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Your Ref: A318662

Department of
Housing and Public Works

09 JUL 2018

Mr Shane King MP
Chair of the Transport and Public Works Committee
Parliament House
George Street
BRISBANE QLD 4000

Dear Mr King

I refer to your letter of 15 May 2018 regarding the Transport and Public Works Committee (the Committee) inquiry into the Queensland Tennis Centre.

As requested, enclosed is the Department of Housing and Public Works' submission to the Committee.

If the Committee has any questions or further information requests, your Committee Secretary is welcome to contact Mr Peter Bayliss, Principal Advisor, Executive Services, Department of Housing and Public Works on [REDACTED]

Yours sincerely

A handwritten signature in black ink, appearing to read "Liza Carroll".

Liza Carroll
Director-General

Transport and Public Works Committee Inquiry

QUEENSLAND TENNIS CENTRE

Submission by Department of Housing and Public Works

July 2018



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Abbreviations

The following abbreviations are used throughout this submission:

DIIESRQ	Department of Innovation, Information Economy and Sport and Recreation Queensland
DLGPSR	Department of Local Government, Planning, Sport and Recreation
ESD	Environmentally Sustainable Design
IAS	Impact Assessment Study
LIP Plan	Local Industry Participation Plan
Mirvac	Mirvac Constructions (Qld) Pty Ltd
QTC	Queensland Tennis Centre
TPS	Tennyson Power Station
TQ	Tennis Queensland
TRD	Tennyson Riverside Development
TRD-DA	Tennyson Riverside Development – Development Agreement

Other References

The Submission references statements from Mr Tim Peisker to the Queensland Floods Commission of Inquiry. At the time, Mr Peisker was the Executive Director, Infrastructure Planning and Development Branch, Sport and Recreation Services, Department of Communities.

List of Appendices

The following documents are attached and referred to throughout this submission:

Appendix 1	Tennis Queensland Proposal –September 2002
Appendix 2	State Tennis Centre Project Brief
Appendix 3	Site Plans – Schedule 22 of DDP
Appendix 4	Community Consultation Strategy

INTRODUCTION

The Milton Tennis Centre had been the home of tennis in Queensland since 1915 until its last tournament in 1994. Tennis Queensland (TQ) later sold the Milton site in 1999. In 2002, TQ submitted a proposal to the State (through the then Department of Innovation and Information Economy, Sport and Recreation Queensland - DIIESRQ) for the development of a new state tennis headquarters.

In October 2003, DIIESRQ commenced a two-stage competitive bid process to identify a preferred developer for the Tennyson Riverside Development (TRD) on the old Tennyson Power Station (TPS) site.¹

On 3 October 2003, the Queensland Government invited expressions of interest from the private sector for the TRD on the former TPS site. The project included a State Tennis Centre and associated development such as community facilities, residential accommodation and commercial outlets.

On 29 September 2005, the State of Queensland, represented by the then Department of Local Government, Planning, Sport and Recreation (DLGPSR), entered into the Tennyson Riverside Development - Development Agreement (TRD-DA) with Mirvac Constructions (Qld) Pty Ltd (Mircac) to develop the land precinct and construct the State Tennis Centre (now Queensland Tennis Centre - QTC) on the site of the old TPS, in exchange for certain parcels of land.

On 1 December 2008, responsibility for the provisions relating to the Queensland Tennis Centre (QTC) was transferred from DLGPSR to Stadiums Queensland (a statutory body established under the *Major Sports Facilities Act 2001*). At the same time, the responsibility for the provisions of the TRD-DA relating to the residential and associated development was transferred from DLGPSR to the then Department of Public Works.

Practical completion of the QTC was achieved on 2 December 2008. The STC opened in January 2009 and the centre court was officially named Pat Rafter Arena before hosting the inaugural Brisbane International from 4 to 11 January 2009.

Following the December 2017 Machinery of Government changes, Sport and Recreation Services became part of the Department of Housing and Public Works.

STRUCTURE OF THIS SUBMISSION

This submission addresses the matters set out by the Transport and Public Works Committee in its correspondence of 15 May 2018 to the Department of Housing and Public Works. This submission uses the order and numbering contained in the correspondence. Abbreviations and attachments referred to in this submission are set out on page 5.

¹ Summary of paragraphs 11-35 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

GENERAL

1) Provide a description of the work including:

a) the location

The QTC is located at 190 King Arthur Terrace, Tennyson QLD 4105.

b) the site

The site is freehold land owned by Stadiums Queensland and has an area of 6019 square meters. The Real Property Description of the site is Lot 7 on SP 214201.

c) the facilities

The QTC currently includes:

- A 5,500 seat international standard Plexi-cushion centre court, named as Pat Rafter Arena, with corporate facilities.
- A total of twenty-three International Tennis Federation standard match and training courts including one grass court, five clay courts and 16 Plexi-cushion courts.
- Administrative, commercial and support facilities including change rooms, pro shop, café, media facilities and function rooms.
- Administrative offices for TQ.

d) an overview of the functions/uses of the centre, including those proposed at the commencement of the project and any changes that have occurred subsequently

The State's objective was to develop a 'state-of-the-art' stand-alone tennis facility of a sufficient size, quality and functionality to:

- enable the successful promotion and development of tennis in Queensland;
- enable the attraction of and hosting of national and international standard tennis events on a scale similar to Davis Cup and Federation Cup ties, and hardcourt championships and age group championships;
- provide a centre for the development of tennis both at a local and state level; and
- provide an administrative headquarters for TQ.

On 9 June 2006 (during construction), the scope of the STC design was varied to include the addition of a roof. The addition of the roof was approved to facilitate the hosting of an annual International Tennis tournament at the STC.

Since completion of construction, in September 2016, the number of grass courts was reduced from two to one and the number of clay courts increased from four to five to better reflect user demand. This change was requested by TQ in May 2016, approved by SQ in July 2016 and works were carried out to convert the court from grass to clay in September 2016.

e) an overview of the work undertaken as part of the project

The TRD-DA principally covered the STC construction arrangements, the transfer of the associated development (residential) land to Mirvac and related performance conditions.

In terms of the whole TRD-DA, the aim was for a landmark development for tennis in Queensland, complemented by associated development including high-quality residential apartments and a gymnasium and the opening-up of the riverfront to the community².

² Summary of Para 64 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

The project consisted of two stages that provided for the demolition and remediation of the TPS completed on 30 November 2006, followed by the construction of the STC commencing in early January 2007.

The design of the STC was changed in June 2006 to install a fixed roof over the centre court stadium in order to reposition the STC to attract and host international hardcourt tennis championships.³

Practical completion of the STC was achieved on 2 December 2008 in time to host the first Brisbane International - a combined Men's and Women's hardcourt championship.

f) **Detailed Budget, including funding from all sources, for the project**

On 29 September 2005, the State of Queensland, represented by the then Department of Local Government, Planning, Sport and Recreation (DLGPSR), entered into the Tennyson Riverside Development - Development Agreement (TRD-DA) with Mirvac Constructions (Qld) Pty Ltd (Mircac) to develop the land precinct and construct the STC (now QTC) on the site of the old TPS, in exchange for certain parcels of land.

As at 31 July 2011, the State's total project budget was \$88,392,251, which includes the State's land and funding contribution.

External contributions of \$12,131,546 were received towards the project.

2) **Provide copies of:**

a) **the Department's Asset Strategic Plan**

Stadiums Queensland owns and manages the asset, QTC. Therefore, QTC does not form part of the Department's Asset Strategic Plan, however is recognised with the Asset Strategic Plan of Stadiums Queensland from 2009 onwards.

b) **the project feasibility study and the business case for the project**

TQ's proposal to the State for the development of a new state tennis headquarters is provided at *Appendix 1*.

c) **The Project Brief**

The State Tennis Centre Project Brief is provided at *Appendix 2*.

d) **The Project Evaluation Report**

Evaluations of aspects were undertaken throughout development of the project however the Department of Housing and Public Works has not been able to locate a specific project evaluation report.

e) **The site plans**

The site plans are attached at *Appendix 3*.

The Department would prefer not to release the site plans in *Appendix 3* as the information is confidential information under the contractual arrangements with Mirvac.

Therefore, the Department requests that the Committee treat these site plans as confidential.

³ Summary of Para 91 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

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- 3) Provide an outline of the major project time-frames and detail actual compared to projected time frames.

Milestones	Start Date			Completion Date		
	Original Estimate	Revised Estimate	Actual	Original Estimate	Revised Estimate	Actual
Demolition and remediation works	28/11/05	-	4/05/06	22/09/06	30/11/06	1/12/06
Conditions Precedent satisfied (including development approval)	01/08/06	22/11/06	22/11/06	01/08/06	22/11/06	18/12/06
Design Development	13/03/06	-	20/3/06	21/12/06	31/01/07	31/01/07
Tender and award trade packages for State Tennis Centre (STC) construction	15/01/07	-	2/03/07	20/04/07	28/09/07	02/03/07
Site access and Operational works (e.g. site services)	8/01/07	-	8/01/07	5/12/08	27/08/07	31/01/07
Construct STC	14/05/07	19/03/07	19/03/07	17/12/08	01/12/08	30/11/08
Commission STC	25/02/08	9/04/08	15/09/08	31/12/08	01/12/08	29/11/08
STC Practical Completion	17/12/08	01/12/08	01/12/08	17/12/08	01/12/08	01/12/08
Handover of STC to State	5/01/09	11/12/08	02/12/08	5/01/09	11/12/08	02/12/08

- 4) Provide a list of the major consultants and contractors for the project.

The major contractor/developer for the project was Mirvac. The then Department of Public Works – Project Services was appointed as the State's Representative to administer the Development agreements with Mirvac.

A) THE PURPOSE OF THE WORK

- 5) What is the purpose of the work?

Since the closure of the Milton Tennis Centre in 1999, tennis lacked a focal point in Queensland and therefore, the ability to compete with other States to host major international tournaments.

The aim of STC was to provide an international-standard tennis facility that is efficiently run, well maintained and recognised by users and spectators alike as synonymous with tennis excellence.

STC would maximise the opportunities to further develop the sport of tennis in Queensland and Australia and to promote Queensland as a premier sporting and tourist destination.

- 6) How does the project align with the Department's Asset Strategic Plan?

The project was initiated in 2005 and construction completed in 2009. Due to the period of time that has passed since project initiation, the Department is unable to confirm whether the then responsible agency had a relevant Asset Strategic Plan in place at that time. The QTC has however been recorded in Stadiums Queensland's Asset Strategic Plan from 2009.

It is noted that as the QTC was not a Departmental asset, it would not have been part of the Department's Asset Strategic Plan.

7) How did the project contribute to the Department's service delivery strategy?

Project Services, as a commercialised business unit of the then Department of Public Works, was focussed on delivering professional services to assist clients in the delivery of their capital works programs and projects. The role of the Department in the QTC project was consistent with that objective.

B) THE SUITABILITY OF THE WORK FOR ITS PURPOSE

8) What are the functional requirements of the Queensland Tennis Centre?

The STC Project Brief issued as part of Stage 2 of the Competitive Bid process detailed the functional requirements for the State Tennis Centre and stated:

The State Tennis Centre is to be a stand-alone facility of an international standard capable of attracting and hosting major tennis events. The facility is to be part of a landmark development for Queensland.

As the only purpose-built State Tennis Centre in Australia to feature all three 'Grand Slam' surfaces, this unique facility will reflect best practice in meeting the needs of sportspeople and spectators alike. It will be designed with Queensland's lifestyle in mind, relaxed and contemporary, underpinned by state-of-the-art systems and functionality - a facility that is synonymous with tennis excellence.

The original Project Brief is provided at *Appendix 2*.

9) How is the work suitable for its purpose in terms of:

a) location and site

TQ noted that there were a limited number of potential sites with the Brisbane metropolitan area that were capable of meeting the requirements for a State tennis centre. At this time the desirable attributes were:

- Centrally accessible to the population density of South East Queensland;
- Well serviced by transport infrastructure (including in particular public transport);
- Capable of accommodating at least 22 tennis courts, ideally with some potential for future expansion;
- The site should preferably possess no apparent higher or better use for the foreseeable future;
- The facility should not compete with any existing privately managed facilities – to the greatest and practicable extent;
- It must be able to provide affordable facilities to the community.

TQ investigated a range of potential sites for the development of new tennis headquarters in Brisbane including the Boondall Entertainment Centre, Sleeman Centre, ANZ Stadium, former Milton Tennis Centre, Boggo Road Goal, RNA Showgrounds and the TPS site⁴.

TQ's proposal (refer *Appendix 1*) stated that TQ's vision was for a world class facility capable of accommodating the requirements of tennis and TQ, while maximising the use of the otherwise

⁴ Summary of Para 18 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

constrained TPS site. TQ's analysis noted that tennis courts have the advantage of being able to be built over easements and below the Q100 flood line, thereby maximising the site utilisation⁵.

TQ identified the TPS site as its preferred location for a STC. TQ considered the site best met its requirements as TQ considered it was:

- centrally accessible to the population density of South East Queensland;
- well serviced by transport infrastructure;
- capable of accommodating at least 22 tennis courts;
- not competing with existing tennis facilities; and
- compatible with the urban environment and considered low impact⁶.

The site was 11.7 hectares of land that had been the subject of a series of government investigations, studies and reports since the Power Station was decommissioned. The presence of the Power Station building and numerous easements on the site had severely limited the potential for redevelopment of the site. Although not heritage listed, the building could only be demolished at a very significant cost – far outweighing the likely return on redeveloping the site for residential housing. The proximity of the site to the rail line had also severely reduced its potential for high yield residential housing. In addition, the site contained the Powerlink substation on its southern boundary and much of the site was below the 1974 flood level.

b) size/scale

At practical completion, QTC was comprised of:

- A 5,500 seat international standard Plexi-cushion centre court, named as Pat Rafter Arena, with corporate facilities.
- A total of 23 International Tennis Federation standard match and training courts including two grass courts, four clay courts and sixteen Plexi-cushion courts. (*note, recently changed to one grass court and five clay courts*).
- Administrative, commercial and support facilities including change rooms, pro shop, café, media facilities and function rooms.
- Administrative offices for TQ.

c) functional performance (e.g. functional spaces, space allocations, space groupings and their functional relationships, quality and standards of the design and construction, circulation, access, safety, and security, and general planning and design)

QTC is a world-class venue for hosting international, national and state-level tennis tournaments. It features an international-standard roofed centre court with 5,500 permanent seats, as well as two show courts seating 1,500 spectators and 20 match and training courts incorporating all three Grand Slam court surfaces – grass, clay and hardcourts.

d) Were any issues identified with regard to the site and what plans were put in place to mitigate these issues

The State conducted preliminary due diligence on the TPS site in 2003, following TQ's identification of the TPS site as its preferred location for a STC, and identified a number of site

⁵ Summary of Para 23 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

⁶ Summary of Para 27 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

constraints including the decommissioned TPA, electricity easements, transport access issues and low lying areas which were subject to flooding⁷.

The project brief detailed the Government's requirements for the STC and covered aspects for this venue such as site planning, transport and access arrangements, facilities, fit-out and handover. The project brief included a requirement that all functional facilities be designed within the STC site to withstand the adverse impact from storms up to a minimum 100 years flood event or other such event as may be required by relevant acts and codes⁸

e) Have issues with the site subsequently been identified and how have these been mitigated

During the January 2011 floods, QTC suffered extensive damage to the level 1 facilities, centre court, and the clay and grass courts.

Project Services, Department of Public Works was engaged by Stadiums Queensland to project manage the refurbishment of QTC. Mirvac was engaged as the Managing Contractor for the refurbishment works which reached practical completion on 30 November 2011, noting that the Brisbane International tennis tournament was scheduled to run from 1 January 2012 to 8 January 2012.

The rebuild of QTC incorporated a number of mitigation strategies including:

- the potential damage by future flooding has been minimised by using flood tolerant materials where applicable and are cost effective;
- services infrastructure being installed above the current 1:50 year flood level, where allowable;
- lockers and loose furniture being removable in the event of a flood;
- Multi-Purpose Rooms being designed for a 1:20 year flood event and are separated from the player's facilities by an existing 1:100 year flood wall. New door openings have also been protected by flood gates; and
- QTC updating its Flood Emergency Response Plan in response to the January 2011 Flood Event.

10) What consideration, if any, has been given to future development on the site?

TQ completed a masterplan in late 2016 for this area and aspires to expand the existing assets to include a second indoor arena to accommodate future growth associated with the Brisbane International event.

There is current consideration by Stadiums Queensland for the expansion of QTC to include a new arena of approximately 3,000 seats capacity. This expansion could include the transfer of a parcel of land to the east of the QTC site.

⁷ Summary of Para 28 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

⁸ Summary of Para 47 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

C) THE NECESSITY FOR, AND THE ADVISABILITY OF, THE WORK

11) Why was the work necessary?

Following closure of the Milton Tennis Centre in 1999, TQ sold the land at Frew Park, Milton which had served as the home of tennis in Queensland since 1915. The Milton Tennis Centre hosted a range of Australian Championships / Opens and Davis Cup ties as well as entertainment events.

Tennis in Queensland lacked a home since the closure of the Milton Tennis Centre in 1999. The Queensland Government required a State Tennis Centre to be a state-of-the-art stand-alone tennis facility. It was to be of sufficient size, quality and functionality to successfully promote the development of tennis in Queensland and attract and host state, national and international standard tennis events.

12) How was the need for the work established?

In June 2002, TQ submitted a proposal to the State for the development of a new state tennis headquarters. Through the proposal, TQ was seeking assistance with the allocation of a four to five hectare site and capital contribution of \$5 million towards the development.

In response DIIESRQ worked with TQ to explore alternative options for the State Tennis Centre, including the development of a multi-purpose stadium to cover a range of sports.

In September 2002, TQ made a proposal to the Queensland Government (provided at *Appendix 1*) to build a State Tennis Centre on the site. The proposal advised that TQ had sought the assistance of Mirvac as an experienced property developer to consider the analysis and investigations required for the development of a STC on the TPS site⁹.

