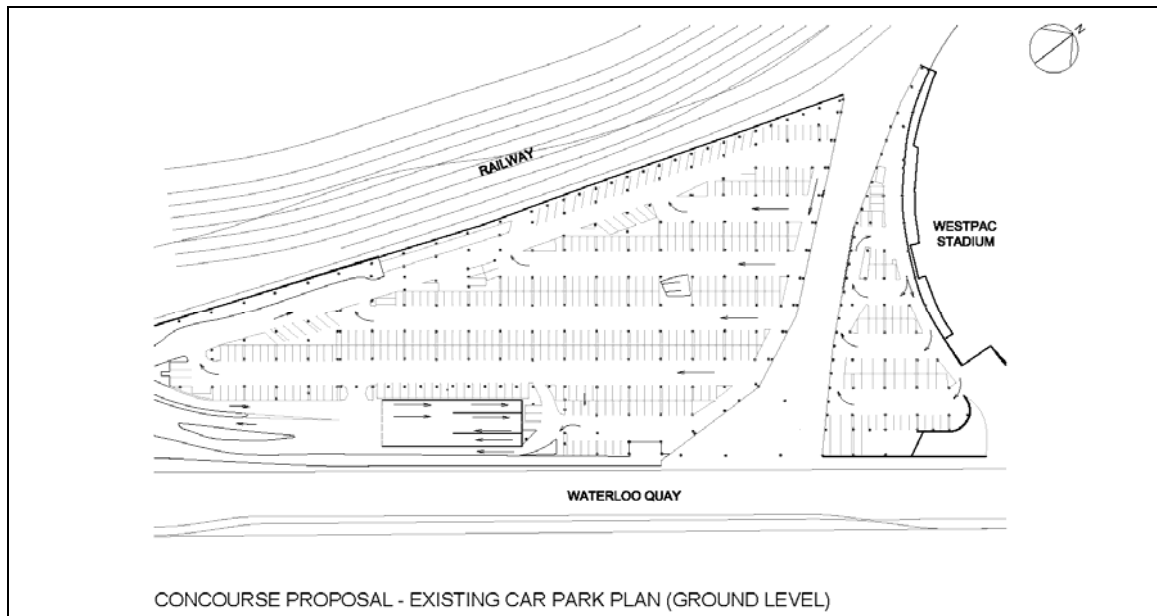
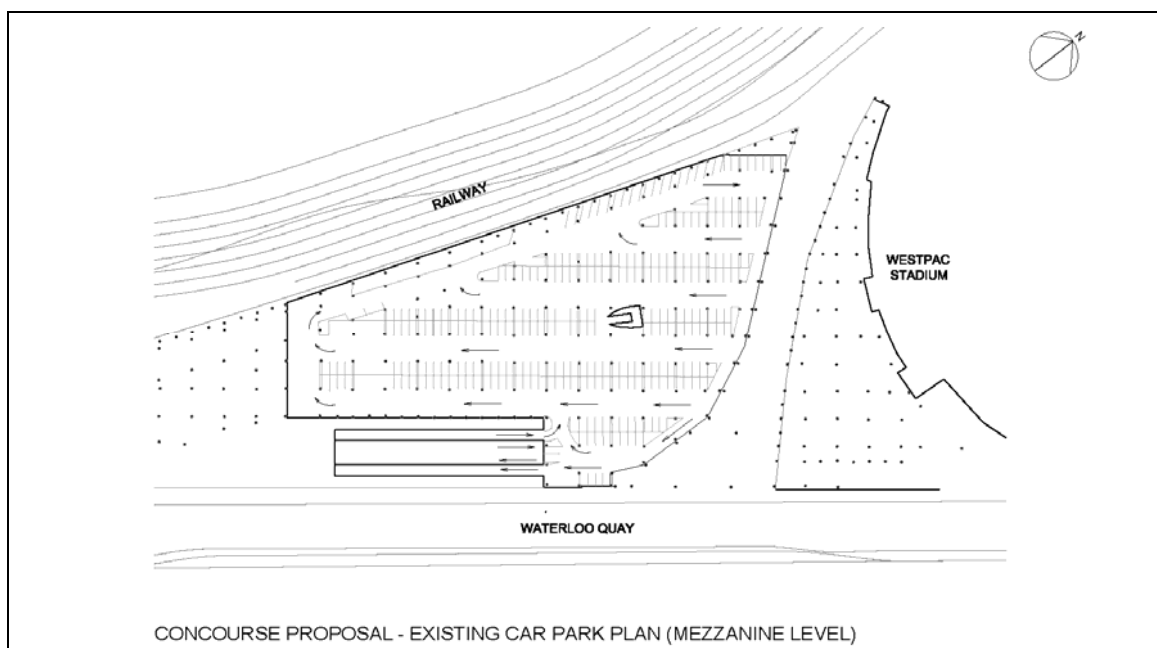


Figure 8 – Concourse Proposal – Existing Carpark Plan (Mezzanine Level)



To overcome this difficulty, the independent experts considered the option of the lift and stair continuing down to the ground level car park, and an entrance being provided there. There are, however, a number of problems with this:

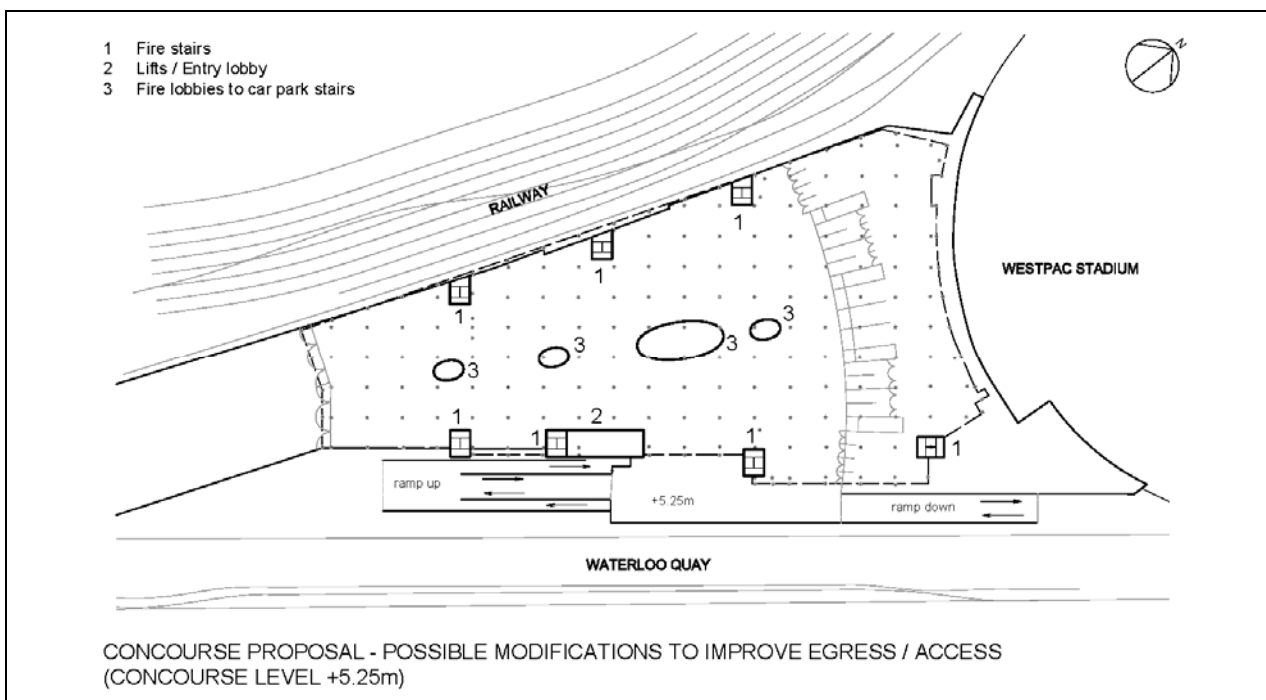
- The current position of the main entrance lobby is directly above the car park entry ramp at the lower level. Taking the lift and stair through to the ground would block this ramp. No obvious solutions to the lift and entrance location were identified (within the Concourse site constraints), other than encroaching on the floor space of the sports centre. If this option resulted after the detailed design phase for Concourse, the site would only have 11 courts versus the 12 confirmed courts available on the Cobham site.