13) Why was it necessary to undertake the project at the time?

This closure of the Milton Tennis Centre in 1999, left the State with no State Tennis Centre capable of hosting any form of national or state event. At the time it was noted that while there is very limited potential for attracting any international event, there was considerable potential for hosting national junior and veterans class events in the State. In the absence of facilities, this potential could not be realised.

This was in contrast with all other mainland capital cities at the time where the tennis sporting infrastructure had benefitted from sustained investment. All other state capitals possessed state tennis centres, with Melbourne and Sydney centres being of world class standard.

14) What options were considered?

TQ's 2002 proposal attached at *Appendix 1* advised that TQ, Mirvac and Tennis Australia identified the STC would be a 22 court facility comprising a centre court with a 4,000 seat show court, six clay courts, parking, clubhouse, tennis pro-shop, tennis hall of fame and TQ administration and offices¹⁰.

In September 2002, Mirvac developed a concept plan for the tennis centre at the Tennyson Power Station site comprising an international standard STC¹¹.

⁹ Summary of Para 21 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

¹⁰ Summary of Para 22 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

¹¹ Summary of Para 24 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

15) Why was the selected option the best one?

The State conducted preliminary due diligence on the TPS site which indicated it had adequate space to accommodate a new STC based on the concept articulated by TQ.

On 17 September 2003, Sport and Recreation Queensland officers from DIIESRQ met with TQ to discuss the minimum specifications for the development of a STC. The minimum specifications had been revised to include a centre court with 3,000 permanent covered seats and the ability to provide up to an additional 4,000 temporary seats for major events, 22 match and training courts, with 16 of hardcourt surface, two Davis Cup standard and up to six of the match and training courts to have an alternate surface¹². This is reflected in the Project Brief at *Appendix 2*.

D) VALUE FOR MONEY ACHIEVED, BY THE WORK

16) What steps did the department take to ensure that value for money was achieved with the project?

TQ proposed that a future strategy would be for a building that complemented the broader site for the tennis infrastructure and ideally provided an opportunity to meet the costs of the centre – its courts, the surrounding infrastructure (such as parking), the headquarters of TQ and appropriate landscaping.

Taking on board the recommendations put forward by TQ, the State undertook a two-stage competitive bid process (Stage 1 Expressions of Interest and State 2 Detailed Development Proposals) for the design, construction and financing of the STC and the operation of the associated development.

Under the arrangement, the Government made the land available to the private sector for development through a market based competitive bid process to seek value for money, minimise risk to the State and to secure the best development outcome possible.

The section of land not used for the STC would be made available to the developer for an associated development project compatible with the tennis centre and surrounding areas. It was envisaged that the developer would use the associated development to provide funding assistance for the construction of the tennis centre.

17) How does the project represent value for money in terms of:

a) cost factors, including whole-of-life costs and transaction costs

The project was delivered as part of a development agreement which, through the State's contribution of land, significantly reduced the direct cash cost to government and enabled a significant enhancement to the local community's services.

b) non-cost factors such as fitness for purpose and quality, and

The QTC provides Queensland with a state headquarters and home for tennis. As the only purpose-built State Tennis Centre in Australia to feature all three 'Grand Slam' surfaces, this unique facility would reflect best practice in meeting the needs of sportspeople and spectators alike. It was designed with Queensland's lifestyle in mind, relaxed and contemporary, underpinned by state-of-the-art systems and functionality - a facility that is synonymous with tennis excellence.

¹² Summary of Para 31 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

c) the advancement of government priorities.

According to the 2004-05 Annual Report for the DLGPSR, the government's priorities at that time were:

- Managing urban growth and building Queensland's regions
- Improving health care and strengthening services to the community
- Delivering responsive government
- Protecting our children and enhancing community safety.

In particular it was noted in the Annual Report that QTC contributed to the government's priority of improving health care and strengthening services to the community.

18) Provide benchmark comparisons of (a) construction costs and (b) operating costs of the centre with other similar projects?

The \$88 million value is appropriate for a venue of this nature and compared to the cost for the Skilled Park (now Cbus Super Stadium) at \$160 million and Metricon Stadium at \$144 million is well within the price range for this type of venture.

E) THE COST OF AND RECURRENT COSTS OF THE WORK

19) What is the whole-of-life Net Present Value Cost for the Queensland Tennis Centre?

The written down value of the QTC as at 30 June 2017 was \$84.1 million and the total replacement value was \$122.6 million for building and land improvements.

20) Copy of the project budget

Please refer to Question 1(f).

21) Provide a copy of the budget analysis for the project showing the budget outlays (both capital and recurrent), the revenues (if any) and the funding source(s) (including details of any financial arrangements).

Please refer to Question 1(f).

22) Provide details of any cost escalation, and the reasons for any increase.

Additional capital works for the STC including the requirement for a stadium roof, enclosure and air-conditioning of players' lounge and corporate lounges, upgrade of media room, shade over the two show courts, and glazing and air-conditioning of multi-function space (1/2 court for junior coaching in non-event mode).

23) Provide a final comparative budget detailing actual against projected costs.

The QTC was delivered within the budget provided. Please refer to Question 1(f).

F) THE VALUE OF THE WORK, INCLUDING THE IMPACT ON THE COMMUNITY, ECONOMY AND ENVIRONMENT

Impact of the work on the community

24) What consultation was undertaken when planning the project?

The Community Consultation Strategy is provided at *Appendix 4*.

In November 2005, as part of its community consultation strategy, Mirvac and its public relations consultant, Promedia hosted focus group sessions with local residents and stakeholders about the development¹³. This provided local residents and businesses the opportunity to receive information on, and ask questions about, the development and the planning approval process.

SRQ part of the then DIIESRQ and DLGPSR met with the Tennyson Residents Association on a number of occasions to provide updates and receive feedback on the impacts of the project on the local community.

25) What are the social impacts associated with the project?

The integrated nature of the project and the provision of an international standard sporting facility and high quality residential development of what was a decommissioned, unused power station site transformed the area into a viable sporting and entertainment precinct.

The Tennyson Local Residents Association noted that key issues for residents at the time were transport and access arrangements, the nature and scope of the residential development and the impacts on residents during construction.

26) What strategies and options did the department develop to deal with significant social impacts of the project?

The Department is not aware of any significant adverse social impacts identified with the delivery of the project.

27) Provide a copy of the analysis of the social impacts of the project

Due to the age of the project, the Department has not been able to locate any records for analysis of any social impacts.

Impact of the work on the economy

28) and 29) How did the work impact on the economy? Provide a copy of the economic analysis of the project

The provision of an international sporting facility allows for the attraction of major sporting events and delivers economic growth associated with hosting international athletes and competitions. An economic analysis of the QTC project has not been located.

¹³ Summary of Para 71 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

30) Did the project comply with the Government's 'Queensland Charter for Local Content'?

The TRD-DA required Mirvac, as the developer, to comply with the Local Industry Policy as part of its development of the State Tennis Centre.

The current Queensland Charter for Local Content was not in place at the time of the QTC project.

31) Did the project comply with the Queensland Government Building and Construction Training Policy?

The Queensland Government Building and Construction Training Policy applies from 1 July 2014. The TRD-DA required Mirvac to ensure that builders and subcontractors require that apprentices and trainees were employed for that part of the STC Works for the minimum number of hours.

The current Building and Construction Training Policy was not in place at the time of the QTC project.

Impact of the work on the environment:

32) Provide a copy of the environmental analysis for the project.

The STC project provided a solution for the decommissioned, unused TPS site that was in keeping with the Brisbane City Council's urban development plan and provided residential development along with community parkland and social and physical infrastructure.

The Department has located a version of a Fauna Assessment Report and a Vegetation Retention Plan that were prepared for Mirvac. The Department will seek agreement with Mirvac for the release of these documents.

33) Environmental issues

The STC project involved the remediation of the TPS site that was previously an unused power station site that required extensive decontamination works and which restored the TPS site for use as a major sporting facility and modern residential precinct.

34) What environmentally sustainable design features have been incorporated into the development?

The QTC is a purpose-built facility that has incorporated many features to enhance the experience and use of the facility.

G) PROCUREMENT METHODS FOR THE WORK

35) Provide details of the procurement strategy for the project including:

a) The method used

A project management framework was established to progress consideration of the TRD including the construction of the Queensland Tennis Centre involving coordination of the TRD project through a two stage competitive bid process.

A two-stage competitive bid process was undertaken.

In October 2003, SRQ part of DIIESRQ released an EOI document inviting interested parties to submit a proposal for the design, construction and financing of the project and associated development. Seven EOIs were received by the closing date.

In 2004, three proponents were shortlisted.

On 9 June 2004, SRQ part of DLGPSR released a request for detailed development proposals (DDPs). On 23 August 2004 the three shortlisted proponents lodged DDPs.

b) Who tendered

The DDPs were received from the following three shortlisted proponents:

- Devine Limited;
- Mirvac Queensland Pty Ltd; and
- Stockland Development Pty Ltd.

c) The selection criteria

A Financial Capacity Assessment was undertaken by the Queensland Treasury Corporation.

Project Services undertook a technical review of the Mirvac DDP.

The Mirvac DDP was evaluated against the following criteria:

- Total development and operational concept.
- Transport and access arrangements.
- Project management and resources.
- Financial capability and project feasibility.
- Impacts on the State.

d) What they tendered

Two of the proponents tendered to provide the QTC on alternate sites. The Evaluation Committee found that these two proposals were non-conforming and could not be assessed¹⁴. Only Mirvac proposed to construct the QTC at the Tennyson site.

e) Who was selected

On 27 June 2005, Mirvac was announced as the preferred developer and on 29 September 2005 the Tennyson Riverside Development agreements were executed by the State Government with Mirvac.

36) Why was the particular procurement system selected and what makes it preferable to other delivery options?

The two stage competitive bid process approach discussed at Question 35(a) above, was undertaken to seek a value for money outcome, minimise the risks to the State and to secure the best development outcome through a market based competitive bid process.

¹⁴ Summary of Para 51 from Tim Peisker statement to the Queensland Floods Commission of Inquiry

37) Outline the approach taken to the selection and appointment of consultants for the project.

As Mirvac was primarily responsible for the selection and appointment of consultants for the construction of the STC, the Department is not able to comment on the approach taken to the selection of consultants for the project.

38) Outline the approach taken to ICT procurement for the project.

As Mirvac was primarily responsible for the ICT procurement for the construction of the STC, the Department is not able to comment on the approach taken to the ICT procurement for the project.

H) THE BALANCE OF PUBLIC AND PRIVATE SECTOR INVOLVEMENT IN THE WORK

39) What work did the public sector and private sector undertake?

The project was delivered by private developer Mirvac up to practical completion of the STC with the lead agency being DLGPSR who engaged the then Department of Public Works as the State's Representative under the contractual arrangements.

40) Provide an estimated cost breakdown of work by the public and private sectors.

Please refer to Question 1(f).

41) What criteria was used when deciding whether work should be undertaken by the private or public sector?

The developer was responsible for the construction of the STC and determined who would undertake works.

The then Department of Public Works was engaged as the State's representative under the contractual arrangements.

I) THE PERFORMANCE OF THE CONSTRUCTING AUTHORITY AND THE CONSULTANTS AND CONTRACTORS FOR THE WORK

42) Is the department satisfied with the work of each of the consultants and contractors?

The developer delivered the project on time and within the adjusted Budget. The Queensland Tennis Centre was made operational in time for the 2009 Brisbane International event.

43) Was the work completed:

a) according to specifications?

The project achieved practical completion on 1 December 2008 and was operational for the inaugural Brisbane International tournament on 2 January 2009.

Project Services worked with Stadiums Queensland on some additional capital works variations to enhance the quality and functionality of the QTC. The works were fully completed by June 2010.

b) on time and within budget?

The construction of the QTC project was completed on time and within the adjusted budget.

c) in accordance with contractual obligations?

The contractual requirements were met.

APPENDIX 1

Tennis Queensland Proposal – September 2002



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Sport and Recreation Queensland

Document # S05/3905

Container # SRQ 03/365-02

2 September 2002

PRIVATE AND CONFIDENTIAL



The Chief Executive
Mirvac Queensland
PO BOX 5121
WEST END QLD 4101

Dear Sir

RE: TENNYSON PRECINCT PROJECT - STATE TENNIS CENTRE

I refer to recent discussions regarding the establishment of a State Tennis Centre on the Tennyson Powerhouse site.

The concepts as outlined are most exciting. You are aware of our State Tennis Centre discussions paper presented recently to the State Government. The project submitted by Mirvac complies with all or most requirements developed in the discussion paper. I also attach for your information recent correspondence from Tennis Australia indicating its interest in working with Tennis Queensland to effect a clay court training facility in Queensland.

Geographically, I believe the Tennis Centre is exceptionally well situated in a corridor of Brisbane that currently has limited tennis facilities. This is important in creating a viable tennis business. Furthermore, the Mirvac proposal is such that ultimately residents in the Tennyson Precinct will have an opportunity to develop a lifestyle around tennis with all the associated benefits.

The calibre of the proposed development plus the positioning of the tennis courts and associate office, pro-shop and tennis museum would be such that all Queenslanders could be proud of the headquarters for tennis in Queensland should this proposal be successful.

We understand that it is Mirvac's intention to proceed with an application for a development of mixed use facilities including residential and some retail which would be integrated with the surrounding environment of the Tennis Centre.

Mirvac has indicated that in the event that they can secure the site, they will fund all costs associated with the analysis of the project's viability and the application to the authorities for a development approval. Furthermore, we understand that in the event that Mirvac does secure the site on satisfactory terms and conditions then the land component and supporting facilities for the Tennis Centre would be available to Tennis Queensland. Arrangements for tenure of the land need to be such that the facility always remains as a benefit for the community.

Mirvac is given a mandate to operate exclusively with Tennis Queensland to secure the site and to proceed with all planning acquisition and final development.

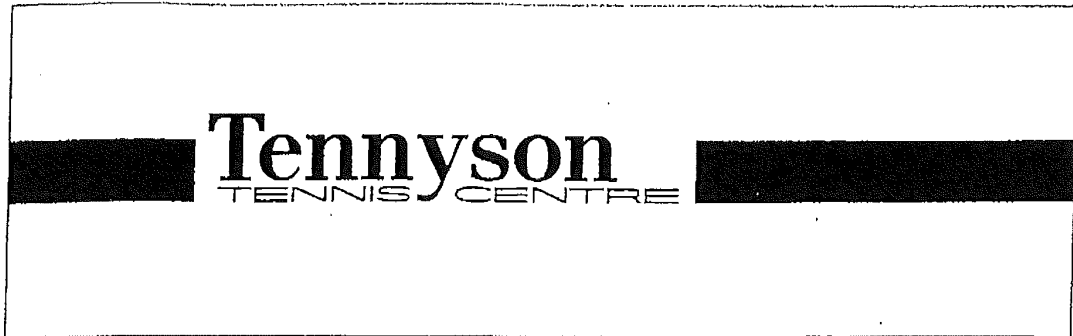
Should this proposal be successful the Board of Tennis Queensland will proceed to finalise Heads of Agreement to proceed with a joint project.

Yours sincerely



President

Access + Egress
MSP + TENIS
GOVT FUNDS



Ⓢ Follow up - Meeting M. ANDERSON (PHILIP)
(next couple weeks
↳ see Andy)



SEPTEMBER 2002

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I. Appendix
 Tennis Queensland
 Tennis Australia

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PROPOSAL FOR A STATE TENNIS CENTRE AND
NATIONAL CLAY COURT FACILITY

A. The Current State of Play

The need for a State wide tennis centre is widely recognized and has been the subject of a separate detailed submission by Tennis Queensland – copy attached.

The background to this is clear.

- Tennis is a popular and widely patronized sport in this State with some 22,000 players registered with Tennis Queensland and a further estimated 300,000 players in a State with an overall population of some 3.5 million.
- Tennis is, like golf, one of the few sports that are capable of being played at both a competitive and social level throughout the vast majority of the human life cycle. This is particularly significant in an era when an ageing population of baby boomers is likely to place significant stress on an already overburdened health system.
- The current infrastructure for tennis in the State has deteriorated markedly over recent decades;
 - Of a total of some 410 community courts in metropolitan Brisbane in 1980 only 170 remain and no new community facilities have been constructed;
 - This figure is even more startling if compared to the changes in demographics over that period (i.e. the population of Brisbane in 1981 was 1,028,000 and in 2001 was 1,627,000);
 - Of the residual 170 courts still remaining, it is estimated that up to 90% of these could disappear over the next decade as higher yielding uses for the land attract investor interest;
 - A high proportion of existing courts are located on the outskirts of the city leaving the bulk of the urban population unserved by tennis facilities.

Importantly, there is now (following the closure of the State centre at Milton in 1998) no State tennis centre capable of hosting any form of national or even State class event. While it is true that there is very limited potential for attracting any international event, there is considerable potential for hosting national junior and veterans class events in the State. In the absence of facilities this potential cannot be realized.

This contrasts with all other mainland capital cities where the tennis sporting infrastructure has benefited from sustained investment. All other state capitals possess state tennis centres and in the case of Melbourne and Sydney they are of world class standard.

All mainland state capitals possess considerably greater numbers of municipal courts than does Brisbane.

- Sydney 525 courts
- Melbourne 637 courts
- Adelaide 512 courts
- Perth 488 courts

COMMERCIAL-IN-CONFIDENCE**B. The Strategy to Rejuvenate Queensland Tennis**

There is very considerable community based interest in tennis as a sport.

Its popularity with youth has in recent years been stimulated by the heroic successes of Patrick Rafter and more recently Lleyton Hewitt.

Any strategy to develop the potential of tennis as both a competitive and social sport in the State therefore has excellent prospects for success.