- With an entrance over 10 metres below the main floor level of the ICSC, most people would want to travel by lift. At least two lifts would be required
- It is not clear whether there would be adequate headroom for buses etc at a ground-level arrival point without some demolition of the existing mezzanine car park

Whether the main arrival is at Concourse level or at ground level, it would be at an isolated lobby that will be difficult to make safe and secure during the operational hours of the building. This is considered significant in regard to dropping off and picking up children and teenagers, who will be the significant users of the facility. In addition, the entrance environment for pedestrian, cycle and motorbike access is hostile.

Supplementing the main entry lift, a disability access lift is proposed further north, with direct access to the car park where all accessibility parking spaces are to be provided. When this lift arrives at sports floor level it is isolated from the main entrance and reception. Safety of this entry point from the unsecured car park below will be difficult to achieve without constant security surveillance. Possible modifications for egress/access are shown in Figure 9.

Figure 9 – Concourse Proposal – Possible Modifications for Egress/Access (Concourse Level)



Although a number of bus routes pass close to the site, bus stops are currently some way away and there is no options to have them any closer. There would be an 8- to 10-minute walk either at ground level or along the Concourse from this bus. At night time in this uninhabited part of the city, serious consideration is yet to be given of how to provide adequate safety for the many young and other vulnerable groups it is hoped to attract to the ICSC. Their arrival is in small numbers versus the large numbers that arrive for the Westpac Stadium as it currently operates for their games or practice session. Further, after 8pm the bus and train frequently reduces yet the use of ICSC will continue through until 10pm. The assumption that only 250 car parks will be

needed for Concourse versus Cobham has been made on the assumption that significantly more people will use buses, trains and walking to access the Concourse. This proposed pattern of use cannot be validated and runs counter to the high use of private vehicles experienced at other centres.

Special Occasions and Events

An important requirement of the brief is that from time to time special occasions and events are anticipated, including for example a national netball tournament final that might attract up to 2500 spectators and banquets for as many as 4200 people (4000 guests and 200 staff). Such large events have particular requirements for access, fire egress and catering.

To move 4200 people to and from a venue three storeys above ground is a substantial undertaking and has not been given serious thought in this proposal. The independent experts believe that people movements for a major event at the ICSC on the Concourse site would have to be managed with the Westpac Stadium and access to the ICSC facilities would be via the Westpac Stadium facility. This would have to be done so as not to disrupt Westpac Stadium events, and all fire egress requirements would have to be met. If this was not possible, more dedicated ICSC lifts would be required to move 4200 people. This would be expensive and there are logistical issues in regard to where these can be built.

For a banquet event, extra seating and tables, mobile plating facilities and toilets would be required. The only way these could be brought into the Concourse building would be by using a mobile scissor lift from the existing vehicle ramp at the Concourse level or via the significantly smaller passenger lift of Westpac Stadium and the ICSC lifts. This would result in numerous trips. This would be a very time consuming and labour intensive process compared to the Cobham site and is considered to be totally inadequate by the independent experts.

Building Functionality for Sports

Copeland Associates carried out a detailed review of the standards provided in the design for each of the key sports designated, netball, basketball and volleyball, and confirm the standards achieved in the design do not fully meet the brief as presented, but with some amendments to the plan have potential to do so.

However, Copeland Associates also identified that the redesign of the entrance, main lift and stair core to achieve basic functionality could effectively eliminate one of the playing courts (court numbers 7, 8 or 9) resulting in the Concourse building not being able to meet the brief.

Copeland Associates also noted the potential risk in not meeting the DIN rating for the floor with the proposed construction method (see Section 6.6.2).

6.4 Traffic Congestion and Access via Public Transport

“Neither location creates unacceptable traffic congestion for the city.”

David Turner of GHD provided advice to the independent review in regard to traffic flows, use of public transport and accessibility (see appendix 8). The advice on accessibility is captured in Section 6.3

6.4.1 COBHAM

Traffic Congestion

The Cobham proposal result in some increased in traffic congestion for the city in regard to the Mt Victoria tunnel and related State Highway intersection because of the current usage rates of the tunnel. However, this impact was considered minor in the approved resource consent.

A proportion of the users of the ICSC will come from the north or west (or beyond) to access via Mt Victoria Tunnel and adjacent state highway sections or through other routes such as Oriental Parade and Newtown/Constable Street. The Mt Victoria Tunnel is a key choke point for the section of state highway between the Basin Reserve and Airport. A small increase in demand could result in some increases in delay and congestion. However, traffic issues (and resulting delays/congestion) on the section of state highway between the Basin Reserve and Airport will not come solely as a result of the ICSC development and are being addressed within the Ngauranga to Airport Strategic Transport Study and the proposed civil works on the Cobham Drive/Troy Street Roundabout.

Access by Public Transport

Potential access to Cobham by sustainable forms of transport is considered to be less than what might to occur at Concourse (in terms of total mode percentage). However walking time to and from bus stops is good and significantly less than the time to the Concourse ICSC from either the Lambton Interchange or the Railway Station. There is scope for improvements in both the number of bus services and frequencies serving the Cobham ICSC once the ICSC is up and running and the potential demand for bus services is better understood. Service improvements may be needed at weekends when the frequency is low and some current services do not operate.

Small buses/coaches will have to make use of the Indian Cultural Centre car park if banquets or international/regional events are held at the ICSC.

Car Parking

The Cobham ICSC provides a safe and convenient car park for all users.

The present car park layout and circulation design may lead to access problems from Kemp Street, difficulties in accessing certain areas of the car park and internal congestion within the car park. It is recommended that the overall design and layout of the car park should be revisited.

6.4.2 CONCOURSE

Traffic Congestion

There are no major city traffic congestion issues predicted if the ICSC is built on the Concourse. Car access to the ICSC will be by way of the traffic light intersection at Hinemoa Street/Waterloo Quay/Stadium carpark. This will be one of a whole series of traffic signal controlled intersections along Waterloo Quay with additional ones planned for Kings Wharf and Cornwall Street. The traffic signals will provide a mechanism to control and regulate the flow of traffic along the Waterfront. One of the previous evaluations of the Cobham site for the ICSC indicated the need to build a "grade separated interchange". However, this was not found to be the case.

The traffic analysis of the Hinemoa Street/Waterloo Quay/Stadium carpark intersection shows that it is capable of accommodating all future movements associated with the Stadium, ICSC and Harbour Quays. There are some difficulties for some of the more minor movements, namely the right turn from Waterloo Quay into CentrePort and the right turn north from CentrePort into Waterloo Quay.

Travel via Public Transport

The Concourse is better served by public transport, although the distance and walking times from the Railway Station (6 minutes) and Lambton Interchange (10 minutes) may be a deterrent for users, especially in wet weather. There are also issues of safety for children/youth walking this route at non-peak times and when it is dark. It is also noted that many of the bus services operating from Lambton Interchange finish by 8pm, which does not encourage late use of the ICSC.

Carparking

It is estimated that 250 car parks will be required at the Concourse. This is less than the 318 car parks at Cobham and is based on the assumption that more people will use public transport to access the Concourse ICSC versus the Cobham ICSC. This may not prove to be the case if travel patterns found at centres in other cities are repeated for the ICSC.

The WRST would provide the ICSC with 250 car parks of its existing commuter parks. However, these would not be available to the ICSC during event times at the Westpac Stadium, when ICSC would be required to make alternative arrangements.

The WRST has raised the issue of loss of revenue from 250 spaces reallocated to the ICSC, which are currently occupied by commuters on most weekdays. This will need to be resolved.