There are four critical ingredients, to any strategy to regain lost momentum in tennis as a major sporting pursuit. These ingredients are:

1. A State centre to provide a focus for the development of the sport. Such a facility must have the potential to host State and national level events. This would require a minimum of some 22 courts that would service the needs of the State for the foreseeable future. It should also house the headquarters of Tennis Queensland.
2. Access to world class coaching and training expertise and facilities to enable the potential of young Queensland elite level players to be realized.
3. The availability of localized facilities in metropolitan and regional Queensland – to at least restore the local infrastructure of metropolitan Brisbane to 1980 levels over the next 10 years (ie. Approximately 420 courts).
4. Development of a national presence in Australian Tennis.

This paper is concerned principally with the first element of the four part strategy – though the concept being advanced will also contribute to the achievement of the second element.

In relation to accessing coaching and training facilities the Queensland Academy of Sport already contributes some \$135,000 per year to assist elite level players to access high quality coaching. This ensures that funds are available to enable promising juniors to realize their potential. The opportunity exists, however, through the University of Queensland's Biomechanics Department to enhance the effectiveness of this coaching – in particular with the application of leading software applications to customized coaching to fit the biomechanical structure of individual players.

The Brisbane City Council is currently finalising a strategy to deal principally with the acute shortage of community centres which should address the third element of the strategy.

With the inclusion of six clay courts, a national clay court training centre would be established at Tennyson. This would enable Queensland to host clay court championships and be utilised by Tennis Australia for national training camps. This will enable Queensland to develop a national presence in Australian tennis.

The key element of a strategy for rejuvenation of tennis in Queensland remains with the critical need for a State Centre which when located in Brisbane would provide a broad community benefit for Brisbane players and for other Queenslanders participating in tournaments at the venue.

COMMERCIAL-IN-CONFIDENCE**C. The Options**

There are a limited number of potential sites within the Brisbane metropolitan area that are capable of meeting the requirements of a State Tennis Centre. The desirable attributes for such a centre include:

- Centrally accessible to the density of population in South East Queensland;
- Well serviced by transport infrastructure (including in particular public transport);
- Capable of accommodating at least 22 courts ideally with some potential for future expansion;
- The site should preferably possess no apparently higher or better use for the foreseeable future;
- The facility should not compete with any existing privately run facility – to the greatest and practicable extent.
- It must be able to provide affordable facilities to the community.

There are a range of optional sites that offer significant areas of land that have been regarded as suitable for consideration against these criteria.

They include:

1. Boondall Entertainment Centre

- This site is large enough to offer sufficient space to house the requisite 22 courts and upon which to construct headquarters for Tennis Queensland.
 - The site is far from ideal as a State Tennis Centre as a result of its location on the far north eastern extremity of the metropolitan area.
 - Availability of public transport servicing the site is poor.
 - The costs of developing a 22 court facility and Headquarters on the site are estimated at more than \$7m.
 - The catchment area is already serviced by 40 courts.

2. Sleeman Centre

- This site will potentially accommodate the requisite 22 courts.
- Again, the location of the site on the far eastern fringe of the metropolitan area and the lack of readily availability of public transport militates against the regular utilization of the facility.
- The estimated cost of a 22 court facility and headquarters is again more than \$7m.

3. ANZ Stadium

- The site is better serviced by public transport than options 1 or 2 and is more centrally located within the metropolitan area.
- The site is, however, heavily compromised by the existing stadium and its infrastructure and indications are that insufficient space exists to accommodate an effective 22 court centre and headquarters.

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4. Former Milton Court Site

- This site is currently being redeveloped for residential use.

5. Boggo Road Site

- The Boggo Road site is ideally located from the perspective of metropolitan centrality. It is extremely well serviced by public transport.
- The topographical features of the site pose some challenges but it is theoretically possible to locate 22 courts on the site subject to the removal of the former prison infrastructure (other than the Heritage listed gaol).
- The use of the site for this purpose would however, run counter to previously endorsed government land use intentions that identified the site for the development of a "new technology village" to leverage the benefits from its proximity to the adjoining research hospitals and the University of Queensland.
- Estimated cost of 22 courts (not including a value for the land) \$7m.

6. Tennyson PowerStation Site

- The Tennyson Power Station Site is centrally located within the metropolitan area.
- It has excellent access by public transport – both road and rail currently and with the potential to develop river access via the City Cat Ferry.
- The site contains – assuming the retention of the former PowerStation – sufficient available land upon which to construct a 22 court centre and to house headquarters for Tennis Queensland.
- Based on the assumptions contained in the concept outlined below, the project can be delivered at no cost to government.

After evaluation of the above locations, and other potential locations (not shown in this report), we have concluded that the Tennyson site is by far the most attractive site to locate a State Tennis Centre.

D. The Concept

The Tennyson Power Station site offers a unique opportunity to create a world class facility capable of accommodating the requirements of tennis and Tennis Queensland at no cost to the public while maximizing the use of an otherwise highly compromised site.

The Tennyson site is an area of some 11.7 hectares of land that has been the subject of a series of government investigations, studies and reports since the PowerStation was decommissioned. The presence of the former PowerStation building and numerous easements on the site severely limits the potential redevelopment of the site. Although not heritage listed, the building can only be demolished at a very significant cost – far outweighing the likely return on redeveloping the site for its theoretically highest and best use (ie. residential housing). Moreover, the proximity of the site to the adjoining rail infrastructure severely reduces its potential for high yielding residential housing. So too does the site contain the Powerlink substation on its southern boundary and much of the site is below the 1974 flood level.

Importantly, none of these factors restrict its potential for the development of tennis courts on the land beyond the PowerStation footprint. Notably, tennis courts have the advantage of being able to be built over easements and below the Q100 flood line, thereby maximizing site utilisation area and avoiding costly land filling and remediation. So too does the PowerStation itself present some opportunities for sympathetic development with the Tennis Centre - as well as some obvious challenges. Clearly, it would not be viable or desirable to construct a world class tennis facility in the grounds of the disused

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PowerStation unless the building is subjected to very considerable redevelopment. The costs of demolition clearly preclude the option of clearing the site in the absence of significant injections of public funds.

The challenge has therefore been to develop a future use strategy for the building that complements the use of the broader site for tennis infrastructure and ideally provides an opportunity to meet some, if not all, of the costs of the tennis centre – its courts, the surrounding infrastructure (such as parking), the headquarters of Tennis Queensland and appropriate landscaping.

The challenges that confront redeveloping the existing building are very considerable and will require extensive and detailed analysis and investigation. This exercise is both costly and risky.

Tennis Queensland clearly does not possess sufficient resources to conduct such an exercise itself. For this reason Tennis Queensland has sought the assistance of Mirvac, (on an exclusive basis for the Tennyson site). Mirvac was selected as an experienced property developer with a proven track record of achievement in complex and large development.

Together, Mirvac, Tennis Queensland and Tennis Australia have examined the requirements of a State Centre and have agreed the following:

- The establishment of a 22 court facility that consists of
 - + ○ A centre court with 4000 seat show court
 - 6 clay courts suitable for national standard events
 - sufficient car parking to meet the needs of the tennis facility (4000?)
 - fully equipped clubhouse
 - tennis proshop
 - a tennis hall of fame
 - Tennis Queensland administration and offices
- The establishment of a biomechanics coaching clinic operated by coaches of national standing in conjunction with the University of Queensland Biomechanics Department.
- The establishment of a gymnasium and lap pool to service both the tennis facility and residential complex.
- The establishment of accommodation for visiting academics and students attending the University of Queensland, QUT and Griffith University on the southern flank of the existing building.
- The establishment of high grade residential accommodation on the northern escarpment of the existing building.

The parties have contributed considerable financial and intellectual resources in developing the concept outlined in this proposal and while considerable work on detailed viability is yet to be conducted, they have confidence in the viability of the business case.

E. Planning Considerations

Clearly, the projects viability will ultimately rely upon the approval of the Brisbane City Council for its redevelopment. Discussions have already been held with the Lord Mayor who has pledged support for the broad strategy outlined in this paper and the specific proposal for the Tennyson site. The Lord Mayor has also indicated that he would support the extension of the City Cat route to service the site.

COMMERCIAL-IN-CONFIDENCE**F. Financial Considerations**

Tennis Queensland and Mirvac have approached this project on the basis of the total facility being produced at no costs to the public.

For this to be achieved it will be necessary to conduct a detailed feasibility of the project. Currently, the site is owned by Enertrade. Preliminary discussions with Enertrade have indicated that, subject to the support of their shareholders, Enertrade would be prepared to enter into an arrangement with Tennis Queensland and Mirvac on the basis that:

- Tennis Queensland and Mirvac be afforded a period of 9 months to explore the feasibility of establishing a facility containing the elements described above.
- Should the project prove feasible, Enertrade would then sell the site to the Tennis Queensland/ Mirvac syndicate for the estimated book value of the site and on the condition that in the event that the project (after having met its obligations to meet the costs of the tennis infrastructure outlined above) is capable of yielding a return beyond an accepted industry return to the developer, then the additional yield would be equally shared between the consortium and Enertrade.

G. Summary of Benefits

The proposal outlined above

- Is defined to provide a world class tennis facility at no cost to government;
- Offers the potential for the government to, additionally, gain some value from a site that is otherwise accepted as possessing little or no recoverable value;
- Contributes to the government's "Smart State" agenda by the application of world class sports science to developing the sporting potential of Queensland youth;
- Rejuvenates an area that is otherwise a prominent eyesore in the inner city and enables the public to gain access to the river precinct;
- Offers a national facility that is likely to attract sports tourists to the State – a burgeoning sector of the tourism market;
- Will result in the creative and sympathetic renovation of an architecturally significant building with heritage values – despite its severe constraints;
- Maximizes the use of an otherwise heavily compromised site with no apparent higher and better use;
- Offers the potential, through the presence of related sporting facilities (eg. Golf, gymnasium, swimming, rowing etc) to service the needs of an increasingly health conscious and ageing population;
- Offers the potential to host significant Pacific Rim regional tennis events and national events should those opportunities arise;
- Is likely to attract the support of:
 - Brisbane residents who either play tennis (some 200,000 people) or are tennis fans.

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- o The local community who are concerned about the current state of the Tennyson site and who are likely to welcome the opportunity to have access to river parkland in a scenic commercial environment.
- o Significant tennis champions of the past including Patrick Rafter, Rod Laver, Evonne Goolagong, Mal Anderson, Ashley Cooper etc.

H. Conclusion

The concept outlined above provides a unique opportunity to deliver a very significant sporting infrastructure project to the community at no cost to government. It also has the added benefit of revitalizing a dead space in the heart of the broader city precinct in a way that complements the investment that has occurred on significant sites within the sphere of the city and is therefore consistent with the government's broader Capital City policy.

Tennis Queensland and Tennis Australia therefore seeks the support of shareholding Ministers for Enertrade to enter into an agreement with the Tennis Queensland/Mirvac consortium consistent with the principles outlined in Section 'F' above.

APPENDIX 2

State Tennis Centre Project Brief

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1 OVERVIEW

1.1 Introduction

This document details the Government's requirements for the State Tennis Centre. The requirements for the State Tennis Centre and its associated transport and access infrastructure, as set out in this document, shall be provided by the developer.

The State Tennis Centre is to be a stand-alone facility of an international standard capable of attracting and hosting major tennis events. The facility is to be part of a landmark development for Queensland.

As the only purpose-built State Tennis Centre in Australia to feature all three 'Grand Slam' surfaces, this unique facility will reflect best practice in meeting the needs of sportspeople and spectators alike. It will be designed with Queensland's lifestyle in mind, relaxed and contemporary, underpinned by state-of-the-art systems and functionality – a facility that is synonymous with tennis excellence.

The design and construction of the State Tennis Centre is to demonstrate a clear understanding of the project objectives and provide a knowledgeable and innovative approach to the requirements of such a facility. The State Tennis Centre must respond to the functional and technical requirements outlined in this document including an appropriate response to climate and environmental factors.

While projecting a clear image and identity, the design and setting for the State Tennis Centre will also need to integrate with the local area, including the associated development, and complement the sub-tropical character of Brisbane.

Where there is no standard defined in this document for the design and construction of facilities at the State Tennis Centre, those facilities are to be of a standard no less than that of Melbourne Park.

The State Tennis Centre is to be provided as a complete 'turn key' arrangement to enable the facility to be fully operational immediately upon handover.

1.2 Flexibility

The State Tennis Centre shall provide high standard facilities and associated infrastructure and services that are operationally flexible and sufficiently adaptable to accommodate the ongoing and changing needs of a State Tennis Centre, including during major events.

Building and room layouts shall provide for flexible use of areas on a daily basis and for ease of future refurbishment or remodelling when needs change. Except for those areas designated for specialist functions, room layouts shall be generic and adaptable, to enable a variety of functions to be accommodated.

Generic room layouts may be reconfigured for various groupings and are to provide options for flexibility and adaptability. The design shall be based on a concept of an adaptable structure allowing multi-grouping of functional areas of various sizes.

Specialist areas shall also have a generic layout where possible, offering the opportunity for different usages.

Planning of the State Tennis Centre site shall maximise the opportunities for flexible adaptation and extension of facilities to enable the State Tennis Centre to respond to new developments in tennis facilities including changes in technology and staffing arrangements.

1.3 Facility Accommodation

The facilities required to allow the State Tennis Centre to function effectively in normal mode would not be sufficient to allow the State Tennis Centre to effectively host state, national and international-standard tennis events. The State Tennis Centre therefore requires additional facilities for major event mode. These additional facilities are to be provided using a mix of the following:

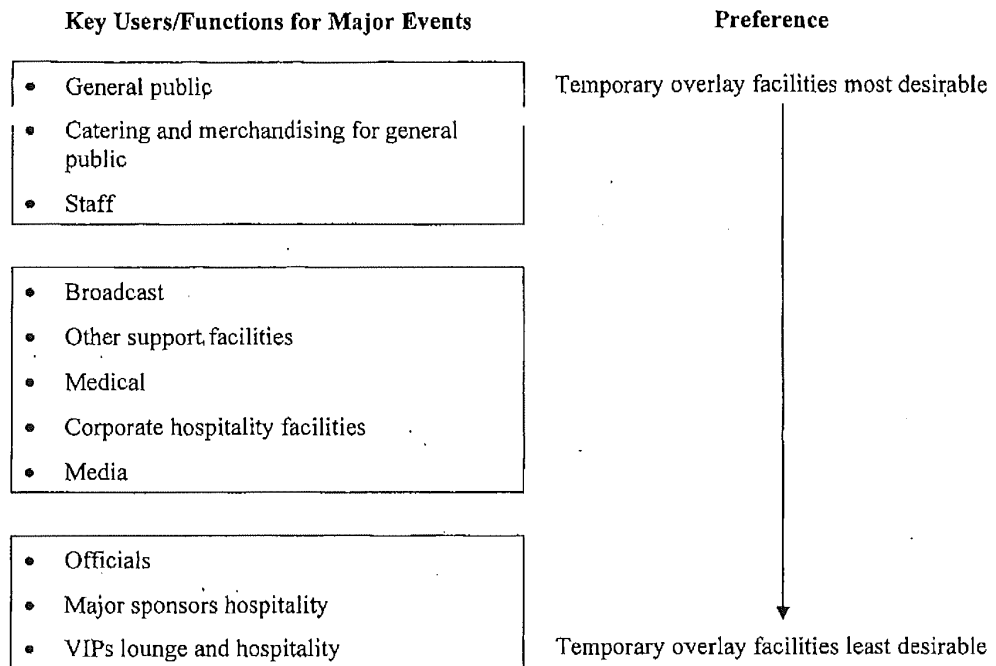
- dedicated permanent facilities;
- reconfiguration of flexible permanent facilities; or
- temporary overlay facilities.

The options regarding the provision of additional facilities for major events are subject to a number of conditions. These are described below.

All facilities required for players during major events are to be provided using dedicated permanent facilities and/or the reconfiguration of flexible permanent facilities (see Section 14.1). The reconfiguration of flexible permanent facilities for major events may utilise a significant portion of Tennis Queensland and venue management facilities.

In considering the use of temporary overlay facilities for major events, the guide shown in Figure 1 should be used. This guide indicates the Government's preferences for permanent facilities rather than temporary overlay facilities for key groups of users and functions.

Figure 1 Use of Temporary Overlay Facilities for Major Events



Major Event Overlay Principles

Where the provision of temporary overlay facilities is proposed for major events, the allocation of strategically located serviced areas capable of accommodating these facilities is to be provided. These facilities are to be:

- located in close proximity to the centre court;
- serviced with water, electricity, lighting, drainage and facilities for cable reticulation;
- provided through a combination of grassed and hard landscaped areas;
- located adjacent to shaded areas;
- easily accessible, including for emergency vehicles;
- positioned to ensure security and safe patron management;
- capable of being accessed from restricted back-of-house areas by staff for deliveries without impacting on the free movement of spectators; and
- easily cleaned.

Operational and Facility Requirements

As indicated in Section 1.3, the State Tennis Centre will operate in two modes – normal mode and major event mode. Details of the operational and facility requirements for the State Tennis Centre in its two modes of operation are outlined below.