There are differences surrounding the Concourse developers and WRST's expectation over drop off and pick up for the ICSC. The developer's team have assumed that all drop off and pick up would occur at Concourse level. However, WRST would require these activities to be undertaken from the ground-level car park due to lack of space at Concourse level hindering turning movements, excessive waiting time for pick up and the requirement for enforcement.

As a result, there is no opportunity for users to access the ICSC directly. Their only options will be lift or stairs. This will create security and safety issues, especially for children, youths and elderly users.

6.5 Impacts on Westpac Stadium

"Westpac Stadium's requirement is that the successful stadium facility is not affected by the construction or subsequent operation of the ICSC on the concourse."

The independent review met with the Chief Executive and the Chair of the Westpac Regional Stadium Trust (WRST –the owners of the Westpac Stadium). The ICSC will only impact the stadium if it is built on the Concourse site.

The prospect of the construction of an ICSC on the Concourse has been in the public arena since 2002, and the WRST has been asked to provide information and support for various feasibility studies in connection with the Concourse site and also the CentrePort site. The CentrePort site is no longer considered to be an option.

The option of an ICSC on the Concourse has been considered by four independent reviews, including comparing the Concourse with the Cobham Park proposal.

6.5.1 KEY RESPONSIBILITIES FOR THE WRST IF THE ICSC IS BUILT ON THE CONCOURSE

The WRST have co-operated fully with all past reviews and the present independent review, and have always tried to help find solutions in regard to the ICSC project on the Concourse site.

The key responsibility for the Trustees of the WRST is to ensure the operation of the very successful existing stadium facility is not affected in any way during the building, maintenance and operation of the ICSC on the Concourse site.

This requirement is non-negotiable – the Trust Deed requires the WRST to be “financially autonomous”, and this non-negotiable requirement would have to be met no matter what is built on the Concourse site.

6.5.2 OBJECTIVES OF THE WRST

The WRST currently owns the Westpac Stadium and Concourse site and has full control over its operations on all event and non-event days, including the use of the 750 car parks (See Section 5.4.5).

The WRST has been hugely beneficial to the region and successful beyond original expectations. It now hosts approximately 45 events per year.

The Trustees are required to run the stadium on a commercial basis and have been able to show a strong financial performance with the way they operate it now.

The Trustees have responsibility to provide benefit for the public of the whole Wellington region, not just Wellington city.

6.5.3 PROJECTED EVENTS

Currently the Westpac Stadium events fall as follows:

- 8 Sundays
- 2 Wednesdays
- 17 Saturdays
- 17 Fridays
- 1 Thursday

The WRST expect event number to range 45-50 per annum in the foreseeable future.

6.5.4 OPERATIONAL REQUIREMENTS

Use of the ICSC facility

The WRST would require the ICSC to be available to the WRST on the day of major sports internationals for the purpose of hospitality.

Catering

Spotless catering have a contract for all activities on the entire site, including the Concourse, so would have to be used by the ICSC.

Cell Phone Sites

The existing cell site on the front of the Westpac Stadium building would need to be relocated to the satisfaction of the phone companies.

Naming Rights

Westpac own the naming rights over the whole site and have contractual rights to signage on the front of the Stadium. This right will prohibit any other naming rights for the ICSC or this site. These rights are diminished by construction of the proposed building. Westpac signage rights will need to be accommodated within the design of the ICSC to the satisfaction of Westpac.

Relationship with Residents

In the 10 years that the Westpac Stadium has operated, management has been thorough in consulting with Thorndon residents and Thorndon businesses and have established a good relationship. The construction of a major building of this size will require similar consultation with Thorndon residents and businesses, particularly those close to the Westpac Stadiums' boundary.

The WRST would want to get sign-off from the residents prior to any contacts being finalised for ICSC.

Standard of Building

The standard of the building to be constructed and the standard of maintenance for the life of the building will need to be equivalent to, or better than, the Westpac Stadium building. It will need to ensure that the design and construction enhances the Westpac Stadium building and the ongoing maintenance maintains the current standard.

Costs

Any costs that would flow on to the stadium in relation to the ICSC being on site would have to be met by the ICSC project. These would include the resource consent process, egress requirements, and building code enhancements resulting because of changes made onsite.

Disruption during Construction and Operations of the ICSC

The WRST would require that construction (and subsequent maintenance) on the site will not in any way interfere with the operation of the Westpac Stadium. WRST has major concerns that the fire egress requirements can always be met, noting that the concourse is one of the principal emergency egress paths.

The WRST gives absolute priority to events and have long-term agreements for priority booking rights for each of its foundation tenants. Bookings tend to be made in six-monthly cycles but can be shorter notice than that.

It would be the WRST's requirement that the stadium bookings always took precedence over any activity of the ICSC.

The events that could affect operation of the ICSC are the Sevens, Rugby Tests, concerts, semis and finals of competitions and some exhibitions.

Carparking

The Trust has 750 car parks available for public use of which 500 are available for commuter car parks and 250 retained for normal stadium business – functions, members and box holders.

The WRST would make 250 of its commuter parks available to the ICSC but would require the same revenue they currently earn to be paid by the ICSC (or ICSC users). They provided the independent review the details on the revenue and this was factored into the cost analysis (see Section 6.11).

These 250 car parks would not be available to the ICSC on event days, sometimes for the entire day and sometimes just from 3pm on the day of the event. When the car parks are unavailable, ICSC users will have to make alternative arrangements.

Access Ramp and Buses

The access ramp to the Concourse is not designed to be operated as a general drop-off/pickup area. It has no through access, requiring vehicles to turn and go out the same way they entered. The size at the top of the ramp is restricted, requiring a three-point turn for cars and a five-point turn for buses. The WRST could not make this available for general drop-off and pickup for the ICSC.

The management and movement of buses would also need full consideration. There is limited space anywhere on the site for parking buses and turning them around.

6.5.5 ISSUES TO BE RESOLVED

The following questions would also need to be resolved to the satisfaction of the Trustees:

- The effect of the wind on the covered walkway
- What will be the impact on patrons arriving and entering a narrow covered area before arriving at the entrance gates?
- There are ventilation shafts located throughout the car park and concourse. How will these ventilation issues be managed, and would they have any impact on the building?
- What is the impact of the pedestrian flows on the ticket gates, and the ticket selling capabilities which is currently a pressure point
- Extensive lighting will be needed to create a welcoming environment
- How will fire egress at the stadium be managed
- How will users enter and exit the ICSC?

6.6 Engineering Considerations

“The ICSC design specifies a DIN-rated sports floor, for international, national and other competitions for all sports. Achievement of a DIN-rated floor at the Concourse would not be known until construction is completed.”

Peter Smith, Structural Engineer and Principal of Spencer Holmes Limited, (see Appendix 8) provided independent advice to the independent review. The engineering issues identified were discussed by the independent experts and the outcomes of these discussions were fed into the cost estimates.

The engineering review considered both the engineering/technical structures of each of the proposed buildings and also any difficulties or issues associated with actually building the buildings.

6.6.1 COBHAM

The following engineering issues were identified.

Seismic Liquefaction

The soil structures in the area would be subject to “liquefaction” in the event of a significant earthquake. Options exist to enhance the soil properties such that the extent of liquefaction is reduced if “liquefaction” occurs. Alternatively the structure can be designed to keep people safe in the case of ground “liquefaction” but accept that the building will be damaged. The latter is the Building Code requirement and this has been met.

Spencer Holmes suggests that the Council should give further consideration to the protection of the facility under earthquake given that the building has been designed for a 70 years life.

Reuse of excavated fill under the building

The key risk identified with the proposed construction is the reuse and compacting on site of the fill that is excavated during construction. Spencer Holmes identified a potential risk that the reused fill may prove difficult to compact to the required standards to ensure settlements are within acceptable limits. The cost of removing unsuitable material and importing replacement fill would be a significant.

Spencer Holmes recommended that before the final construction contracts are agreed, the feasibility of reusing the existing fill be further investigated and appropriate provisions included in the final specifications.

Contamination on site

From 1924 until 1967 the Evans Bay coal fired power station was located in the area of the current Fire Training Station. Ash generated by this facility was deposited on the Cobham site.

The potential for contamination with ash from the Evans Bay Power Station has been investigated by Sinclair Knight Merz, and their report was made available to the independent review.

The investigation showed that ash deposits are concentrated in the west and north areas of the site.

The location and extent of this contamination is not a major issue in regard to construction on the ICSC site. This issue will be dealt with by sealing (called “capping”) any contaminated material during construction.

The cost of such work is included in the budget for the Cobham ICSC.

Maintenance

Spencer Holmes noted that regular planned washing of the exterior of the building will be essential to ensure the potential life of all of the building materials can be achieved.

Ease of Building

Spencer Holmes looked to see if there would be any issues associated with actually building the building (i.e. constructability) on the Cobham site, and if there was any risk to the proposed construction timetable. Cobham is a large flat easily accessible site and there is plenty of room on it for cranes, storage of materials, etc during construction. It will be easy to keep the site safe and secure during construction. Apart from the need to maintain access appropriate for heavy vehicles and cranes, Spencer Holmes identified no significant risks associated with the construction timetable for the building that could result in the building not being completed and available for use by the end of 2010, provided the appeal was dropped now.

6.6.2 CONCOURSE

At the time the Concourse was designed it was never intended that a building would be built above it. As a result, the existing structure of the Concourse will need to be significantly strengthened to support the ICSC building. It was always envisaged that some small buildings associated with the activities of the Westpac Stadium would be built on the edges of the Concourse (such as souvenir and other shops). The Concourse was built to provide easy access into the Westpac Stadium and an emergency fire egress solution for the stadium. Spencer Holmes identified a number of significant engineering issues which have significant cost implications, and a number of these have not been included in the design submitted for review.

Seismic Joint

The Concourse structure has a “seismic joint” running across it from west to east along the southern side of the rail way line that runs on the ground floor under the Concourse (see Section 5.4.4). The “seismic joint” is a space that has been put in to break the large length of concrete into two parts. This was done so that the concrete would be able to shrink and move once it was in place without cracking. While this movement is desirable for the Concourse surface, it is not desirable that the ICSC straddle the “seismic joint”. The option of tying the concourse structures together at the seismic joint should be investigated.

The Concourse Foundation Strengthening

The existing Concourse piles have to be strengthened to take the increased vertical loads from the ICSC. At locations where existing piles carry the weight of the new roof structure from the ICSC, the proposal includes for the introduction of screw piles alongside the existing concrete piles.

The proposal also includes for the introduction of K braces within the reinforced concrete frames of the existing concourse structure to strengthen the existing structure sufficiently to provide support for the indoor stadium. The proposal provides additional screw piles to strengthen the foundations adjoining the K braces under earthquake loading.

Building Code Changes

The NZ Building Code requirements have changed since the Concourse was designed in 1997.

These changes increase the lateral loads imposed by the ICSC as well as requiring an increase in the loads from the existing concourse structures. The result is a significant increase in the required level of strengthening.

Other Building Code changes require modification of the support for the flooring units used for the existing concourse floors and possible strengthening of these elements.

DIN-Rated Floor

The design specifies a DIN-rated sports floor. This relates to the “spring in the floor”. The concept design for the Concourse did not include provision of a DIN-rated floor. The design proposes a non-DIN-rated specialist sports floor over a timber floor supported on a grid of steel beams. Spencer Holmes and Copeland Architects (see Section 6.3.2) both identified that no examples could be found worldwide where this construction method has been used for a DIN-rated floor. The usual proven method of construction to ensure this standard is met is to build the specialist floor on top of a concrete slab. A concrete slab is not practical because it would be too heavy for the Concourse structure.

The independent experts believe there is some risk that this method will not result in a DIN-rated floor but this would not be known until after the floor was constructed or a prototype had been constructed. If it did not meet the standard, this would compromise the use of the facility as a sports centre over the life of the building.

Maintenance and Renewals

The proposed materials on the outside of the Concourse building have a 15 to 25 year life. Replacing the exterior cladding once constructed will be expensive due to the even more restricted access for cranes (including over railway land on the western elevation) on the site once the building is in place.

Ease of Construction

Spencer Holmes’ view is that construction of the ICSC above the Concourse will present some significant construction challenges which have the potential to disrupt the operation of the Westpac Stadium. As a result there are significant cost and time implications for construction.

They note that the Concourse itself will need to be strengthened (“back propped”) to enable the use of large mobile cranes. The alternative of using a tower crane would result in restricted egress on the concourse over a longer period.

In addition to the building challenges, a significant issue during construction will be maintaining public access and safe emergency egress for the Stadium, through an active construction site. WRST have said they can have no disruption to their events as a result of construction.

This would mean that prior to, and during any event, the Concourse areas would need to be cleared and secured to enable safe access into, and compliant emergency egress from, the Westpac Stadium.

During the period immediately prior and during the event, construction would stop and the site would be cleared. In addition building consent for any changes to the Westpac Stadium fire egress would need to be obtained from the Council each time this occurred. Fire engineers are likely to take into consideration the human response to egress through a partially completed

construction site. These issues would result in a significantly longer build time than the Cobham proposal.

6.7 Building and Resource Consent

"The Concourse was never built for the purpose of having a structure built above it. It was built to meet the fire egress requirements of the Stadium."

Robert Tierney, Manager of Commercial and Major Project Consents for the Council, prepared a report for the independent review on Building Code Compliance (see Appendix 8). Clare Wooding, Senior Planner for the Council, prepared a report for the independent review on Resource Consent Compliance (see Appendix 8)

6.7.1 COBHAM

Resource consent for Cobham has been granted. However, it is subject to appeal to the Environment Court.

The building consent application for Cobham meets all areas in regard to the Building Code.

Robert Tierney and the independent expert engineer both identified that Building Code compliance has been met. In two specific areas only the minimum requirement under the Building Act has been met. This is because the design has specifically targeted building user safety, i.e. people safety rather than property protection.

The two areas are structural and fire design.

The Building Consent Authority (BCA) engaged BECA to peer review the structural design and Thomas Fire Engineering Ltd to peer review the fire design.

Both reviews concluded the design was satisfactory in that it met the Building Code.

6.7.2 CONCOURSE

No resource or building consent has been given for the Concourse option because it is only at the "concept design" stage. Clare Wooding advised that it is likely that as a major Council project, the resource consent application would be publicly notified. In addition, the changes required to the Westpac Stadium resource consent conditions may also require public notification.

The key issues which would require assessment during the resource process are parking and design issues regarding the relationship of the new building with Westpac Stadium.

The outcome of a public notification process cannot be predetermined because any submissions lodged must be considered by a hearings panel. This introduces a further element of uncertainty into the resource consent process.

Robert Tierney noted that because the Concourse was only at the concept design stage, documentation was limited and there are extensive areas of the design detail still to be completed – one of the major unanswered issues is fire egress.

The original fire egress review carried out by BECA's identified implication for both the new ICSC and the Stadium. It specifically identified that the ICSC and the Concourse site could not operate at the same time as the Stadium. This would be completely unacceptable to both the ICSC and WRST.

Further information was provided by BECA on behalf of the Concourse team. This was peer reviewed and remained inconclusive on whether the enclosed Concourse space was a "point of safety".

The Concourse was never built for the purpose of having a structure built above it. It is built to meet the fire egress requirements of the Westpac Stadium. The current "point of safety" on the southern end of the Stadium is the entry turnstiles on the Concourse. The requirement is that it would take no more than 8 minutes for everyone using the southern end emergency egress to get to the defined "point of safety". If the ICSC was built on top of the Concourse the new "point of safety" would be 200 metres further down the Concourse at the end of the new ICSC building. This would extend the travel time for Stadium users by a further 4-5 minutes so that the Stadium would no longer be compliant. This is a major issue. The design arrangements and egress option for the Concourse as presented would not get a building consent.