Table 1 Normal Mode

Focus of operations	<p>Community tennis centre, involving the following operations:</p> <ul style="list-style-type: none"> • Venue management • Tennis Queensland administration • Commercial use of courts • Supporting commercial activity (e.g. café, professional tennis shop and hire of function rooms) • Elite and development squad programs (including Queensland Academy of Sport) • Junior development programs • Weekly fixtures (adult and juniors) • Weekly, social and recreational tennis • State and age championships • Satellite, challenger and futures events • Corporate tennis events • Suitable non-tennis events on an infrequent basis
Facility use	<ul style="list-style-type: none"> • All match and training courts • Administrative facilities, accommodating venue management • Tennis Queensland State Office • Commercial facilities (café and tennis professional shop) • Support facilities required for day-to-day operations <p><i>Smaller Scale Tennis Events - State and age championships and corporate events</i></p> <ul style="list-style-type: none"> • All match courts and possibly centre court (courts unavailable for public use) • Permanent facilities (café, tennis professional shop, players' facilities) used to capacity • Possible use of meeting or general purpose rooms
Frequency/ Duration	<ul style="list-style-type: none"> • Facilities available year round with the exception of some events • Smaller scale tennis events - approximately 8 per year

User groups and indicative numbers	<ul style="list-style-type: none"> • Venue management staff - 4-6 • Tennis Queensland staff during office hours - 15 • Tennis Queensland Board - up to 20 attendees (bi-monthly) • Tennis Queensland committees - up to 15 attendees (monthly) • Regional association meetings and general meetings (evenings) - up to 50 attendees monthly • Squad use of match and training courts • Facilities available to public except during some events • Spectators and players - up to 200 for day-to-day operation • Spectators and players - up to 500 for smaller scale tennis events • Match officials - up to 40 for smaller scale tennis events
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Table 2 Major Event Mode

Focus of operations	<ul style="list-style-type: none"> • Hosting major events (e.g. Davis Cup and Fed Cup ties) • Suitable non-tennis events on an infrequent basis
Facility use	<ul style="list-style-type: none"> • Media, sponsor, VIP, medical and broadcast facility requirements • Ticketed access to centre court facilities and show courts • Centre court facilities with large scale temporary seat installation • 2 to 4 match/training courts as warm-up courts • 2 show courts • Temporary seating for centre court and show courts • All permanent facilities and open space may be used to capacity • Parts of the venue management facility and Tennis Queensland State Office to be allocated for event purposes • Major temporary overlay of support and commercial facilities for media, catering, toilets, broadcast, medical, catering and storage • Major event transport strategy and plan implemented
Frequency/ Duration	<ul style="list-style-type: none"> • 2-3 events per year over a period of up to 10 days each with day and evening sessions and 4-5 day bump in and training and 2 days bump out

User groups and indicative numbers	<ul style="list-style-type: none">• Venue management - 4-6, with up to 6-8 casuals• Tennis Queensland staff during office hours - 10-12• Tennis Australia and International Tennis Federation officials - 10• Squad use of match and training courts• Public access to courts restricted during some events• Contractors - up to 100 (e.g. cleaning, ushers and car park attendants)• Volunteers - up to 200• Event management - 5-10• Players - 16-20 for a Davis Cup or Fed Cup tie, 32+ for a national tournament or 50+ for an international tournament• Players' entourages - 50-75• Match officials - up to 40• Public spectators - up to 7,000• International, national and state federation officials - 50• VIPs - up to 150• Corporate spectators including sponsors and guests - 300+• Media - television, radio and print - up to 150.• Security, police, medical and emergency service personnel - 25+• Catering and beverage - up to 100• Merchandise - up to 10• Service deliveries - 20
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Facility Accommodation Arrangements

Details of the facility accommodation arrangements for the State Tennis Centre in its two modes of operation are outlined below.

Table 3 Facility Accommodation Arrangements

State Tennis Centre Facilities	Mode of Operation	
	Normal	Major Event
Tennis Queensland State Office	Dedicated permanent facilities	Dedicated permanent facilities. The temporary overlay may utilise a significant portion of Tennis Queensland's facilities. See Section 10.1 for details.
Tennis courts and administrative, commercial and support facilities	Dedicated permanent facilities	Dedicated permanent facilities. The temporary overlay may utilise a significant portion of venue management facilities. See Section 11.2 for details.
Major event facilities	Not required	All players' facilities are to be provided using dedicated permanent facilities combined with the reconfiguration of flexible permanent facilities. See Section 14.1 for details. Other major event facilities can be provided using a mix of dedicated permanent facilities and/or the reconfiguration of flexible permanent facilities and/or temporary overlay facilities.

1.4 Segregation of Players, VIPs, Sponsors, Media and General Public

An efficient and effective control system for access to and exit from the State Tennis Centre is required for both modes of operation.

Major event mode operations shall provide segregated entry and exit points and segregated internal circulation for the following groupings:

- general admission and corporate spectators;
- VIPs, staff and sponsors;
- media; and
- players.

Segregation of access and internal circulation is not an essential requirement for normal mode operations. Emergency egress routes shall be provided for both major event mode and normal mode.

2 SITE PLANNING

2.1 General

The State Tennis Centre site shall comprise compact building zones with rooms near to and/or adjoining other rooms as required by the adjacencies set out in this document.

The State Tennis Centre site shall be capable of being secured with clearly defined places of entry, which provide pedestrian and vehicular access to and from adjacent transport infrastructure including, but not limited to pedestrian, bus and rail networks.

Community access to public areas of the State Tennis Centre (e.g. café and tennis professional shop) should be allowed during operating hours.

The State Tennis Centre shall be designed to minimise the adverse effects of wind tunnelling and shading. The design should maximise cooling breezes during summer and provide protection from winds during winter.

The State Tennis Centre site shall be planned to ensure that noise, fumes or other nuisances from adjacent activities, both from within the Tennyson Riverside Development site and the local area, do not disrupt the delivery of State Tennis Centre services. The impact of the State Tennis Centre on the associated development and the local community shall be minimised. All necessary noise and vibration surveys must be undertaken.

3 TRANSPORT AND ACCESS

3.1 General

Transport infrastructure and access arrangements associated with the State Tennis Centre shall comply with Brisbane City Council (BCC) and other statutory requirements including disability access. Transport planning for the State Tennis Centre shall be consistent with the desired outcomes, directions, principles and planning steps in the Integrated Transport Planning Framework for Queensland (September 2003).

All necessary transport and access infrastructure shall be provided as part of the work.

The Government has approved vehicular, pedestrian and bicycle access to the Tennyson Riverside Development site through the adjoining Animal Research Institute site. An access corridor and bicycle corridor are identified in Schedule 7 of the Development Agreement. The access corridor is to be used as the primary access route for the Tennyson Riverside Development and Animal Research Institute sites. The corridors are discussed in Section 3.7.

The State Tennis Centre will be used for a range of purposes, requiring a flexible transport strategy to accommodate the corresponding range of transport demands. Table 4 represents a typical range of usage.

Table 4 State Tennis Centre Usage During a Typical Year

Category	Usage	Daily Patronage	Frequency
Tier 1	Davis Cup tie	7,000	Once a year
Tier 2	Fed Cup tie, international and national titles and tournaments	2,000 - 3,000	Once a year
Tier 3	Satellite, futures and challenger tournaments and state and age championships	400 - 500	Up to 10 events per year
Tier 4	Community use	200	Everyday

3.2

Transport Strategy and Plan

A comprehensive transport strategy and plan shall be developed to manage the increased level of activity including parking demands associated with the State Tennis Centre. The strategy and plan is to cover all transportation aspects of the State Tennis Centre during both modes of operation, particularly during Tier 1 and 2, and incorporate the requirements detailed in this document.

It is of particular importance that the transport strategy and plan ensures the State Tennis Centre is stand-alone and separate in operation from the associated development.

The transport strategy and plan shall detail the operational arrangements for all categories (see Table 4), including the nature and scale of public transport services that are proposed to meet the Government's objective of minimising private vehicle travel demands. The strategy and plan shall also include details of all existing and special transport services required to meet the expected demands and traffic management arrangements.

The transport strategy and plan is to be developed in conjunction with the relevant authorities and to the satisfaction of the State. All necessary approvals are to be obtained by the developer.

3.3

Vehicular Access

Legible, easy and safe access to the State Tennis Centre shall be provided for all vehicular traffic (including emergency vehicles) from the public road network via dedicated road(s). Independent vehicular access to the State Tennis Centre is to be provided such that its operation is not constrained by or reliant upon the concurrent use of the associated development.

Access arrangements for taxis, VIP vehicles, mini buses, coaches and service vehicles shall not be constrained by other vehicle movements (e.g. public transport and shuttle bus operations), and shall not constrain other vehicle movements (e.g. emergency vehicles).

All permanent signage, barriers, bollards and other traffic control devices shall be provided as necessary to ensure the safe operation of access roads and maneuvering areas.

Private Vehicles

Private vehicle access to the State Tennis Centre site shall be provided in such a manner to minimise the impact of traffic operations on the external road network. All works deemed necessary by the relevant authorities shall be provided to mitigate the impacts of additional traffic generated by the State Tennis Centre.

Sufficient provision shall be made for set-down and pick-up of patrons of the State Tennis Centre arriving and departing by private vehicle during normal mode.

Private vehicle transport demands shall be minimised through the use of alternative transport modes, particularly for Tier 1 and 2.

Taxis and VIP Vehicles

Covered access shall be provided for set-down and pick-up of patrons accessing the State Tennis Centre site by taxi or VIP vehicle (e.g. limousine). Separate set-down and pick-up areas, of sufficient length to accommodate the demands generated by major events, shall be provided.

Mini Buses/Coaches

A separate set-down and pick-up area shall be provided for patrons accessing the State Tennis Centre site by mini bus or coach. This area is to be clearly separated from that required for public transport (bus) operations during major events.

Service Vehicles

Service deliveries shall be accommodated by the minimum necessary dedicated delivery points. Access to service areas shall ensure clear separation of service vehicle movements from other movements within the State Tennis Centre.

Service areas shall minimise or eliminate the reversing of trucks and meet BCC requirements.

Emergency Vehicles

Access to all necessary areas shall be provided for emergency service vehicles either via dedicated roadways or by alternative access paths to ensure all site related emergencies can be attended to by relevant authorities.

3.4 Pedestrian/Bicycle Access

Safe and convenient pedestrian and bicycle access shall be provided to the State Tennis Centre site from the external road network. Pedestrian, bicycle and vehicle movements are to be clearly separated. Where separation is not possible, physical measures shall be provided to ensure pedestrian and cyclist safety.

Pedestrian circulation routes are to be provided throughout the State Tennis Centre site to facilitate access to the facilities and activities (whether contained within a single building or located throughout the State Tennis Centre) including car parks and landscaped areas. The pedestrian access throughout the site shall be designed to readily accommodate both normal mode and major event mode movements.

Cyclist facilities including bicycle storage to cater for a minimum of 15 bicycles shall be provided.

Unrestricted and convenient public access between the State Tennis Centre and the Brisbane River shall be provided for pedestrians and cyclists to enable connection to any future public path system along the riverfront.

3.5 Parking

Car parking shall be provided in accordance with BCC requirements and include appropriate provision for staff, visitors and people with a disability.

Parking sufficient to cater for the demands associated with State Tennis Centre in normal mode shall be fully provided on-site. Increased parking demands associated with State Tennis Centre events shall be accommodated either on-site or off-site such that the existing on-street parking environment surrounding the site is not adversely impacted.

3.6 Public Transport

General

As indicated in Section 3.2, a transport strategy and plan shall be prepared that addresses the use of bus and rail services.

As part of the transport strategy and plan, the developer is to investigate improvements to the current level of public transport and non-motorised access to the State Tennis Centre to cater for the demands generated in both modes of operation. The effectiveness of these improvements in contributing to achieve the Queensland Government's Integrated Regional Transport Plan for South East Queensland objectives for more sustainable transport is to be clearly demonstrated.

Normal Mode

Improvements to the existing level of rail and bus services and facilities to meet the requirements of the State Tennis Centre in normal mode shall be investigated. Liaison shall be undertaken with the relevant authorities (i.e. Brisbane Transport, Translink and Queensland Rail) to ensure:

- coordination of existing Brisbane Transport bus services connecting the State Tennis Centre to the Ipswich and Beenleigh rail lines; and
- rail and bus facilities and services are sufficient to satisfy general patron and disability requirements.

The developer shall be responsible for provision of all appropriate transport and access infrastructure, including all necessary improvements to existing pedestrian infrastructure to achieve connectivity with nearby rail stations.

Major Event Mode

All existing and special rail and bus services required to accommodate the increase in public transport demands during major events are to be detailed as part of the public transport plan.

A set-down and pick-up area shall be provided to accommodate additional bus movements, clearly separated from other transport modes (e.g. taxi and private vehicle set-down/pick-up operations). The bus set-down/pick-up area may be temporary.

Sufficient queuing space to accommodate departing bus patrons shall be provided clear of pedestrian paths and other set-down/pick-up areas.

3.7 **Animal Research Institute - Planning and Design Parameters for Access Corridors**

Corridors for vehicular, pedestrian and bicycle access to the Tennyson Riverside Development site through the adjoining Animal Research Institute site are identified in the Access Licence for Construction of Transport and Access Works (Schedule 7 of the Development Agreement). There are two corridors:

- an access corridor that follows a route that borders the perimeter of the Animal Research Institute site along its southern, eastern and western boundaries; and
- a bicycle corridor that runs adjacent to the Brisbane River along the northern boundary of the site.

Transport solutions for the Tennyson Riverside Development are to use the access corridor as the primary access route for the Tennyson Riverside Development and Animal Research Institute sites.

It is not intended that the Animal Research Institute site will be used other than for the provision of vehicular, pedestrian and bicycle infrastructure located within the access and bicycle corridors, connections with external transport and access infrastructure and other works associated with these corridors required by the State.

This infrastructure is to be provided in accordance with the following planning and design parameters and the requirements stipulated within the Development Agreement.

Access Corridor

Road Standard – A public road to BCC and other statutory requirements including disability access shall be provided. Road must be of sufficient standard to accommodate buses, service vehicles and emergency vehicles.

Pedestrian and Cyclist Provision – Safe and convenient pedestrian and cyclist access shall be provided within the access corridor. A safe and convenient connection shall be provided between Yeerongpilly rail station and the access corridor.

Traffic Management Device – An allowance has been made within the access corridor for the provision of a traffic management device. The location of this device is identified in Schedule 7 of the Development Agreement.

Easements – Easements run along the southern boundary of the Tennyson Riverside Development and Animal Research Institute sites. Construction of infrastructure upon the easements is to be in accordance with the easement conditions and may include pedestrian and bicycle infrastructure.

The infrastructure within the access corridor shall be designed to service the State Tennis Centre in both modes of operation.

The configuration of the connection to Fairfield Road shall be sufficient to accommodate the traffic and pedestrian demands from the Tennyson Riverside Development site, including the State Tennis Centre in major event mode, and the Animal Research Institute site.

During construction of the infrastructure, access to the Animal Research Institute internal road system is to be maintained. A connection is also to be provided from the new road to the Animal Research Institute internal road system.

Bicycle Corridor

Safe and convenient cyclist access shall be provided within the bicycle corridor with connections to the Tennyson Riverside Development site and Ortive Street.

Fencing

Fencing to allow for the construction and operation of infrastructure located within the access corridor and the bicycle corridor shall be provided.

4 DISABILITY ACCESS

The State Tennis Centre and the transport and access infrastructure shall comply with the principles of social justice and equality in their design and construction. Access to all facilities within the State Tennis Centre and the transport and access infrastructure shall meet the requirements of the following:

- *AS 1428.1-2001 Design for access and mobility - General requirements for access - New building work;*
- *AS 1428.2-1992 Design for access and mobility - Enhanced and additional requirements - Buildings and facilities;*
- *Disability Discrimination Act 1992 (Commonwealth);*
- *Disability Services Act 1992; and*
- *Anti-Discrimination Act 1991.*

In particular, the following are to be provided:

- appropriate facilities for the hearing impaired;
- non-discriminatory access and seating for people with a disability and their carers; and
- barrier free access to public transport infrastructure and services.

Notwithstanding the above, the particular needs of wheelchair tennis players, which may be in excess of the above requirements (e.g. to accommodate the width of sporting wheelchairs), are to be accommodated in all facilities and areas.

5. GOVERNMENT POLICIES

The State Tennis Centre works shall comply with the following Queensland Government policies:

- Art Built In Policy (www.arts.qld.gov.au/publicagency);
- State Government Building and Construction Contracts – Structured Training Policy (10% Training Policy) (www.trainandemploy.qld.gov.au/partners/events/industry/building_and_construction_industry/index.htm);
- Queensland Code of Practice for the Building and Construction Industry (www.build.qld.gov.au/industry/industry05.asp); and
- Local Industry Policy (www.sd.qld.gov.au/dsdweb/htdocs/global/content.cfm?ID=116).

Consistent with the smoking policy (www.opsme.qld.gov.au/directives/smoking_policy.htm) of the Queensland Government, the State Tennis Centre is to be a smoke-free venue. Appropriate provision, including signage, is required to allow smoking within dedicated areas of the centre to reduce exposure to passive smoking.

The developer and all subconsultants, services subcontractors and significant building subcontractors shall be third party certified to *ISO 9001:2000 Quality management systems - Requirements*.

A Quality Plan shall be prepared and maintained to the satisfaction of the State, which shall comply with the requirements of the standard.