The last matter in regard to the Concourse building consent would be the requirement to demonstrate the proposed cladding materials and system for the ICSC are robust in regard to corrosion.

The construction process, including all temporary arrangements on the Concourse that impacted Stadium egress in any way for any events, would each require a building consent. This would have extra expenses and time delay implications for the construction phase.

6.8 Fire Egress

"The fire egress is a serious issue for the Concourse option and could in fact be a show-stopper."

6.8.1 COBHAM

There are no fire egress issues arising with the Cobham design.

6.8.2 CONCOURSE

Given the significance of the fire egress issues which the Independent Experts and Robert Tierney identified with the Concourse design, the independent review requested an opinion from Thomas Fire Engineering Ltd on this matter (See Appendix 8). This is a serious issue for the Concourse option and could in fact be a "show stopper". Thomas Fire Engineering identified five options for the design of the egress for the new ICSC at the Concourse.

These are:

- Not permit simultaneous or overlapping use of both buildings.
- Entirely separate the egress so the ICSC egress does not use the existing concourse.
- Design the entire complex to allow for simultaneous evacuation of the ICSC and the Westpac stadium.
- Design the entire complex for staged evacuation. However, each venue must be able to safely evacuate either venue while occupants are arriving or leaving an event in the other venue.
- Treat the stadia as separate buildings and allow egress from one building to the other.

Thomas Fire Engineering concluded that fire egress has not been properly addressed and is significantly more complex than the simple calculator of the egress width of the Concourse (which will be reduced because of the columns supporting the new ICSC). Further, they note that the solution for ICSC will involve revisiting the Stadium egress arrangements, and this will require significant work and cost.

6.9 Construction Cost

"The Cobham site is constructed for a 70 year life while the Concourse has many major components with a 15-25 year life."

Andy Mallard, Principal and Quantity Surveyor of Mallard Cooke, provided cost advice to the independent review (see Appendix 8). As the two proposals were to different specifications Mallard Cooke used the Cobham proposal as the "brief" and then removed the amenities from the Concourse design (including floor space and construction costs) that were in excess of the Cobham design proposal.

Mallard Cooke used the materials as proposed in each brief, taking into account any additions/deletions determined as being required for engineering/buildability purposes by the independent expert engineers and/or architects. This approach enabled a "like with like" comparison. Mallard Cooke also factored in capital replacement costs for each building to enable a 70-year whole of life capital cost comparison between the two options. The major construction materials for Cobham site have a 70 year life, while for many of the major components for the Concourse they only have a 15-25 year life. This approach enabled a "like with like whole of life" capital cost comparison.

The capital cost assessment of both options includes:

- All professional fees
- All costs associated with obtaining consents
- The operational layout for both sports play and delivery of supporting equipment and supplies
- Functional layout and components
- Access for staff, service/maintenance

- Durability
- Whole of life cost on key components
- Identification and value of items specifically excluded/included from the Concourse proposal when compared to the Cobham proposal
- Construction methodology and timeframes
- Identification and valuation of any outstanding risk items

Civil works outside the site area associated with each proposal were not included in the capital costs if they are required for reasons greater than the ICSC on either site.

6.9.1 COBHAM

“The Cobham Proposal has reached a stage where the majority of its costs are known.”

The total construction cost for Cobham is \$49.5 million excluding GST, land, FF&E, and civil works beyond the site.

A summary of the makeup of the costs:

Building	\$42,620,000
Design, management fees and sundries	\$5,537,000
Resource and building consents	\$570,000
Project contingency	\$773,000
Total estimated construction cost	\$49,500,000

Mallard Cooke used standard quantity surveyors’ methodology to develop the cost estimate. It then reviewed the recently-received Mainzeal Construction tender including items that were noted as not being included/excluded (tender tags) to cross-reference its assessment. However, Mallard Cooke did not rely on the Mainzeal tender to finalise its cost estimate.

This capital cost assessment includes all known risks for the project and a construction margin of 5%. Mallard Cooke also notes that “now is the time to build” as interest rates are at their lowest for many years, building activity is depressed, margins are very competitive and tendering has sharpened considerably over the last six months.

6.9.2 CONCOURSE

“There are significant risks that are difficult to quantify.”

The total construction cost for the Concourse is \$68.2 million excluding GST, airspace, FF&E and civil works beyond the site and identified but unquantified, risks.

A summary of the makeup of the costs:

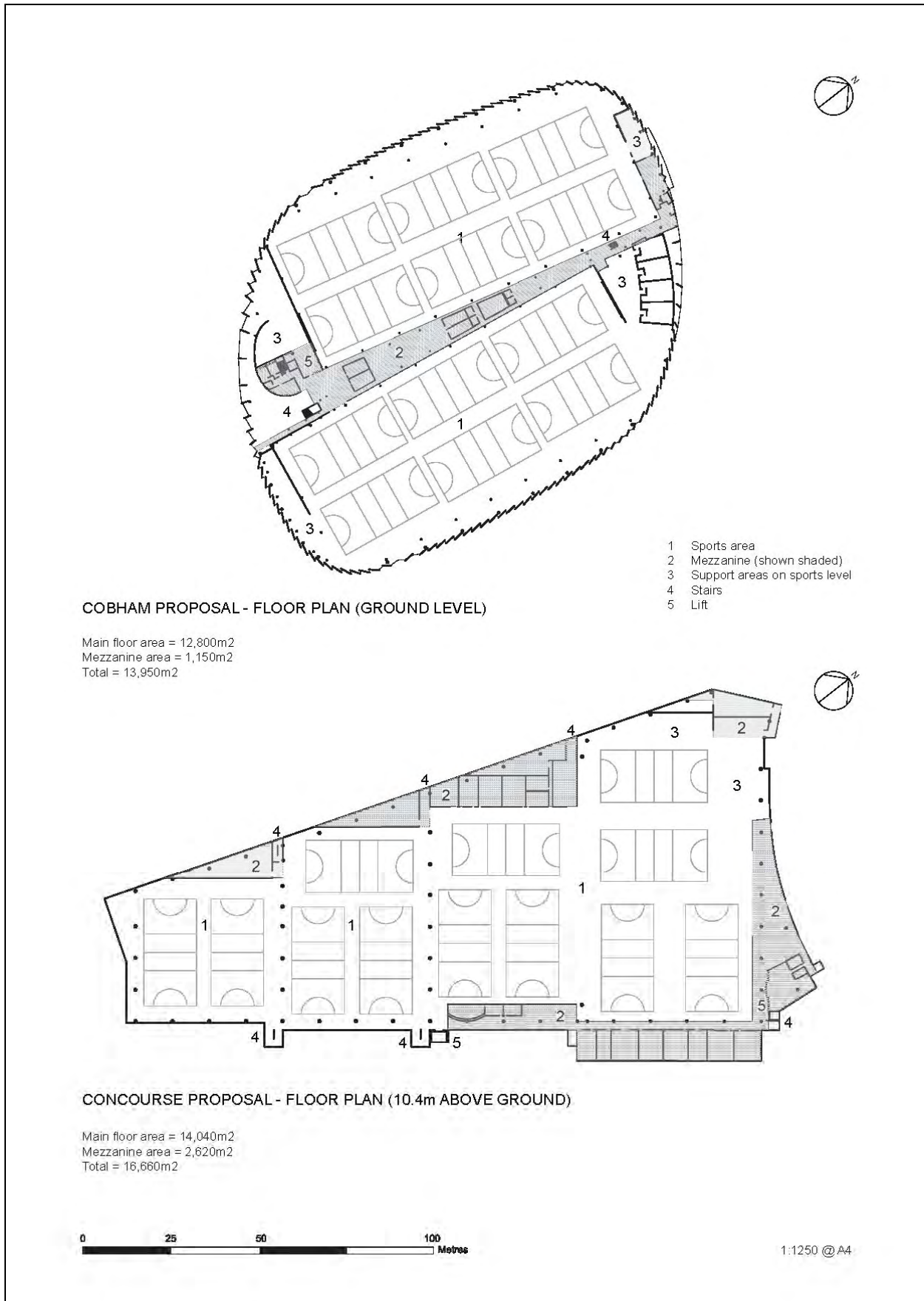
Building	\$57,300,000
Design, management fees and sundries	\$7,175,000
Resource and building consents	\$730,000
Project contingency	\$3,000,000
Total estimated construction cost	\$68,205,000

In order to undertake the 'like-with-like' comparison between Cobham and the Concourse the following amenities, including floor space as relevant, were removed from the Concourse proposal.