6 CENTRE COURT

6.1 Court Construction, Finishes, Services and Equipment

Table 5 Centre Court Requirements

Standard and dimensions	<p>Davis Cup standard and dimensions (41m x 20.5m).</p> <p>Orientation of the court is to minimise the impact of sun and associated glare. The orientation of the longitudinal axis of the court is to be in the range 10 degrees west of magnetic north to 30 degrees east of magnetic north.</p> <p>Playing surface of the centre court during tournament play is not to be adversely affected by shade and wind.</p> <p>Wheelchair tennis to be accommodated.</p>
Base construction	<p>All necessary geotechnical investigations to be undertaken.</p> <p>Concrete base to be designed to suit subgrade conditions with all necessary control joints and falls. The slab is to accommodate all applied loads including any loadings caused by the installation of alternative surfaces. Base is to be certified by a structural engineer. Refer to Section 16.8 for additional civil engineering requirements.</p>
Slab finish	Helicopter trowel with a light broom finish.
Court surface	<p>The quality of the playing surface is to be of a standard suitable for junior, state, national and international tennis events.</p> <p>Surface to be Tennis Australia approved cushioned acrylic hardcourt surface, 5mm thick, installed in accordance with the manufacturer's specification.</p> <p>The surface is to have the following International Tennis Federation play characteristics:</p> <ul style="list-style-type: none"> • Surface Pace Rating - 30-40, medium (CS 01/01); and • Energy (Shock) Absorption - 7%-15% (CS 04/01).
Alternative surfaces	<p>Ability to permit temporary installation of natural grass or clay playing surfaces to Davis Cup, International Tennis Federation and Tennis Australia standards.</p> <p>Access to allow forklifts to deliver and install 2.4m x 2.4m pallets containing alternative surface.</p> <p>The design is to provide ease of conversion to alternative playing surfaces without compromising the overall functionality of the centre court, particularly with regard to seating and sightlines.</p>
Surface tolerance	<p>Court surface is a single plane, tilted to drain surface water to appropriate drains/collection point.</p> <p>Fall of 1 in 100 required to drain the surface. Direction of fall is usually diagonal but may be altered to meet site drainage requirements.</p> <p>Surface tolerance (deviation from plane) is 3mm (maximum deviation) under a 3m straight edge placed anywhere on the court.</p>

Lighting	<p>To meet requirements for commercial television broadcasting (including high definition television) and all international tennis standards including the United States Tennis Association, Tennis Australia, International Tennis Federation, Association of Tennis Professionals and Women's Tennis Association for international standards of play. Refer also to Section 16.2.9. No light poles shall be placed in front of spectator areas.</p> <p>Horizontal illuminance shall be a minimum average 2,000 lux at 1.0m above the surface for total playing area or in accordance with the standards above (whichever is the greater). Vertical illuminance shall be in accordance with above international television broadcasting standards.</p> <p>Infrastructure capacity for 50% additional future upgrade of lighting levels.</p> <p>Light spill, including to adjacent residential areas, shall be minimised or light pollution from the tennis court lighting addressed in accordance with BCC requirements.</p>
Court equipment	<p>All necessary infrastructure and equipment for the successful operation of a major tennis event.</p> <p>Net posts shall be Grand Slam Equipment TNPCSAT or equivalent and installed in court sleeves. Court sleeves for singles and doubles play.</p> <p>Nets to be full-drop, international size (post to post), equivalent to Yonex or Josan EA3 soft fabric head band and double mesh at top. Centre strap and anchor to be included. Nets for singles and doubles.</p> <p>All required moveable seats and equipment for all umpires, officials and players.</p> <p>Wet weather covers for the total court surface, a suitable storage area close to centre court and all necessary handling equipment.</p> <p>Protective covering for the court surface to permit other events to occur without damage to the court's surface. A cover similar to the Rod Laver Arena at Melbourne Park is the standard required. A suitable storage area close to centre court and all necessary handling equipment. Refer to Section 12.14.</p>
Services	<p>All necessary data, communication, power and water outlets and all necessary infrastructure and equipment, including that required for the Public Address, Closed Circuit Television (CCTV) and hearing impaired systems.</p> <p>Concealed conduits for television cameras and net cams.</p>
Warranty period	<p>The warranty period for the court base and surface will be 12 years.</p>

6.2 Seating and Shade

Seating is to be designed in accordance with all relevant statutes, standards, codes and current references and in accordance with international best practice for tennis court seating. Prior to any construction commencing, the developer is to satisfy the State, by way of narrative, diagrams and calculations that the optimum seating configuration will be achieved.

Seating requirements are as follows:

- the full seating capacity is to be 7,000, of which 3,000 shall be permanent and 4,000 temporary;
- permanent shade roof structures providing sun and rain protection to all permanent seating without impeding sightlines and lighting to the centre court;
- optimise viewing conditions for spectators;
- minimise interference to sightlines due to pedestrian movement in front of seated spectators;
- separation between spectators and players/officials to limit interference;
- all permanent seats to be tilt-up seats, individually numbered (with appropriate row and aisle identification) via recessed smooth rivet fixed vandal-proof discs;
- all seat fixings shall be low maintenance and vandal resistant, connected to risers wherever possible; and
- the seating design and construction is to permit the installation of an appropriate amount of corporate seating as required during major events.

The developer is to provide all items necessary for the corporate seating arrangement, including appropriate partitioning if required.

6.3 Scoreboard

One dedicated centrally-controlled good quality electronic scoreboard to display immediate match details for centre court. The scoreboard is to be well configured (not for video replay), of minimum size 4m x 2m, and approved by Tennis Australia.

All infrastructure for the installation of two temporary video-wall scoreboard monitors, and associated control equipment, for centre court during major events. Refer to Section 16.6.6 for additional details.

6.4 Dedicated Players' Service Access

Secure and dedicated access for players leading from the player changing facilities to centre court.

6.5 Toilets for Players and Officials

Male and female toilets for players and officials during matches.

6.6 Public Concourse

A main public concourse shall be located to service all vomitories, concessions and toilets, and:

- be designed to ensure the safe passage of spectators in an emergency. The basis for the width of the concourse shall be as set out in the United Kingdom "Guide to Safety at Sports Grounds" (Green Guide) and in accordance with good international practice;
- be designed to sustain the point-loading situation typical for heavy equipment, such as pallet loaders;
- be designed to enhance the experience of visiting the State Tennis Centre with facilities to allow people to congregate and relax prior to and after a match;
- incorporate clear graphics to ensure the orientation and safe passage of patrons;
- allow the provision of temporary seating and alternative court surfaces in the least disruptive manner to the normal operation of the centre;

- connect with temporary seating in the same manner as it does with the permanent seating; and
- link to match and training courts by a series of walkways of varying widths that reflect the relative importance of the access. Particular requirements are outlined in Section 18.

All necessary infrastructure and equipment to the public concourse including but not limited to:

- mounting brackets, power outlets and cable connection points for CCTV cameras and television monitors located in strategic locations for viewing by the public;
- Public Address system;
- waste collection system;
- seating;
- drinking fountains;
- lighting;
- power outlets (single and three phase as required); and
- Automatic Teller Machine (ATM) infrastructure (ATMs provided by others).

7

MATCH AND SHOW COURTS

7.1

Match Courts

Table 6 Match Court Requirements

Standard and dimensions	<p>Fourteen (14) courts of an International Tennis Federation standard and dimensions of 36.6m x 18.3m.</p> <p>Orientation of the courts is to minimise the impact of sun and associated glare. The orientation of the longitudinal axis of the courts is to be in the range 10 degrees west of magnetic north to 30 degrees east of magnetic north. All courts are to have the same orientation.</p> <p>Playing surfaces are not to be adversely affected by shade and wind.</p> <p>Walkways between courts are to be of suitable width and provided with some shading.</p> <p>Wheelchair tennis to be accommodated.</p>
Base construction	<p>All necessary geotechnical investigations to be undertaken.</p> <p>Concrete base to be designed to suit subgrade conditions with all necessary control joints and falls. The slab is to accommodate all applied loads. Base is to be certified by a structural engineer. Refer to Section 16.8 for additional civil engineering requirements.</p>
Slab finish	<p>Helicopter trowel with a light broom finish.</p>
Court surface	<p>The quality of the playing surface is to be of a standard suitable for junior, state, national and international tennis events.</p> <p>Surface to be Tennis Australia approved cushioned acrylic hardcourt surface, 5mm thick, installed in accordance with the manufacturer's specification.</p> <p>The surface is to have the following International Tennis Federation play characteristics:</p> <ul style="list-style-type: none"> • Surface Pace Rating - 30-40, medium (CS 01/01); and • Energy (Shock) Absorption - 7%-15% (CS 04/01).

Surface tolerance	<p>Court surface is a single plane, tilted to drain surface water to appropriate drains/collection point.</p> <p>Fall of 1 in 100 required to drain the surface. Direction of falls is usually diagonal but may be altered to meet site drainage requirements.</p> <p>Surface tolerance (deviation from plane) is 3mm (maximum deviation) under a 3m straight edge placed anywhere on the court.</p>
Fencing	<p>Each court to be individually fenced, with top and bottom rails, to 3m height at ends and taper down from the baseline to 1.2m between courts.</p> <p>Perimeter fencing to courts to accommodate wind/sight screens as required. Refer also to Section 16.9.5.</p> <p>All courts to have access for maintenance as well as players/patrons between courts.</p>
Lighting	<p>To a standard for international play in accordance with <i>AS 2560.2.1-2003 Sports lighting - Specific applications - Lighting for outdoor tennis</i> and Tennis Australia Technical Instruction – Lighting for Outdoor Tennis. Refer also to Section 16.2.9. No light poles shall be placed in front of spectator areas.</p> <p>Horizontal illuminance shall be minimum average 1,000 lux at 1.0m above the surface for total playing area.</p> <p>Light spill, including to adjacent residential areas, shall be minimised or light pollution from the tennis court lighting addressed in accordance with BCC requirements.</p>
Court Equipment	<p>All necessary infrastructure and equipment.</p> <p>Net posts shall be Grand Slam Equipment TNPCSAT or equivalent and installed in court sleeves. Court sleeves for doubles play.</p> <p>Nets to be full-drop, international size (post to post), equivalent to Yonex or Josan EA3 soft fabric head band and double mesh at top. Centre strap and anchor to be included. Nets for doubles play and singles sticks.</p> <p>All required moveable seats and equipment for umpires, officials and players.</p> <p>Heavy duty wind/sight screens to perimeter fences where appropriate.</p> <p>Waste receptacles to each court.</p>
Services	<p>Power and water outlets to all courts in suitable positions as well as all necessary infrastructure and head-end equipment for the Public Address and CCTV systems.</p>
Warranty period	<p>The warranty period for court bases and surfaces will be 12 years.</p>

7.2 Show Courts

Table 7 Show Court Requirements

Standard and dimensions	Two (2) courts of an International Tennis Federation standard and dimensions of 41m x 20.5m. Other requirements as per match courts in Table 6
Base construction	To match court requirements in Table 6.
Slab finish	To match court requirements in Table 6.
Court surface	To match court requirements in Table 6.
Surface tolerance	To match court requirements in Table 6.
Fencing	To match court requirements in Table 6, with ability to remove for unobstructed views from temporary spectator stands.
Lighting	To meet requirements for commercial television broadcasting (including high definition television) and all international tennis standards including the United States Tennis Association, Tennis Australia, International Tennis Federation, Association of Tennis Professionals and Women's Tennis Association for international standards of play. Refer also to Section 16.2.9. No light poles shall be placed in front of spectator areas. Horizontal illuminance shall be a minimum average 2,000 lux at 1.0m above the surface for total playing area or in accordance with the standards above (whichever is the greater). Vertical illuminance shall be in accordance with above international television broadcasting standards. Infrastructure capacity for 50% additional future upgrade of lighting levels. Light spill, including to adjacent residential areas, shall be minimised or light pollution from the tennis court lighting addressed in accordance with BCC requirements.
Court Equipment	To match court requirements in Table 6. Court sleeves and nets for singles and doubles play, and all necessary infrastructure for the installation of temporary electronic scoreboards. Wet weather covers for the total court surface, a suitable storage area close to the show courts and all necessary handling equipment.
Services	Data, communications, power and water outlets in suitable positions and all necessary infrastructure and head-end equipment including that required for the public address, CCTV and hearing impaired systems.
Warranty period	To match court requirements in Table 6.

8 TRAINING COURTS

8.1 Court Construction, Finishes, Services and Equipment

Table 8 Training Court Requirements

<p>Standard and dimensions</p>	<p>Four (4) clay courts of an International Tennis Federation standard and dimensions of 38m x 18.3m.</p> <p>Two (2) double grass courts of an International Tennis Federation standard and dimensions of 38m x 27.9m.</p> <p>Orientation of the courts is to minimise the impact of sun and associated glare. The orientation of the longitudinal axis of the courts is to be in the range 10 degrees west of magnetic north to 30 degrees east of magnetic north. All courts are to have the same orientation.</p> <p>Playing surfaces of the courts are not to be adversely affected by shade and wind.</p> <p>Walkways between courts are to be of suitable width and provided with some shading.</p> <p>Wheelchair tennis to be accommodated.</p>
<p>Court usage</p>	<p>It is intended the training courts will be used for:</p> <ul style="list-style-type: none"> • specialist training and development of elite players and squads; • practice during major tournaments and events such as Davis Cup ties; • small scale 'niche' tournaments; and • occasional commercial hire.

Grass courts	<p>All necessary geotechnical investigations to be undertaken.</p> <p>Grass courts are to be prepared as detailed below.</p> <p>A sub-base drainage system is to be installed consisting of trenches, 3m apart, 250mm deep and 300mm wide, placed along the length of the courts. Slotted 100mm agricultural pipe is to be placed in the drainage trenches and backfilled with 10mm rock. A geotextile filter fabric is to be used to prevent blockage of the sub-base drainage system. The agricultural pipe is to be linked into the appropriate drains/collection point.</p> <p>The base profile covering the sub-base drainage system is to consist of the following layers:</p> <ul style="list-style-type: none"> • 150mm of 10mm rock; • 50mm of coarse washed sand; and • 200mm of a medium grade clay-loam soil of a suitable pH and clay content lightly compacted in 50mm stages. <p>The soil layer is to be laser levelled to maintain a fall of 1 in 100 required to drain the surface. Direction of fall is usually diagonal but may be altered to meet site drainage requirements.</p> <p>Turf the court surface using a 'Legend' variety turf approved by Tennis Australia which is suitable for the Brisbane climate, the State Tennis Centre environment and the intended use of the courts.</p> <p>Obtain specialist advice from a soil scientist on a suitable turf growing medium and submit for approval by the State.</p> <p>Turf medium to be test certified by a National Association of Testing Authority accredited laboratory to establish compliance with the agreed requirements.</p> <p>Court surface is a single plane, tilted to drain surface water to appropriate surface drains/collection point.</p> <p>Commence topdressing and rolling the courts following establishment.</p> <p>Commence mowing, irrigation and fertilising the courts following establishment.</p>
Clay courts	<p>All necessary geotechnical investigations to be undertaken.</p> <p>Design and construction to be provided to Boral's NUclay Tennis Courts Construction Specification available from Boral Tennis, Western Australia (Ph.08 9273 5107).</p> <p>Court surface is a single plane, tilted to drain surface water to appropriate surface drains/collection point.</p> <p>Fall of 1 in 300 required to drain the surface. Direction of fall is usually diagonal but may be altered to meet site drainage requirements.</p> <p>The surface material is to be suitable for the Brisbane climate, the State Tennis Centre environment and the intended use of the courts. Consideration needs to be given to the surface's fineness ratio, affinity to moisture and grading of particles.</p> <p>Design and construction are to minimise maintenance and loss of clay surface.</p>

Fencing	<p>Each court to be individually fenced, with top and bottom rails, to 3m height at ends and taper down from the baseline to 1.2m between courts, except for the clay courts where all external fences are to be 3m high and installed with wind screens to protect the court surface from wind erosion.</p> <p>Perimeter fencing to courts to accommodate wind/sight screens as required. Refer also to Section 16.9.5.</p> <p>For clay courts, perimeter edging around the entire perimeter of the court area.</p> <p>All courts to have access for maintenance as well as players/patrons between courts.</p>
Lighting	<p>To standard for international play in accordance with <i>AS 2560.2.1-2003 Sports lighting - Specific applications - Lighting for outdoor tennis</i> and Tennis Australia Technical Instruction – Lighting for Outdoor Tennis. Refer also to Section 16.2.9.</p> <p>Horizontal illuminance shall be minimum average 1,000 lux at 1.0m above the surface for total playing area.</p> <p>Light spill, including to adjacent residential areas, shall be minimised or light pollution from the tennis court lighting addressed in accordance with BCC requirements.</p>
Court equipment	<p>All necessary infrastructure and equipment.</p> <p>Net posts shall be Grand Slam Equipment TNPCSAT or equivalent and installed in court sleeves. Court sleeves for doubles play.</p> <p>Nets to be full-drop, international size (post to post), equivalent to Yonex or Josan EA3 soft fabric head band and double mesh at top. Centre strap and anchor to be included. Nets for doubles play and singles sticks.</p> <p>All required moveable seats and equipment for umpires, officials and players.</p> <p>Heavy duty wind/sight screens to perimeter fences where appropriate.</p> <p>Waste receptacles to each court.</p>
Services	<p>Power and water outlets to each court in suitable positions and all necessary infrastructure and head-end equipment including that required for the public address and CCTV systems.</p>
Irrigation system	<p>A fully built-in automatic watering system, linked to the Building Management System, to the clay and grass courts.</p>
Warranty period	<p>The warranty period for court bases will be 5 years.</p>

9 TENNIS COURT SEATING AND SHADE

Seating for the show, match and training courts shall be provided in the following configuration:

- permanent seating - shaded seating for six spectators for each match and training court;
- temporary seating (space allocation only) – for at least 300 seats adjacent to each of the two show courts; and
- relocatable seating - modules of permanent seating capable of being reconfigured and relocated to form two banks, each of 150 tiered seats, adjacent to the show courts (utilising the spaces identified above).

10 TENNIS QUEENSLAND STATE OFFICE

10.1 General

The Tennis Queensland State Office will be accommodated within the overall State Tennis Centre and with access from a dedicated entry. During major event mode, a significant portion of Tennis Queensland's State Office will be available to accommodate event management. During major events, the office will accommodate approximately 10 additional officials through the use of facilities including reception areas, board and meeting rooms and general office spaces.

The facility shall be provided to a standard as indicated in Section 19 including all floor coverings, ceilings, demountable partitions, built-in fittings and fitments, any required window drapes and all required services. Tennis Queensland will provide all loose furniture, workstations and loose equipment. (Refer to Section 13 for details on the provision of furniture and equipment generally.)

The following accommodation is required for the Tennis Queensland State Office.

10.1.1 Reception/Foyer

A waiting and reception counter area within a foyer with access to other parts of the administrative facilities.

Tennis Queensland currently holds a range of memorabilia including equipment and trophies intended for display. The foyer area is to include cabinets and wall space for display of memorabilia.

10.1.2 Board Room

A separately enclosed room, capable of accommodating a board meeting of up to 20 people, finished to an appropriate standard to suit the operation of the Tennis Queensland Board. The room is to have the capability of being adapted on a temporary basis for the administration of major events.