- First-aid and drug testing rooms
- Large kitchen spaces, cafe
- Turnstiles
- Centre manager's offices, sports admin offices, media rooms, reception store
- Media and sports control rooms
- Umpires' room or lockers
- Staff accommodation is limited to the reception area
- Storage cages or rooms.

The shape of the Concourse building (long, thin, and irregular) is limited by the shape and size of the Concourse itself. This results in increased floor plate being required and more wasted space compared to the more compact rectangular shape which is possible on the Cobham site (see Figure 10).

Figure 10 – Comparison of Floor Plans



In summary this means that the building floor space for Cobham is 13,950m² (without carpark) compared to 15,190m² for the Concourse proposal.

The Mallard Cooke cost estimate makes allowance for the following areas of risk which the independent expert has identified.

Fire Engineering

Mallard Cooke has allowed for fire separation between the ICSC and Westpac Stadium, fire protection of the underside of the ICSC building, separate fire egress stairs for ICSC for 4200 people, fire sprinklers and fire separation of the carpark from the stairwells (See section 6.8).

Overheads and Margins

Mallard Cooke has used a contractor profit margin of 5% but has increased the contractor P&G amount to allow for the extra risk and associated with:

- The extra requirements for building site security and public safety because the Concourse will still be in use during constructing
- Additional safety lighting underneath the ICSC building while it is being built
- Allowance to reduce the impact of rain/water flowing onto pedestrians who are using the Concourse during construction
- The delays associated with construction having to stop and the site (Concourse) being cleared during events
- Carpark-related cost during construction
- Safety working over the operating rail yard
- Strengthening (back propping) of the Concourse to enable heavy cranes to site and operate on the Concourse

Construction Programme

Significant work is required before construction can commence on the Concourse site. Mallard Cooke reworked the front end of the submitted Fletcher Construction programme but assumed Fletcher's calculation for the actual construction time was correct. This resulted in the following programme being used for the cost estimate:

- Approval to proceed, say 1 month, May 2009
- Arrangements/agreements in principle reached with stakeholders (including Westpac Stadium, GWRC, RailCorp and sport codes), say 2 months – optimistic at best July 2009
- Local Government Act special consultative process, 3 months October 2009
- Engagement of design and management team (based on expression of interest, RFP, design competition and contract agreements before work starts), say 4 months February 2010
- Preliminary design phases, community engagement and resource consent application, say 5 months including resolution of fire engineering July 2010
- Notified resource consent process, say 6 months January 2011
- Completion of design following the RC process, say 5 months June 2011
- Competitive tendering and evaluation, say 3 months September 2011

- Earliest start date on site October 2011
- Rugby World Cup September 2011
- Realistic construction start November 2011
- Construction completion (including allowance for bad weather), 20 months June 2013

Cost Escalation

Because construction won't actually start until November 2011 allowance had to be made for the cost of materials increasing from now until then plus escalation during the construction period. Mallard Cooke used acknowledged industry inflation rates which meant today's prices were increased by 5.1%. However, it noted that because of the international recession, inflation may actually be higher post-2010 than used in their calculations.

Building Risk Allowance

As with Cobham, Mallard Cooke made allowances for risk elements associated with building the Concourse. For Cobham, however (because of the detailed documentation and the fact it is ready to be built) the risks are generally known and can be quantified. However for Concourse, as the design is only at the concept stage, many of the solutions to known risks have not been identified. Mallard Cooke approached this by grouping known risks that could be quantified (ie costs can be calculated), from those that were identified but no solution was obvious and hence costs could NOT be quantified. Mallard Cooke calculated that an allowance of \$5 million should be made for the risks that exists that could be quantified.

These included:

- Facilities not shown on the concept plans or within the specifications but nevertheless required to meet those facilities provided at Cobham
- Unknown ground conditions and therefore the effect on the proposed structural scheme
- Uncertainty with respect to the ability to rely on the existing carpark structure to support the new building and the structure's ability to meet the latest Code requirements
- Support of the existing structure during construction given that some heavy loads will be applied to areas of the carpark eg crane bases and back propping, plus loss of revenue for carparks that will be unavailable during construction
- How the structure for the new building will cater for the existing seismic gap within the carpark
- How the steel and timber framed court floor will cater for the specified DIN rated sports floor
- What additional structure is required to support the cantilevered east change facility
- Entry and egress from the new facility and how these access ways interface with the use of the Westpac Stadium and the carpark
- Whether use of some of the Westpac Stadium facilities, such as the rubbish load out area, will in fact be suitable or whether additional facilities need to be provided
- Urban design comments such as reference to the large blank wall along the western boundary (albeit that a strip window and overhanging eave has been shown) that may

need to be addressed and to the height of the space under the new building and how this will be perceived

- Construction complexities in building over an operating pedestrian walkway, building within the rail corridor and building adjacent to an operating rail yard
- How the construction activities will work in with the public's use of the plaza walkway

They allowed another \$3 million for contingency risk associated with each of the following:

- The level of allowances made for the designers
- Other direct costs to the Council such as an extended time period
- Legal and other fees over and above allowances made in order to gain agreements and the resource consent, or any other consent
- Potential additional management time related costs
- Advertising and other sundry costs
- The potential for additional site related civil works
- Relocation of Westpac signage covered by the new building

In addition to these risks they identified the following significant "risks" which could arise for the project but which cannot be quantified:

- Four additional egress stairs were included in the cost comparison estimate; however these may not be enough to cope with the potential 4200 occupants. This cannot be quantified without a specific Fire Report.
- Consideration of additional egress from the existing Westpac Stadium as raised by the BECA Report dated 31 March 2009
- Complete fire separation of the carpark from the concourse
- It has not been determined whether the effect of introducing columns into the Plaza walkway would have a detrimental effect on egress under emergency situations; further fire modelling may resolve this uncertainty
- Further consultation with NZ Fire Service to determine what other matters need to be considered with regards to emergency evacuation
- WRST require use of the new building to interface with events, which is in contrast with the fire engineering requirement to separate the two buildings
- Carparking arrangements with WRST including the reconfiguration of the WRST carpark to accommodate ICSC users as well as commuter parking; noting that the two may not be able to be mixed as commuters pay a daily rate
- The condition imposed by WRST in that it will not allow a drop off zone at the top of the ramp to the Plaza level, this will mean users will need a drop off zone on ground level, as is the case with taxis at present. This may require a further reconfiguration of the carpark to cater for the drop off zone so as not to conflict with the taxi rank.
- A similar situation to the above will manifest itself with bus turning and deliveries

Summary of the differences between Cobham and the Concourse

The Concourse ICSC will cost approximately \$15 million more to build (excluding \$3 million additional contingency) than the Cobham ICSC. This difference is made up of the following:

Component	Cost difference
Additional floor area – 1,200m ²	\$2,000,000
No carpark or landscaping	(\$5,000,000)
Strengthening of existing carpark	\$4,500,000
Support structure for the elevated court level and access/egress stairs	\$2,100,000
Steel/timber floor v concrete floor	\$7,300,000
Roof	(\$1,500,000)
External walls and windows	\$1,500,000
Heating and ventilation	\$1,300,000
Escalation	\$2,800,000
Broad-brush building cost comparison between the two proposals	\$15,000,000

However, there may be additional costs to build the Concourse ICSC, over and above the \$15 million difference, to deal with the unquantifiable risks listed above.

There is a risk that satisfactory resolution of the Concourse egress issue cannot be found, and/or the lift/entrance issue at the Concourse results in the Concourse only having 11 courts and therefore does not meet the requirement of the sports. The outcome of these two potential “show stopper” issues would not be known until the detailed design for the ICSC on the Concourse has been completed. If there was not a satisfactory outcome, the project would have to commence again, and reconsider other options - this would further delay (beyond 2013) the availability of this facility to the people of Wellington.

6.10 Life-cycle Construction Cost Analysis

“Simply stating capital cost does not paint the entire picture.”

The use of different materials, different environmental controls, etc can affect the “real” cost of a building over its intended lifespan, in this case 70 years. Using life-cycle cost analysis (LCC) Mallard Cooke was able to compare one building with another to gauge its whole-of-life cost. Mallard Cooke only looked at the life-cycle cost difference between the significant components of the two options.

For example if the same materials were used on the floors for each proposal then there is no need to test their whole of life cost as they would be identical.

The Cobham proposal includes the following major components that are different from the Concourse proposal:

- Roof coverings comprising a long life metal roof with some fabric roofing
- External walls that are predominantly precast concrete panels and windows
- Natural ventilation

- Greater use of daylight combined with artificial lighting.

Conversely the Concourse proposal includes the following components that are different from the Cobham proposal:

- Medium life metal roof coverings with some fabric roofing
- Corrugated metal cladding and glazed external walls
- Soffit lining to the underside of the court level over the concourse
- Mechanical ventilation
- No roof lights to add natural light therefore more reliance on artificial lighting
- Additional and larger lifts.

In assessing whole-of-life costs Mallard Cooke considered the following:

- Life of the material
- Down-time associated with removal and replacement
- Inflation over time
- Maintenance and running costs
- The net present value of cash flows over a 70 year life span.

Using this approach Mallard Cooke identified the whole-of-life construction cost comparison between the two sites as show below:

Element	Cobham	Concourse
Construction Cost Estimate	\$49,500,000	\$68,205,000
Roof coverings	\$457,000	\$736,000
External walls	\$867,000	\$1,400,000
Ventilation	\$157,000	\$627,000
Lighting	\$201,000	\$564,000
Lifts	\$24,000	\$58,000
Additional energy consumption based on \$20/m ² /yr		\$3,153,000
Whole-of-Life cost comparison	\$51,206,000	\$74,743,000

In summary the Concourse proposal will be \$23.5 million more expensive over its 70-year life than Cobham.

6.11 Operating Costs

“Operating Costs are the annual costs to run and maintain the ICSC.”

Mallard Cooke again took the approach to look at the areas of difference between operating the ICSC on the Concourse site and the ICSC on the Cobham site. The three key differences between

the two sites are carparking, maintenance costs (such as washing down the exterior) and energy costs.

Carparking

The Cobham site has 318 on site carparks and the cost of building these is included in the construction cost. The Concourse proposal has none of its own carparks but proposes leasing 250 of the WRST carparks for users of the facility. A further 10 of the existing WRST carparks will be required to house part of the building plant rooms for the ICSC. Also, if an entrance lobby and car drop-off bay were provided at ground level, this would take a further 20 to 30 of the existing WRST carparks at ground and mezzanine levels. No assessment has been made of further carpark spaces lost through provision of additional egress stairs or the demolition of part of the mezzanine to provide a bus drop-off facility. The WRST currently get revenue for these carparks from commuters who park there. The WRST will only make these carparks available to the ICSC if they receive the same amount of money for them that they currently get, and they have full use of the carparks when events are on. This carparking cost is an operational cost for the Concourse option. No assumption on who pays for carparking on the Concourse option has been made as this additional cost would either rest with the Council or users, but no such cost exists with the Cobham site. The carparking operating cost at the Concourse is \$400,000 per year (excl GST). (Note: GHD calculated the cost to be \$480,000 per year (excl GST), however by this time the Mallard Cooke calculations had been completed. The independent review decided not to rework the Mallard Cooke figures as the difference was not material to the report recommendations).

Maintenance Cost

Mallard Cooke have estimated that maintenance cost difference between the two sites (associated with the different construction materials and the difficult access on the Concourse site) to be \$150,000 excl GST.

Energy Cost

The Concourse proposal includes air conditioning while the Cobham proposal has a simple natural ventilation system. The Concourse air conditioning system uses more energy, Mallard Cooke have estimated this additional energy use cost difference is \$260,000 (excl GST) per year more for the Concourse.

In summary the Concourse will cost \$810,000 (excl GST) per year more to operate as a result of the different requirements for carparking, maintenance and energy use.

6.12 Cobham Proposal Write-off Costs

“The existing costs spent on the ICSC are part of the project cost no matter where the ICSC ends up being located.”

To get Cobham to the stage that is ready to build, \$4.585 million will have been spent. This is made up as follows:-

Expenditure to date \$4,241,000

Outstanding commitments for the completion of tender and resource and building consents, including -

Designers' fees (balance of tender phase and unpaid fire sprinkler modelling)	85,000
QS fees – balance of tender phase	11,000
BCLS - \$57k (total fee of around \$170k, balance would have gone to BRANZ and Department of Building and Housing levies)	57,000
Environment Court additional traffic modelling	30,000
Environment Court legal fees	85,000
The Council management costs	76,000

Total Cobham costs spent to date and conclusion costs **\$4,585,000**

If the decision is made not to proceed with the Cobham site these costs will have to be written off. This would happen if the Council decided to proceed with the Concourse option and hence these costs for the ICSC would need to be included in the Concourse proposal as they would make up the total cost of the city getting an ICSC.

6.13 Urban Design of the Concourse Option

“The concept has the makings of a high quality design if the issues identified are adequately addressed.”

Graeme McIndoe, Architect and Urban Designer provided a review of the Urban Design of the Concourse option to the independent review (see Appendix 8). He considered the proposed Concourse design against the Council's Central Area Design Guide and the Stadium Design Guide.

No review was done for Cobham as the acceptability of its Urban Design was confirmed during the resource consent process.

The Concourse was never actually built to have a structure above it. It was built to funnel traffic in and out of the arena in a given time. Provision was made to add small structures on the sides of Concourse to soften and enhance it and provide additional commercial attractions for the Westpac Stadium.

Graeme McIndoe believes that the Concourse proposal is consistent with Wellington City District Plan urban design requirements, as well as good urban design practice. The concept has the makings of a high quality design if the issues identified are adequately addressed.

He notes however that pedestrian access via a bridge link from Thorndon would be highly desirable as this would provide direct pedestrian access from schools in Thorndon, and help to address any flow capacity issues that may arise with additional columns on the concourse. This would require consultation with Thorndon residents as part of the resource consent.

Graeme also notes that covering the Concourse would provide shelter for pedestrians but that the space created is very wide and relatively low and needs further consideration.

Finally, he notes the 200- metre west wall in the concept design would be prominent to the Thorndon residents and still requires further design to make it acceptable from an urban design perspective.

The independent experts have significant concerns that the detailed design may not be able to address the outstanding urban design issues.

In particular the independent experts agree that the west wall is an issue and think that it will be difficult and costly to reduce the impact on Thorndon residents of the long uninterrupted west wall which is greater than the length of two rugby fields. The experts debated the quality of the space underneath the ICSC building. The independent review concluded that it was difficult to see how the design could avoid the space resembling an enormous underground carpark or subway, a sense of entrapment or panic in the case of an emergency area is over 200 metres long, a minimum of 40 metres wide and only 4.5 metres high, obstructed by numerous columns and enclosures containing staircases, lifts and fire lobbies. The proposal if developed would need to address these risks.

6.14 Sustainability

"Cobham is ecologically sustainable, while currently the Concourse option does not include any sustainability and life cycle analysis."