10.1.3 CEO Office

A separate enclosed office for Tennis Queensland's Chief Executive Officer.

10.1.4 Individual Offices

Two (2) enclosed offices.

10.1.5 General Office

Open plan office for 11 staff with workstations and a work area within the general office to provide facilities for copying, fax machine and general administration.

10.1.6 Office Store

A general store area of 20m² for stationery, publications and equipment.

10.1.7 Meeting Rooms

Access is required to rooms in the State Tennis Centre for day-to-day meetings and workshops. These would be accessed by Tennis Queensland State Coaches and other staff. The rooms are to have the capability of being adapted on a temporary basis for the administration of major events.

10.1.8 Visitors/Staff Toilets

Dedicated male, female and people with disabilities (PWD) toilets for staff and visitors of the Tennis Queensland State Office.

10.1.9 Tea Preparation

A tea preparation area with access to office areas including sink, water boiler, and power for refrigerator and microwave oven.

10.1.10 Car Parking

Fourteen (14) car parks for the exclusive use of staff and visitors with access controlled by key cards and intercom.

11 ADMINISTRATIVE FACILITIES**11.1 General**

Administrative facilities to assist in the effective, efficient and economical management of the State Tennis Centre.

The facility shall be provided to a standard as indicated in Section 19 including all floor coverings, ceilings, demountable partitions, built-in fittings and fixtures, furniture and equipment and any required window drapes and all required services and as a complete 'turn key' provision to enable the facility to be fully operational immediately upon handover.

11.2 Venue Management

The following accommodation is required for venue management for day-to-day operations.

During major event mode, a significant portion of the venue management facilities will be available to assist with the overall management of the event and are to accommodate approximately 5 additional officials.

11.2.1 Entry/Foyer

A spacious area shall be provided to suit the needs of users during both normal and event modes. It should accommodate seating for waiting and access to reception and other parts of the administrative facilities. Direct access should be provided to a training/multipurpose area (see Section 12.15). If this area caters for access to the Tennis Queensland State Office, entry to the State Office is to be distinct.

11.2.2 Venue Manager Office

Adjacent to the entry, an enclosed office for the State Tennis Centre Manager. This is the key facility for the day-to-day management of the State Tennis Centre.

11.2.3 User Interface Area

This area is to provide the first point of contact for users of the centre. Venue management will staff this area during opening hours.

A reception area with a counter that can accommodate three inquiry points for direct interaction with public entering the venue management areas.

11.2.4 General Office

A general office area to accommodate four workstations with appropriate partitioning and a work area within the general office to provide facilities for copying, fax machine and general administration.

11.2.5 Office Store

A general store area for the needs of venue management.

11.2.6 Tea Preparation Area

A tea preparation area with access to office areas including sink, water boiler, refrigerator and microwave oven.

11.2.7 Visitors/Staff Toilets

Dedicated male, female and PWD toilets to suit the number of staff and visitors expected during operations.

11.2.8 Function Rooms

Three adjoining function rooms capable of being opened by way of operable walls into one space so as to seat 200 people in a dining configuration. This facility may be made available for use by other parties on a commercial basis. Access to the toilets, tea preparation area and catering holding areas is to be provided.

An additional storeroom adjacent to the function rooms to store good quality dining chairs and tables for 50 people.

11.2.9 Viewing Area

A covered area where players and tournament officials can gather and view the show courts.

11.2.10 Medical and Emergency Services Room

A permanent room to accommodate first aid facilities and two couches. The room is to have direct access to an emergency vehicle parking area with clear passage for a wheeled stretcher without intervening stairs.

11.2.11 Car Parking

Ten car parks for the exclusive use of staff and visitors with access controlled by key cards and intercom.

11.2.12 Management Systems

All infrastructure and equipment required to operate the electronic management systems. These systems are further detailed in Section 16. The venue management facility shall be provided with the following electronic management systems to assist in operations:

- a comprehensive computer based Facility Asset Management Register;
- an integrated Management Information System;
- a Building Management System;
- access control system for specific entry doors and boom gates;
- a public address system to all parts of the centre; and
- a CCTV system that provides views to all courts and public areas.

11.3 Commercial Facilities

The following accommodation is required for the commercial tenants.

11.3.1 Professional Shop

A retail 'pro shop', accessible by patrons of the State Tennis Centre and the general public, which will:

- cater for sales and display of tennis accessories;
- offer a racket re-stringing service; and
- include a cash handling/treasury facility.

The developer is to provide a good quality commercial standard fit-out and all service infrastructure.

11.3.2 Café - Food and Beverage Service

A café, accessible by patrons of the State Tennis Centre and the general public, which will provide café style facilities with servery and associated dining area. The café shall cater for the preparation and sale of light meals and snacks with a front of shop servery opening onto an eating area that has a combination of internal and external covered eating areas.

During major event mode, the café will service a number of areas including a players' lounge/dining area. Refer to Section 14.1.1.

The permanent kitchen/preparation area/scullery of the café which will be sized to accommodate normal mode requirements will be capable of being temporarily extended and upgraded during major event mode to accommodate the increased demand for food and beverage services. The space is to be capable of being upgraded with temporary fit-out to a commercial standard and expanded by utilising temporary 'plug-in' containers for such uses as cool and cold rooms, reheat ovens and dishwashers. The space is to feature appropriate permanent services to facilitate its major event mode operation and include a service delivery area for vehicles.

The developer is to provide a complete, fully fitted out and equipped café to a good quality commercial standard to accommodate the requirements of normal operations as well as all necessary services infrastructure to accommodate major event requirements. The café shall be designed to the satisfaction of the State.

12 SUPPORT FACILITIES

12.1 Players' Accommodation

12.1.1 Players' Change Rooms/Toilets

Toilets, showers and change rooms in accordance with the *Building Act 1975*. Notwithstanding the provisions of the Act, the following minimum facilities are to be provided to cater for 40 males and 40 females.

Male players:

- 4 Water Closets (WCs);
- 1 wheelchair accessible WC;
- 1 urinal;
- 6 showers;
- 1 wheelchair accessible WC/shower; and
- 5 hand basins.

Female players:

- 6 WCs;
- 1 wheelchair accessible WC;
- 6 showers;
- 1 wheelchair accessible WC/shower; and
- 5 hand basins.

Thirty lockers for male players and 30 lockers for female players. At least 75% of these lockers are to be sufficiently large to accommodate the size of bags currently used by players. The lockers are to have an appropriate mix of horizontal and vertical lockers and be of robust design and construction to withstand heavy usage. The lockers must be able to be accessed only by the user of the locker.

A space allocation for an additional 20 large lockers each for both male and female players for major events.

This facility shall be able to be closed to the public during a major event, for sole use by VIPs and players and be capable of functionally integrating with other VIP and player facilities while maintaining circulation separate from the public.

12.2 Media Facilities

12.2.1 Camera and Lighting Gantry

A means to install, access and service cameras and lights in the centre court including spotlights and effect lighting.

12.2.2 Interview Areas at Court Level

Facilities for a 'flash' interview zone, at centre court level, in the dedicated players' service access to allow journalists to interview players as they exit the court. This area shall be able to accommodate television crews, lights and a sponsor's logo backdrop, while providing direct cabling provision in a small equipment closet.

12.3 Equipment and Control Rooms

Facilities to house equipment and control systems. Refer to Section 16 for requirement details.

12.4 Cleaning

A centralised storeroom for storage of bulk cleaning supplies adjacent to maintenance areas.

12.5 Drinking Fountains

Strategically placed drinking fountains to the concourse, public food courts and show, match and training courts.

12.6 Gymnasium

A well equipped and fully fitted out gymnasium dedicated for the specific training of up to 12 tennis squad members. All gymnasium equipment is to be provided by the developer. The fit-out and design of the gymnasium will be developed in consultation with the State.

The gymnasium needs to be located close to the players' change rooms.

12.7 Loading Area

A loading area for food and general service deliveries, located appropriately to suit the various needs of the centre.

12.8 Maintenance/Grounds Keeping

12.8.1 Office

A secure office for two people, centrally located with access to all parts of the State Tennis Centre.

Locker/shower/toilet room for staff, including:

- 2 full-height lockers, 300mm wide;
- 1 unisex shower stall; and
- 1 unisex WC and 1 wash basin.

12.8.2 Store

Storage space for grounds keeping materials and equipment located in close proximity to the centre court to allow direct access by grounds keeping vehicles. Other provisions shall include:

- overhead roller doors to enclosed area;
- ventilated area for parking of tractors and other motor driven equipment;
- separate secure chemical storage room; and
- separate drive in bin areas for the storage and separation of court material (e.g. granulated clay, sand, loam and top soil).

12.8.3 Chemical Shower

An emergency shower adjacent to the chemical storage room to enable personnel to wash off contaminants in an emergency.

12.8.4 Maintenance Area

Workspace and equipment for plumbing, carpentry, electrical and general maintenance including space for workbenches for small item workings by all trades and storage for immediate materials only. The space shall have:

- a ceiling height of approximately 3.5m, noting there is no requirement for forklift access; and
- provisions for water, portable compressed air and three-phase electrical service.

12.8.5 Maintenance Storage

A storage room for storing materials and supplies with a locked space for electrical, general maintenance, directional signage and banners/flags. The locked space shall include warehouse-type storage shelving.

12.9 Perimeter Security and Access Points

The entire perimeter of the State Tennis Centre is to be appropriately secured during both modes of operation, with separate entries for vehicles and pedestrians.

12.10 Public Telephones

Public telephone booths on the public concourse and adjacent to the main entry points. These shall be free standing units and located within reveals at designated locations.

12.11 Toilets

Toilet facilities are to include the following:

- permanent toilets shall be distributed around the State Tennis Centre for use by the general public and players. As a minimum, toilets for 3,000 spectators adjacent to centre court to 100% of the requirements of the *Building Act 1975* for males and 150% of requirements of the *Building Act 1975* for females;
- in each toilet facility, a baby change room with unisex accessibility and one ambulatory toilet cubicle;
- separate male and female field toilets shall be located for easy access by players adjacent to match and training courts;
- public toilets and players and officials' toilets shall have a cleaner's closet as appropriate;
- service connections for temporary toilet facilities positioned in strategically located areas capable of accommodating these facilities;
- toilet facility entrances and exits fitted with lockable gates/doors to allow for their closure during non-peak events;
- all toilet fittings shall be durable and user friendly;
- toilet cubicle doors to be fitted with falling hinges, to return to open position after use;
- cold water by means of press action spray taps;
- soap and paper towel dispensers;
- stainless steel slab urinals within the male toilet facilities;
- individual mirrors behind vanity basins;
- the Public Address system shall be capable of broadcasting match commentary within the toilet facilities, an override function shall enable emergency and information broadcasts, and allow for muting to the toilet areas if required; and
- all pipework, conduit and cisterns within public toilet facilities are to be concealed.

Unisex family/PWD toilet rooms shall be distributed around the State Tennis Centre and in close proximity to the centre court's wheelchair platforms. These rooms shall house a standard WC pan with horizontal side grab rail, a hand wash basin, wall mounted proprietary baby changing table; with additional space for a nappy disposal bin and feeding chair.

12.12 Serviced Areas for Temporary Overlay Facilities

Where spaces are allocated for temporary overlay facilities, services such as power, water and data are to be provided in ground at point of connection thereby avoiding trip hazards during major event mode. The design shall ensure permanent facilities are positioned to allow temporary overlay facilities to be located in the most effective manner.

12.13 Shade Coverage

Sufficient shade coverage throughout the State Tennis Centre to ensure the comfort of patrons.

12.14 Storage for Centre Court

Storage facilities adjacent to centre court for temporary fencing, corporate partitions for boxes, court covers (as specified in Section 6.1), sports equipment, entertainment equipment and rigging equipment associated with a major event.

12.15 Training/Multipurpose Area

A 300m² open sided multipurpose roofed area adjacent to venue management for a number of activities including junior coaching on a half court, presentations and for general gathering during state and age championships.

Adequate lighting to this area and all necessary fittings and equipment.

12.16 Waste

The facility shall accommodate the collection, storage and disposal of all waste material generated at the State Tennis Centre and provide:

- appropriately designed bins located close to all food and beverage and bar outlets, including provision for recycling receptacles;
- bins located away from the main congestion points with clearly identifiable signage;
- space for industrial bins appropriately secured, shaded and screened, away from circulation routes; and
- access for collection of waste and industrial bins.

13 FURNITURE, FITTINGS AND EQUIPMENT

13.1 General

Loose furniture, fittings and equipment to all facilities necessary for the efficient functioning of the State Tennis Centre in normal mode. The State Tennis Centre is to be fully operational immediately upon handover. The only exception is the Tennis Queensland State Office, where Tennis Queensland will provide loose furniture and equipment as detailed previously.

Facilities include, but are not limited to:

- centre, show, match and training courts;
- administrative facilities;
- support facilities;
- venue maintenance equipment; and
- courts maintenance equipment.

The level of provision of maintenance equipment shall be consistent with the Maintenance Plan outlined in Section 22.2.

13.2 Items Supplied by Developer

The furniture, fittings and equipment to be supplied by the developer include, but are not limited to, the following types of items (note the list does not apply to the Tennis Queensland State Office):

- loose furniture for all office administration, function rooms, store rooms, player rooms and other areas, such as desks, chairs, tables, credenzas, storage cabinets, shelving, lockers, cabinets, workstations, compactus, filing cabinets, mobile pedestals and office bins;
- audiovisual equipment such as televisions, monitors, VCRs, DVDs and scoreboards;
- computer servers of sufficient capacity to service the needs of the State Tennis Centre in all modes of operation including administration facilities;
- all facsimile and photocopiers;
- computers to workstations and desks, Microsoft Office software and appropriate venue management software. All servers, cabling, routers and hubs to nominated locations;
- all communications equipment including telephone handsets, intercoms and two way radios;
- all kitchen utensils, such as pots, pans, trolleys and loose items;
- all workshop equipment and machinery;
- medical fitout including equipment, medical stores, ambulatory access and first aid kits;
- electrical appliances for tearooms and other areas, such as toasters, jugs, refrigerators, microwaves and dishwashers;
- food service delivery equipment, including crockery, cutlery and thermo insulated trolleys to suit;
- gardening and grounds maintenance equipment, including loose above ground irrigation systems, ride-on and self propelled lawnmowers, rollers, hoses, hand tools and safety equipment suitable for management and upkeep of the State Tennis Centre grounds;
- all specialist maintenance equipment to maintain courts, including but not limited to for grass courts - a cylindrical mower (ride-on/roller/reel-type), a household mower, weed-cutter, spraying and fertilising equipment, scarifying and aerating equipment, a self-propelled 300kg sectional roller, lute planer, brushes and hoses;
- specialist workshop equipment such as industrial hearing aid stations, eyewash stations, general safety equipment tool boards, chemical bunds, fatigue matting, close proximity lighting and industrial loose hand tools;
- materials handling equipment such as a pallet jack, electric buggies and trailers and stores trolleys;
- miscellaneous equipment such as flags, vacuuming and cleaning machinery, safe(s), player dining and sporting equipment;
- court equipment to International Tennis Federation standards, including posts, full drop nets (for singles and doubles), umpire chairs, officials' chairs and players' chairs and water removers (squeegees); and
- all other items necessary for the operation of a State Tennis Centre, including its support facilities.

The above equipment is to be supplied, delivered and installed to the project program as a 'turn key' operation. All equipment is to be new and good commercial quality, suitable for a State Tennis Centre.

13.3 Items Supplied by Others

The following categories of items are indicative of those to be provided by others:

- loose office consumables;
- filing systems for administration;
- all administration uniforms;
- initial consumables such as initial food stocks, canteen stocks, cleaning materials and chemicals, stationery and disposable paper products;
- motor vehicles;
- automatic teller machines;
- vending machines; and
- accounting systems and all point-of-sale register systems.

14 MAJOR EVENT MODE

The following facilities are required for a major event. As indicated in Section 1.3, these facilities are to be provided using a mix of the following:

- dedicated permanent facilities;
- reconfiguration of flexible permanent facilities; or
- temporary overlay facilities.

Provide adequate services such as power, telephone, facsimile, data, and hydraulic services as required for these facilities to operate in major event mode.

14.1 Players

14.1.1 Players' Lounge/Dining Area

This area shall be separate from public, media and officials areas and able to be closed off from adjoining areas. It shall accommodate up to 100 players in dining mode (buffet style) and contain a reception/desk for handling specific requests from VIPs and players.

A lounge area capable of being subdivided into separate team lounge areas during a team event, with the dining area being shared.

14.1.2 Drug Testing

A drug testing facility, positioned off the dedicated players' service access to centre court, with:

- dedicated access to a toilet;
- reception area; and
- processing area.

14.1.3 Prize Money Area

An area for security of all prize money with a private area adjacent for presentation of prize money to players.

14.2 Officials

14.2.1 Ball Persons Area

A ball persons area for 30 people, with access to lockers, toilets and showers.

14.2.2 Officials Rooms

An officials' lounge for 35 officials with access to lockers, toilets and showers.

14.2.3 Tournament Director

An area for use by the Tournament Director and an assistant.

14.3 Broadcast

14.3.1 Outside Broadcast Vehicle Compound

An area for Outside Broadcast (OB) vans.

Consultation shall be undertaken with the primary broadcaster for final requirements. The OB vehicle compound shall:

- be used as a vehicle park for articulated expandable production vehicles and support vehicles;
- have a cable route from the compound and parking areas into centre court and media areas that allows the easy laying of cables;
- have a dedicated switchboard and meter;
- provide space for temporary standby power generation or secure alternative power source to the OB vehicles and television production areas as well as to the sport lighting; and
- be well lit.

Adequate parking for use by the press in this area.

14.3.2 Storage

Storage facilities for television media use located in close proximity to the OB vehicle compound.