The Council is adopting sustainability guidelines for community facilities. These guidelines are still under development. The 'Green Star Rating Tool' principles have been used for the ICSC project.

eCubed Building Workshop Ltd considered the ecologically-sustainable design differences between the two proposals (see Appendix 8) for their summary report).

The environmentally sustainable design for both options has been compared against the following broad criteria:

- Energy use
- Indoor environmental quality
- Water conservation
- Materials and durability
- Accessibility and transportation
- Land use.

6.14.1 COBHAM

The Cobham Design provides a simple, durable, covered space with high reliance on passive environmental control including no heating, natural ventilation and natural lighting to the bulk of the principal sports spaces. There is currently no heating but the design has enabling works that

will allow gas radiant heating to be added at a later date. In so doing it has created a very sustainable solution which should result in low life-cycle costs due to reduced energy, maintenance and replacement costs as there are very few building systems.

eCubed believe that the approach taken is entirely consistent with what is required for an indoor community sports centre. They note that it would not be what you would expect in a multi-use non-sporting facility which would require higher levels of environmental control, containment and flexibility.

eCubed identified further opportunities for improved sustainability in regard to water conservation.

eCubed noted that Cobham is in a less accessible suburban location with fewer modal options (e.g. trains) than the Concourse option. However they believe a sporting facility of this nature should be expected to be located within the community and to suit its demographic rather than in the CBD which would involve travel and congestion into the city.

Finally they noted that the Cobham option obviously displaces some existing external amenity and green space in comparison with the Concourse option.

6.14.2 CONCOURSE

eCubed noted the Concourse design process has not advanced to the phase when sustainability options can be explored and finalised. To date the Concourse option does not include any sustainability and life-cycle analysis. The existing design utilises air-conditioning and lighting and gas radiator heaters. It is a sealed and 'black box' solution as opposed to the 'passive' design of Cobham. eCubed noted there is no clarity in regard to water conservation.

In regard to accessibility and transportation, eCubed note that the option is in a more accessible fringe CBD location with complete transport modal options, however the entry to the ICSC for this option is less than desirable and will require more lift energy use.

6.15 Alignment of Council strategies and policies

“The Council’s Social and Recreation Strategy is the key driver behind the ICSC project – however the solution for the ICSC must sit in harmony with all other relevant Council policies.”

The independent review considered the policy framework which the Council should consider when choosing where to locate community sports centre. For the ICSC project the most important consideration is the Social and Recreation Strategy. Within this strategy the Council provides community sport and activity assets and is committed to making these readily accessible to all Wellingtonians. To date this includes the Council providing free carparking at community sports centres and subsidising operating costs by 70%.

In meeting this strategy the choice of site also needs to balance other relevant Council policies while ensuring the main purpose of the building can be met. The other Council policies include:

- Environment Strategy
- Urban Development Strategy
- Transport Strategy.

The independent review found the Cobham site best meets the Social and Recreation Strategy while still supporting the other policies which must be considered. It is superior to the Concourse option as it will be available 365 days a year for community sport. The Concourse will not be available on large Westpac Stadium event days. For small event days it will be available but with no onsite parking.

6.16 Rugby World Cup (RWC)

“The Westpac Stadium has been chosen to host games for the RWC – the decision of the preferred option for the ICSC must not impact negatively on this opportunity.”

New Zealand will host the Rugby World Cup (RWC) in 2011. New Zealand’s proposal included detailing the facilities available where games would be held. The Council provided RNZ 2011 with a summary of the facilities available in Wellington. The Council’s submission said the new ICSC would be completed and available for team training. There are two aspects the review considered in regard to the RWC:

- The impact of the preferred location of the ICSC on the undertakings made by the Council in bidding for RWC quarter-finals and pool games. In this regard the Council noted in its proposal that “the ICSC at Cobham Drive would be completed and available within a 10-15-minute drive from the CBD for visiting team training”.
- The impact on the choice of location for the ICSC on the functioning of the Westpac Stadium during the RWC and/or disruption of the construction programme for the ICSC.

6.16.1 COBHAM

Construction at Cobham (subject to the Environmental Court appeal being dropped) would see the ICSC opening by the end of 2010, well before the RWC in September 2011. This means the ICSC would be opened to meet the Council undertaking that secured RWC games.

6.16.2 CONCOURSE

The construction programme submitted by Fletcher Construction on behalf of the design team for the Concourse indicated a fast-track approach that would see an immediate start to the design phase, a contract awarded towards the end of 2009 and an earliest start on site in March 2010. The submitted programme then indicates a construction completion in August 2011 but also indicated an “ideal” inclement weather contingency of two further months.

There are two significant assumptions in this programme: that all necessary approvals, community consultation, agreements with neighbours, agreements with the WRST and RailCorp and resource consents can run concurrently with the progress of design, tendering and construction; that the Council, or the body set up to undertake the development, would fast-track the procurement of designers and contractors without the normal public tender process.

The programme ignores some of the critical processes the Council would have to follow before it could award any contracts for design and construction. The complex negotiations that would need to be completed with WRST and RailCorp and the required consultation process and robust selection process for the design team would mean the earliest start date for the Concourse would be October 2011 with construction completed in June 2013.

The Concourse construction would not disrupt the RWC matches at Westpac Stadium as construction would commence after the event - but the undertakings by the Council in regard to securing RWC games would not be met. However alternative indoor facilities would be available in the region for team training such as Te Rauparaha Arena in Porirua. The independent review does not consider this to be a material issue in terms of the location options for the ICSC.

6.17 Proximity and use by schools

“Primary schools typically have limited facilities that meet the basic needs of curriculum teaching. Few have quality indoor spaces suitable for sports and physical education.”

The independent review did not consider the number of schools within a certain distance from the ICSC was relevant. This is a simplistic approach and not persuasive in making one site superior over the other. Schools’ approaches to the use of community sport facilities are complex and related to many significant factors – not just distance to the community centre in question. Cost of transport, time spent away from the classroom and a lack of relevant teaching skills are identified as ongoing barriers to participation.

6.18 Future expansion on site

“The potential to build extra courts on the site is a distraction when choosing the best location for the ICSC – in 10 years’ time we will probably need another ICSC somewhere else in the city to satisfy the demand.”

The Cobham site has the space for a further three-court structure, over the outside carpark, some time in the future. No such opportunity exists at the Concourse site.

The independent review did not consider this to be an important differential between the two sites, as they envisage that once the facility has reached capacity it is more likely a new facility of a similar size to the ICSC would be built somewhere else in the city.

6.19 Opportunities to enhance the Cobham project

“In undertaking the independent review the independent experts identified opportunities to potentially enhance the Cobham ICSC without impacting its completion date.”

The independent review has identified a number of issues that, if incorporated into the Cobham ICSC specification, would enhance the facility without necessarily affecting the time of delivery. These issues have been referred to the Council for further consideration.

6.20 Use of the ICSC at the Concourse for concerts

“The use of the facility for this purpose undermines the establishment of an indoor community sports centre.”

Councillor Foster believes there is opportunity for the ICSC on the Concourse site to be used for large concerts attracting between 4500 and 12,000 people. He believes this use would be possible with the design proposed for the Concourse. Councillor Foster notes there may be opportunities for 8-15 such large events per year. He identified this need because the TSB Arena can provide for a maximum crowd of 6000 general-admission or 4709 seated whereas facilities in Auckland, Christchurch and Manukau can cater for larger crowds and hence Wellington misses out on these concerts (and the associated economic benefit).

Councillor Foster saw benefit in having such a facility in the CBD as it would be close to the train and bus services and give easy access for those travelling from out of town. The support for the use of public transport has been demonstrated by crowds attending Westpac Stadium events.

Neither the Concourse or Cobham designs could cater for events attracting more than 4200 people (ie 4000 guests and 200 staff for a banquet). Neither have been designed to meet the access and fire egress requirements for crowds of up to 12,000. Further, the ability to incorporate this into the Concourse design (if it is possible at all) would be at a significant additional cost. The use for the facility for this purpose undermines the establishment of an indoor community sports centre.