14.3.3 Television and Radio Broadcast Booths and Television Presentation Studio

Facilities for television and radio broadcast booths, including all required services infrastructure (e.g. power, phone and data outlets), as described in Section 16.

Television and radio broadcast booths to centre court located in an optimum position. Adequate services (power, communication, data and broadcast cabling) available or easily accessible for four television presenters and four radio commentators.

A presentation studio to accommodate four television presenters (located at the front of the broadcast booth), camera operators and sound engineers, for a total of ten people.

14.3.4 Television Crew Room

A television crew room for up to 20 people in close proximity to the OB vehicle compound, incorporating tea/coffee making facilities, dining tables and chairs.

14.4 Media

14.4.1 Media Entry/Circulation

Separate access and circulation pathways for the media.

14.4.2 Media Workroom

A media workroom to accommodate 80 journalists where the media will write their copy, fitted out with continuous work counters having access to power/data/phone outlets at the writing counter and chairs.

At least 30 lockers in or adjacent to the workroom.

14.4.3 Photographers Facilities

Facilities to accommodate 20 photographers and their equipment next to the media workroom in close proximity to centre court. The photographers' facilities are to include:

- 10 individual work areas with services including power, phone and data lines; and
- 20 lockers, for secure storage of a range of goods and equipment for the use of photographers.

On the centre court, the following facilities:

- a suitable area on both sides of the court, which are out of the line of sight of spectators, for courtside photographers; and
- a number of camera positions for photographers and television cameras distributed around centre court with easy access to broadcast connections.

14.4.4 Press Conference Area

A conference area for interviewing players and coaches in an 'official' setting, to be fitted out with lighting, backdrop and facilities for reporters and cameras. The press conference area shall be in proximity to the players' change rooms.

The area shall accommodate 80 people (seated), lighting and cameras, which may be set up on an elevated platform at the rear. An elevated platform shall be located at the front, to contain a desk/podium and chairs for interviewees. These platforms shall be portable to allow for greater flexibility. This is primarily a facility for the written press, but will also be used for broadcast purposes.

Acoustic surfaces to allow for high quality sound transmission for television and radio broadcast. Fifty direct cable connections located in the rear for television broadcasting.

Storage space is required within or close to the press conference area to store seating, equipment and the elevated platforms. A separate entry into the press conference area for players and coaches.

14.4.5 Press Interview Area

An interview area with lighting, backdrop and adequate facilities for reporters and cameras for one-on-one interview of players. The interview area will be in proximity to the players' change rooms.

14.4.6 Press Area

A press area within the media workroom. This area shall be located so it can be adequately serviced to enable the serving of hot and cold food and beverages to photographers, press and radio broadcasters. It may also be used as the expansion space for the media workroom.

Accommodation and services in the press area include:

- dining tables and chairs for up to 50 journalists; and
- a bar and servery point within the lounge.

14.5 Catering

14.5.1 Food and Beverage Concessions

Services for concession outlets with the following requirements:

- the location of the various areas that make up the catering system shall ensure easy distribution of food and beverages;
- the size of the various areas shall be assessed to ensure the operation can function effectively, especially during peak times;
- the location, distribution and design of food and beverage outlets shall maximise access and use by capacity crowds during short intervals;
- the needs of people with disabilities shall be fully met through access routes to various eateries and appropriate counter heights;
- public food courts associated with each concession area with appropriate shade structures where spectators are able to mix and consume products purchased;
- location of queue lines shall be considered when planning concession stands, to minimise congestion on the public concourse; and
- mounting brackets and power and cable connection points for television monitors to food areas, positioned to allow viewing by spectators and players.

14.5.2 Catering Office

A catering administrative office with access to staff lockers and change rooms located in close proximity to the main catering facilities and a briefing room.

14.5.3 Sponsors Lounge/Dining Area

Dedicated accommodation for sponsors, including dining and socialising spaces, located in close proximity to centre court to cater for 75 people.

14.5.4 VIP Hospitality Lounge/Dining Area

Dedicated accommodation for VIP guests, including dining and socialising spaces, located in close proximity to centre court to cater for 100 people.

14.5.5 Corporate Hospitality

Dedicated accommodation for corporate hospitality, including dining and socialising spaces. The facility shall be located in close proximity to centre court and cater for up to 250 people.

14.5.6 Catering Support

An appropriately sized kitchen/preparation area as an extension to the café preparation area (refer to Section 11.3.2).

14.6 Other**14.6.1 Briefing/Muster Area**

A briefing/muster area for up to 30 people for briefings by event management, security and police.

14.6.2 Ceremonial

Flag poles for the centre court, main entries and other strategic positions on the site to reflect the relative importance and nature of the event.

14.6.3 Security Office

A security office suite located in close proximity to the main entry of the State Tennis Centre, to be used for coordinating security personnel and stewarding operations on event days. It must be able to accommodate the coordination of all emergency services.

14.6.4 Police Room

A police office and interview room.

14.6.5 Ticket Office

A ticket office, with a separate pre-paid window, located close to the entry turnstiles without causing congestion.

14.6.6 Event Management Work Room

A room, including photocopy and facsimile machines, for general administration, player accreditation, coordination of transport arrangements and allocation of cars to players.

14.6.7 Re-string Area

An area with two workstations for the re-stringing of players' rackets.

14.6.8 Massage/Physiotherapy Areas

Massage/physiotherapy facilities for use by both male and female players, located adjacent to the players' change rooms, able to be subdivided into two spaces and capable of accommodating a total of four massage tables.

14.6.9 Volunteers Facilities

A contact/registration point for approximately 200 volunteers with access to toilets and lockers.

14.6.10 Staff Facilities (catering, security and event)

Access for staff to toilets and showers.

14.6.11 Banking/Automatic Teller Machines

Services and facilities for the installation of two ATMs on the public concourse and adjacent to the main entry point.

14.6.12 Medical Suite

A medical suite for the treatment of injured players and spectators. Direct access to an emergency vehicle parking area is required from the medical suite with a clear passage for a wheeled stretcher without intervening stairs.

14.6.13 Laundry Service Room

A room adjacent to the players' change rooms for the handling, collection, distribution and storage of towels and linen.

14.6.14 Cleaning/Storage Room

A room for storage of cleaning equipment, chemicals and other miscellaneous equipment (e.g. spare bins).

14.6.15 Merchandising Concessions

Allocation of space to cater for the temporary location of merchandising stands. A central concession is required for the full range of products that will be available together with appropriate change rooms in addition to an 'outreach' concession position adjacent to the main entry point. Merchandising stands will:

- require electricity, data and telephone connection points; and
- provide for the sale of programs and merchandise.

14.6.16 Turnstiles

Infrastructure to accommodate the provision of temporary turnstiles, including in-ground sleeves for posts, power and data points. Separation of pedestrians and vehicles, particularly where public queuing occurs.

14.6.17 VIP and Media Entrances

A separate entry for VIPs, sponsors, media and staff.

15 SIGNAGE

15.1 General

Coordinated identification, directional, safety or other required signage systems to enable staff and visitors to locate facilities easily and find individual areas, inside the buildings, without assistance and to follow procedural or operational requirements. Signage shall:

- be provided to all facilities associated with the State Tennis Centre;
- be unobstructed and located in positions that are readily visible. Sign layout and graphics shall be able to be easily understood, including by people with disabilities;
- convey a unified corporate image for the State Tennis Centre site; and
- be in accordance with the Government's *Corporate Identity Manual*.

A design for a logo for the State Tennis Centre shall be provided for the approval of the State.

15.2 State Tennis Centre Identification

A prestigious illuminated sign at the main entrance, clearly indicating the entrance to the State Tennis Centre as appropriate and giving directions to different facilities.

15.3 Sponsor Signage

Space and frames for installation of appropriate temporary signage for events. Signage to be provided by others.

15.4 Facility Signage

The following signage is to be provided:

- safety signage to meet statutory requirements;
- all courts clearly identified;
- centre court seating numbered as specified in Section 6.2 and each entry to centre court shall show the seat numbers accessed via that entry;
- directory boards prominently located at the entry level to every building and in the foyer of each floor;
- individual rooms identified with an appropriate number;
- within the State Tennis Centre site, and on each building's floor, signage and map boards to direct people around the site and include authorised entry requirements;
- signage to all public toilets that allows interchanging of male and female signs in order to alter the ratio of male to female toilets for particular events. Signage to be vandal and graffiti resistant; and
- clearly identified routes to public transport facilities.

16 BUILDING SERVICES

16.1 General

16.1.1 Provision for Building Services

All required building services and equipment for the State Tennis Centre, including services infrastructure for any temporary accommodation to allow the State Tennis Centre to function efficiently in major event mode.

Power, water and telephone/PABX separately metered for venue management, the Tennis Queensland State Office, commercial tenants and media facilities. Security systems and other appropriate systems provided separately for the Tennis Queensland State Office, venue management and commercial tenant facilities.

Appropriate accommodation, facilities and services for the installation of all required plant and equipment for all building systems in a logical systems layout. This shall include appropriate space around equipment to allow access in accordance with occupational health and safety requirements for safe operation and maintenance of all items of equipment.

A services reticulation system installed, where possible, in common trenches or corridors for ease of access.

16.1.2 Site Services Infrastructure

The developer shall be responsible for:

- ensuring the availability and capacity of all site services required to deliver services throughout the State Tennis Centre in all modes of operation;
- ensuring all normal mode services installations are concealed with adequate provision for access to permit testing, servicing and maintaining system items, whether located in plant rooms, duct risers, walls or ceilings;
- providing a building management system so lighting, mechanical services, energy management services and other building services are centrally controlled, managed and monitored; and
- providing the spare and standby site service capacities and space required for major events, and for future expansion and upgrades as required.

A 'front-end' control for the Building Services systems to the venue management office for day-to-day control.

16.1.3 Plant Accommodation

Plant and equipment that requires regular service maintenance is to be located outside of occupied accommodation. Discrete plant rooms and centres are to be provided to best suit the services and building solutions. Such plant accommodation is to offer easy access for maintenance and allow for periodic replacements of all plant. Such plant accommodation shall be located to ensure minimum noise and vibration transfer to occupied accommodation. In addition, air intakes and exhausts are to be located so re-circulation does not occur.

Buildings shall be designed so identified service routes are provided for distribution of pipework, ductwork, cabling systems and the like. Major distribution routes located above operational areas are to be avoided.

16.1.4 Internal Service Distribution

Services shall be distributed within facilities to provide flexibility for future expansion, change of use and ease of maintenance. In planning the distribution of services, consideration is to be given to the following:

- voids and risers must be sized to facilitate maintenance;
- the services to each functional area shall be capable of being isolated so they can be disconnected without cutting supplies to other areas;
- internal services distribution to take into account the performance requirements, operational flexibility and internal services availability;
- build in allowances for routing of temporary services required in major event mode (e.g. television cabling, auxiliary power reticulation and communications requirements); and
- conduits for net cams and for power and communications to umpire/scorer locations for centre court and show courts.

16.2 Electrical Services

16.2.1 General Requirements

Power and lighting systems are to meet the relevant Australian Standards or specified standards and have the capacity to meet current and future needs of the State Tennis Centre in all modes of operation.

The site is bounded by electricity supply authority easements and may include power line infrastructure which produces electromagnetic fields (EMFs). The design shall allow for identification and mitigation of all possible EMFs from this source.

Ensure all electrical, electronic and digital components and systems meet the requirements of the Australian Communications Authority and comply with relevant Australian Standards for electromagnetic compatibility to prevent electromagnetic interference.

16.2.2 Spare Capacity

Table 9 outlines the spare capacity requirements for electrical service elements to be incorporated in the works for major event mode. Unless specified otherwise this shall be the minimum capacity for each facility.

Table 9 Spare Capacity Requirements – Electrical Service Elements

Service	Spare Capacity Required (in Major Event Mode)
Electrical cables	50% load
Cable tray space and conduits	100% space
Switchboard circuits (electrical and control boards)	50% space and load

16.2.3 Switchboards

All main switchboards and distribution boards are to be located in secure locations so they are not exposed to vandalism and tampering.

To facilitate maintenance with minimal disruption, separate distribution boards are to be provided for the centre court and each floor level for general lighting and power, and where required to supply miscellaneous items of equipment.

16.2.4 Emergency Power Supply

Essential on-site emergency standby power generation to the centre court and normal mode facilities and operations to the satisfaction of the State.

'Plug in' capability (connection points, cable access, switchgear and controls) for connection of mobile generators to provide standby power to facilities in major event mode.

16.2.5 Uninterruptible Power Supplies (UPS)

An on-line UPS installation for security systems and essential building services control systems.

16.2.6 Lightning Protection

A lightning protection system of a type that does not utilise building fabric or construction elements to conduct downstroke currents to earth.

16.2.7 Internal Lighting Requirements

Unless specified otherwise, the lighting systems throughout the facilities shall be in accordance with the general recommendations of *AS 1680 Interior lighting* series of standards and with the specific recommendations of other appropriate standards in the *AS 1680.2 Interior lighting* series of standards.

The requirements of *AS 1680.2.2-1994 Interior lighting - Office and screen-based tasks* into the lighting design for computer workstation areas, are to be incorporated.

Low energy fluorescent lighting employing high frequency control gear for long life, reliability and low maintenance. However, in public circulation spaces, waiting areas and other public areas, the lighting installations may be used to create visual interest and complement the interior design of the space.

16.2.8 Exterior Lighting

All necessary exterior lighting to enhance the external environment after dark and ensure security and safe access at all times including lighting to the perimeter of the site to minimise vandalism and unauthorised entry to the site at night. Lighting levels shall, at all times, support the security and safety objectives of the State Tennis Centre. All accessible external luminaires to be vandal resistant.

16.2.9 Court Lighting

Artificial lighting for all tennis courts. The lighting shall comply with Tennis Australia's Technical Instruction – Lighting for Outdoor Tennis which is currently being reviewed, *AS 2560.1-2002 Sports lighting - General principles, AS 2560.2.1-2003 Sports lighting - Specific applications - Lighting for outdoor tennis* where not in conflict with other international tennis lighting codes nominated herein.

Lighting shall comply with the following requirements:

- those specified in Sections 6.1, 7.1, 7.2 and 8.1;
- standby lighting for centre court in case of power failure;
- individual switching of courts;
- switching for reduced illumination levels to 50% of designed levels of illuminance;
- timing control linked to the Building Management System;
- a uniformity coefficient of 0.75;
- Light Loss Factors of 0.75 to be allowed on all floodlighting calculations; and
- 10% of the number of each type of tennis court light globes are to be provided as spares.

16.2.10 Emergency Lighting

A single point unit system with addressable computer based monitoring of all emergency and exit lights.

16.2.11 Lighting Controls

Automatic control for all interior and exterior lighting. Switching programs are to be determined in coordination with the State.

16.3 Fire Services

16.3.1 Overview

Fire safety is to be in accordance with the requirements of the *Building Act 1975*, Statutory Fire Codes and the Queensland Fire and Rescue Service (QFRS).

A fire safety strategy document must be delivered to the State one month prior to handover of the work, including fire strategy drawings to demonstrate compliance with the relevant regulations. This document shall cover all aspects of fire safety, fire fighting and building management. The

developer shall ensure the facilities have been appraised by competent persons prior to occupation for compliance with the Fire Code and all relevant legislation.

Direct links for emergency evacuations are required between the fire alarm monitoring system and the Fire Rescue Authority. There shall also be provision in the public address systems to communicate with all occupied areas across the State Tennis Centre.

16.3.2 Fire Alarms

A microprocessor based addressable fire detection and alarm system that serves the entire State Tennis Centre site in addition to the requirements of the *Building Act 1975*.

The system shall be selected on the basis of its whole of life cost, taking into account the initial capital cost and the cost of software upgrades.

16.3.3 Fire Hose Reels

Notwithstanding the concession available within the *Building Act 1975*, hose reels are to be located in all positions as required by the QFRS. External fire hose reels are to be key locked with a master key approved by QFRS.

16.4 Telecommunications Services

16.4.1 Overview

Information and Communications Technologies (ICT) infrastructure cabling applies to all facilities associated with the State Tennis Centre. The developer shall be responsible for the full service provision of ICT infrastructure cable as defined in the referenced standards and shall:

- ensure the ICT infrastructure cabling is designed and installed to maximise its use for other building services applications such as electronic security and building management systems;
- investigate the use of blown fibre technology to assist in minimising the cost of future bandwidth capacity upgrades. Results of the investigation and the subsequent proposal are to be presented to the State for consideration before proceeding with any works;
- utilise AS3080 Category 6 Unshielded Twisted Pair (UTP) cabling for all 4-pair UTP installation and utilise OM3 optical fibre cabling for all optical fibre installations;
- provide for a site-wide single infrastructure cabling design;
- consider the establishment of future communication services economies through the merger of voice, video and data services into a single 'integrated communications' environment;
- ensure adequate bandwidth availability to accommodate the needs of emerging technologies and applications;
- ensure the Tennis Queensland State Office, venue management and commercial tenants services networks remain physically separate;
- ensure data security, privacy and access restrictions are addressed; and
- include a hearing impaired loop to centre and show courts.

16.4.2 Standards and References

Equipment and installation shall comply with all relevant Acts and Regulations, Standards and Codes, with more stringent requirements being applied where conflict arises between the requirements, standards and references.

16.4.3 Wall Frames

Integrated cabling system with punch down wall frames at building distributor locations. These frames shall be free standing or wall mounted units that provide for full backbone cable termination with 20% spare capacity within the installation. Lightning protection to be installed on all frames utilised to terminate lead-in or intra-building cabling services.

16.4.4 Lead-in Cabling

Lead-in cabling services from a minimum of one telecommunications service provider. These services shall include redundant dual connections points of Single Mode Optical Fibre (SMOF) from the Telstra network and copper voice grade cable connected to the local Telstra exchange for voice services and exchange line services.

The incoming telecommunication carrier services shall terminate in the site equipment room, which shall house the main distributor. The developer shall determine the requirements, and provide services, for all required systems.

16.4.5 Distributor

An integrated cabling service distributor within a designated equipment room for the State Tennis Centre. The distributor shall be configured as the central hub of all copper and fibre ITC cabling services for the State Tennis Centre.

16.4.6 Building/Floor Distributors

Building and floor distributors throughout the centre to allow for access to the ITC cabling infrastructure throughout the State Tennis Centre. These distributors shall include copper voice grade cabling, Cat. 6 UTP cabling, single-mode and/or multi-mode optical fibre cabling, coaxial cabling and shielded audio system cabling. Each distributor shall be clearly labelled and accessible by authorised users only.

16.4.7 Telecommunication Closets

Dedicated, secure telecommunication closets throughout the centre including a dedicated closet for the media with 100-150 outlets. Distributors shall be located within closets. Sufficient space shall be provided to allow maintenance access to the distributors (wall frames and equipment racks) as well as the ability to mount additional security and communications services at these locations.

Efficient cable access and pathways between adjacent telecommunications cupboards in both the vertical and horizontal planes, and install the necessary facilities for an efficient mobile phone and wireless network system.

16.4.8 PABX

PABX services for the Tennis Queensland State Office, venue management, commercial tenants and media and provide for the use of Voice-Over-IP (VoIP) in the PABX service design. In addition to possible connection of the PABX system to the Wide Area Network (WAN), provision shall be made for connection to the carrier's network.

16.4.9 Integrated Cabling Systems

An integrated cabling service throughout the State Tennis Centre that shall include the provision of copper voice grade cabling, Cat. 6 UTP cabling, single-mode and/or multi-mode optical fibre cabling, coaxial cabling and shielded audio system cabling. This integrated cabling system to be capable of supporting data, security, audiovisual and building maintenance service communication protocols within the integrated cabling platform. A minimum 20% spare capacity for all identified services to allow for future upgrade and expansion.

16.4.10 Pit and Pipe Systems

A pit and pipe facility to enable the installation of permanent and temporary cabling services throughout the State Tennis Centre. This system is to be configured with access points located at all identified communication locations, including centre and show courts and media operation areas. Empty conduits with draw wires, installed in addition to essential conduit runs to enable the temporary installation of additional communication, security and audiovisual services during major events.

16.5 Security Services

16.5.1 Overview

Security systems for the State Tennis Centre to be developed with the State and incorporate a risk assessment report. Complementary method statements shall be developed in conjunction with the State. The systems design shall comply with AS 2201 Intruder Alarm Systems standards.

The security systems shall play a key role in safeguarding the physical security of assets and the personal safety of all State Tennis Centre users.

The electronic security systems shall include, but not be limited to, the following:

- CCTV surveillance;
- pedestrian and vehicular access control systems;
- keyless door lock management;
- intruder detection systems;
- equipment alarm monitoring;
- site-wide paging system; and
- digital intercommunication systems.

16.5.2 Security Management System (SMS)

Interfaces between the fire, electrical and building management systems to report critical alarms via the security systems to security personnel. Critical alarms include, but are not limited to, fire alarms, generator fault alarms and critical plant failures. The security system shall incorporate a PC based, networkable SMS located within venue management. This system to be connected to off-site monitoring stations for out-of-hours or elevated alert situations.

16.5.3 Intruder Detection

Detectors shall be installed in inconspicuous locations and configured for minimal false alarm activation and maximum area coverage.

16.5.4 Closed Circuit Television

A CCTV system for the surveillance of selected areas in and around the State Tennis Centre during both normal and major event modes. The CCTV monitoring system shall be configured to provide networked distribution to enable security monitoring at nominated locations.

Pan and zoom functions for entry points, public concourse, centre and show courts and other areas of risk.

The CCTV system shall meet, as a minimum, the Government Guidelines for CCTV and be configured for:

- crowd surveillance (major events);
- security patrols (normal and major event modes);
- public safety activities in external areas (normal and major event modes);
- high risk areas and those areas where intercommunication is provided;
- digital recording, provided to record access to areas containing valuable and attractive items and for high risk areas; and
- camera installation to be coordinated with the external lighting installation and landscaping elements.

16.5.5 Access Control Systems

An access control system to form a sub-system of the security management system to:

- control access between public areas and staff/participant areas;
- control access to service roads and parking areas to authorised people at all times;
- segregate event areas from common usage areas during normal operating times;
- monitor access to secure areas;
- provide crowd management services during major events; and
- include panic buttons/duress alarms in appropriate positions.

16.5.6 Intercommunication

Digital intercommunications at all controlled access points to allow contact with the local monitoring and control station. These intercom points shall be contactable from both the central security office during major events and venue management offices. Intercommunication shall be duplex in nature and be capable of integration to the CCTV system for intercom instigated camera call-up. All intercom slaves shall be vandal resistant models located in secure fittings.

A site-wide Radio Frequency (RF) two-way radio system shall be provided to enable communication between mobile security staff during major event and normal modes. This system shall comprise both base station and mobile radio services. The base station shall be located within venue management.

Areas in the State Tennis Centre sensitive to high frequency radio signals shall be fitted with cabled monitor stations connected directly to the base station repeater equipment.

16.6 Audiovisual Services

16.6.1 Overview

Distributed audiovisual services are to be provided throughout the State Tennis Centre. Audiovisual services to facilitate the requirements of the media, corporate entertainment services, facility management services and patrons. These services shall include:

- public address systems to centre and show courts for crowd announcements, umpire calls and media advertising;
- public address systems to adjacent courts and facilities for patron messages;
- dedicated entertainment facilities within corporate entertaining areas, client offices and catering facilities;
- distributed television and video information services throughout public and management areas; and
- connection to media areas for bi-directional distribution of audiovisual services between media facilities and internal building, service areas.

16.6.2 Main Public Address System

A digital, zoned public address system suitable for announcements, music and media information. Identified 'zones' within the centre to include centre and show courts, each match court, corporate/VIP areas, public concourse, public and player marshalling areas and locker rooms. Input to this system shall be made possible from media control locations, centre and show courts, umpire/scoring locations and venue management offices.

The developer to perform acoustic testing of the State Tennis Centre's design to the satisfaction of the State to ensure appropriate positioning, powering and signal treatment is performed to ensure the volume and tonal quality of the public address system is adequate for the purpose. The system design shall ensure all patron areas are supplied with even volume and tone throughout adjacent zones.

16.6.3 Audiovisual System to Sponsors/Players/VIPs Lounge and Entertaining Areas

Entertainment facilities (all infrastructure and equipment) to:

- all function rooms;
- players' lounge and entertaining area;
- sponsors' lounge and entertaining area; and
- VIPs' lounge and entertaining area.

These functions are to have the following services and equipment:

- independent public address systems;
- large screen projection services;
- master antenna television (MATV) systems;
- lecterns and podiums;
- audiovisual source devices such as VCRs, DVD/CD players and RF tuners; and
- automated control systems.

Audiovisual infrastructure to the corporate hospitality area for corporate box holders, including dining and socialising spaces.

16.6.4 Master Antenna Television System

The MATV infrastructure shall distribute all freely available off-air digital and analogue television channels and be capable of carrying pay television and in-house television services.

All facilities including corporate areas, hospitality lounges, player lounges, dining rooms, function rooms, event management rooms, reception and other public areas are to have access to MATV.

Television monitors are to be provided within all permanent facilities for use by the public, players, venue management and officials.

Easy access is to be provided to MATV cabling for serviced areas that will be used for temporary overlay facilities in major event mode.

16.6.5 Broadcast and Media Facilities

Broadcast and media facilities shall require easily accessible cable connections and pathways for the temporary installation of audio, video, data and power cabling during major events. These facilities shall also be provided with floor distributors connected to the integrated cabling system to enable the distribution of media communications throughout the venue.

16.6.6 Scoreboards

One dedicated centrally-controlled good quality electronic scoreboard to display immediate match details for centre court. The scoreboard is to be configured to display player names, teams/country and progressive match scores, but not configured for video replay. Provide all associated hardware and support software.

The scoreboard is to be connected to the umpire/scoring locations via the integrated cabling system to enable information downloads during match-play. Information displayed upon the scoreboard is to be of sufficient size for the information to be read from the rear seats of the opposite stands by a patron with normal eyesight.

Allowance for the installation of two temporary video-wall scoreboard monitors, and associated control equipment, for centre court during major events.

16.7 Mechanical Engineering

16.7.1 Vertical Transportation

Where required a passenger lift shall be provided to facilitate access for people with a disability, staff, players and VIPs. Service lifts shall be provided where required.

The developer shall undertake a lift traffic analysis to ensure the proposed lifts are adequate. Where lifts are necessary they shall be in accordance with *AS 1735.12-1999 Lifts, escalators and moving walks - Facilities for persons with disabilities* and *AS 1428.2-1992 Design for access and mobility - Enhanced and additional requirements - Buildings and facilities*.

Lift capacity shall be appropriate for the intended usage. The minimum call waiting time shall not exceed 30 seconds in up peak mode, based on a car load of 70% rated capacity.

Lifts shall include the provision to be access controlled.

16.7.2 Stairways

Stairways distributed throughout the State Tennis Centre, from the ground level to the upper floor, allowing for both public and service use. Stairs associated with the centre court shall conform to limits set down in the United Kingdom "Guide to Safety at Sports Grounds" (The Green Guide).

16.7.3 Climate Control and Ventilation

Mechanical services shall be flexible and be able to cope with building function changes, in normal or major event modes. Mechanical services should be designed so unoccupied areas of a building can be shut down.

16.7.4 Indoor Environment Requirements.

Air conditioning or equivalent effective passive energy technology to provide minimum indoor comfort conditions (as shown in Table 10) controlled within the following tolerances in:

- office spaces;
- function rooms, meeting rooms and internal dining areas;
- internal public spaces;
- change rooms, gymnasium and physiotherapy rooms; and
- the professional shop.

Table 10 Minimum Indoor Comfort Conditions

Required Comfort Conditions	Dry Bulb Temperature	Relative Humidity
Summer	23°C +/- 1°C	55% nominal
Winter	21°C +/- 1°C	N/A

Humidification is not required for comfort air conditioning. The plant must continue to operate when summer ambient conditions exceed design ambient conditions.

16.7.5 Sustainable Low Energy Design

The ecologically sustainable development requirements set out in this document shall be complied with to maximise the use of passive climate control technology.

16.7.6 Air Conditioning Systems

Air conditioning systems shall be consistent with the State's aim of achieving a value for money solution while achieving the environmental conditions that apply to each functional space.

To optimise energy use, the design of such systems shall incorporate:

- an air conditioning system zoned for use during core hours and at other times;
- 100% outside air economy cycle and purge cycle;
- efficient air filters;
- variable speed drive technology to minimise fan and pump energy use;
- fan and pump selections to maximise motor efficiency;

- occupancy sensors to provide air conditioning set back to intermittently occupied areas such as meeting rooms;
- carbon dioxide monitoring and motorised dampers in areas of high occupancy such as function rooms; and
- efficient and economic after hours operation of individual operational or administration areas.

In areas where air conditioning is provided, the design shall:

- comply with the Q-Mech reference specification for all air conditioning services;
- provide adequate zoning to cater for varying loads. Each facade of the building shall be treated as a separate external thermal zone with separate internal thermal zones; and
- utilise a dedicated single or multi-zone air handling unit to achieve zoning for each office area or part floor of the building serving a number of constant air volume thermal zones with similar outside air load requirements.

16.7.7 Mechanical Ventilation Systems

Mechanical ventilation systems shall be provided for all areas not air conditioned or provided with adequate natural ventilation. These areas include, but are not limited to, toilet areas, tea rooms, store rooms and equipment and maintenance rooms.

Supply air shall be provided to all areas at not less than six litres per second per square metre of floor area or eight air changes per hour, whichever is the greater.

16.7.8 Hot Water Systems

Hot water systems that are adequate to cope with predicted demand in major event mode.

16.7.9 Gas Services

All work shall conform to the requirements of *AS 5601-2002 (AG 601-2002) Gas installations* and Q-Mech reference specifications for industrial, natural and LP gas.

16.7.10 Cold Rooms

All necessary cold rooms for the efficient operation of food and beverage facilities during normal mode and all necessary services infrastructure to accommodate temporary cold rooms during major event mode. Cold rooms are to conform to the relevant Q-Mech reference specification for cold rooms.

16.7.11 Noise Control

Noise and vibration shall be controlled from the mechanical plant and associated services to ensure the working conditions detailed in Table 11 are provided.

Table 11 Noise Level Requirements

Occupied Areas	Noise Ratings
Function and meeting rooms	NR35
Interview and board rooms	NR35
General offices	NR40
Kitchen and café	NR40
Foyer, circulation and amenities	NR45
Locker and tea rooms	NR45
Workrooms, maintenance and workshop	NR50

Noise levels shall be measured in accordance with *AS 1055.2-1997 Acoustics - Description and measurement of environmental noise - Application to specific situations*. All equipment, including condensers, refrigeration equipment and exhaust fans shall be positioned and be acoustically treated to achieve sound levels on the site boundary and adjoining areas in accordance with the requirements of the Environmental Protection Agency (EPA).

16.8 Civil Engineering

16.8.1 General

All work is to be suitable for the purpose intended and designed and constructed in accordance with relevant Australian Standards and statutory requirements, while incorporating the requirements defined in this section.

The developer is to undertake all necessary investigations including contour and detail surveys, geotechnical investigations and modelling to substantiate satisfactory performance of the final design.

Unless otherwise nominated, the civil engineering infrastructure shall have a design life of 50 years.

16.8.2 Critical Design and Construction Element

The design and construction of the tennis court sub-bases are critical to the performance of the concrete slab, which form the base for the cushioned acrylic hardcourt surfaces, and are critical to the performance of grass and clay surfaces. Refer to Sections 6, 7 and 8 for details. The court surface installation shall be carried out strictly in accordance with the product manufacturer's recommendations. The courts and associated infrastructure shall be fully documented and detailed for construction. The use of performance elements in construction subcontracts is not permitted.

In particular, the State requires progressive demonstrable assurance that the process, scope, analytical modelling and final design of the total court environment will reliably meet the performance criteria documented in this document. The physical long term performance criteria of the courts and the warranty of this performance are detailed in Schedule 6 of the Development Agreement.

The design process is to include the use of analytical models that can be shown to reliably predict the bounds of court surface behaviours arising from constructional, environmental and seasonal variations in the foundation material. This is to include the investigation and modelling of the occurrence and extent of court surface irregularities of all courts, including the grass and clay courts.

The design process is to pay particular attention to soil/structure interaction, surface and sub-surface drainage and the interaction with landscaping.

While the responsibility for the investigation, design, construction and performance of the courts remains solely with the developer, the State is to be informed of progress and incremental outcomes of the methodology for the design and construction of the tennis courts.

The developer shall forward to the State a concise collated report containing all information relevant to the tennis court design and construction process at the following stages:

1. geotechnical investigation brief and consultant's response prior to commissioning the modelling consultant;
2. geotechnical report on site investigations and report on modelling results at design development stage; and
3. construction documentation drawings for the tennis court precinct including hard and soft landscaping, drainage design, foundation and substructure design, and detailed drawings of the tennis court slab construction. This shall include the final specification of the construction and testing program for the court foundation, structure and precinct.

16.8.3 Specifications

Natspec specifications and standards are to be used for documentation of the work.

Notwithstanding the requirements of the referenced standards in Natspec, compaction testing shall be carried out at a rate of at least one test per 150 m² per layer in the areas of the courts.

16.8.4 Certification

The civil design is to be carried out and certified for compliance with the requirements of this document and relevant standards by a practising Professional Engineer registered under the *Professional Engineers Act 2002*.

Provide level 1 supervision, as outlined in Appendix B of *AS 3798-1996 Guidelines on earthworks for commercial and residential developments* for the placement of all filling and material including sub-grade, base materials and reinforced concrete on the site. At completion of the works, provide certification from a Geotechnical Testing Authority verifying that the placement and compaction of fill complies with the requirements of the specification.

16.8.5 Earthworks

All functional facilities shall be designed within the State Tennis Centre site to withstand the adverse impact from storms up to a minimum 100 year flood event or such other event as may be required by relevant acts and codes. An analysis of the site and catchments is to be carried out to justify site development levels to the satisfaction of the State.

The site development shall give due regard to surface drainage and sanitary drainage provisions. No ponding of stormwater is to occur over any part of the proposed development platforms. Ensure that overland stormwater flows are adequately catered for and are directed away from buildings and courts.

The minimum general surface gradient shall be not be less than 1 in 100 on hard surfaces areas and 1 in 80 on grassed areas. The earthworks platforms and overland flow paths shall take due account of the planned ultimate development of the site.

16.8.6 Roadworks

Accesses and carpark areas shall conform to *AS 2890.1-1993 Parking facilities - Off-street car parking*, *AS 2890.2-2002 Parking facilities - Off-street commercial vehicle facilities* and with local authority requirements.

Roads are to have a design life of 20 years without maintenance being required during the nominated design life. All roads and paved areas shall be concrete kerbed.

16.8.7 Stormwater Drainage

The stormwater drainage system shall be in accordance with the "Australian Rainfall & Runoff" (ISBN 1858256878) issued by the Institution of Engineers Australia and the "Queensland Urban Drainage Manual (1994)" (ISBN 1875513744) available from the Department of Natural Resources, Mines and Energy. Roofwater systems shall comply with *AS/NZS 3500.3:2003 Plumbing and drainage - Stormwater drainage*, *AS 3500.3.1-1998 National plumbing and drainage - Stormwater drainage - Performance requirements*, *AS/NZS 3500.3.2:1998 National plumbing and drainage - Stormwater drainage - Acceptable solutions* and associated standards.

Surface flows within building precincts shall not generally exceed 30m without drainage to underground pipe systems. Open channels are not to be used except in special circumstances and to the approval of the State.

Design parameters for the stormwater drainage system are provided in Table 12.

Table 12 Stormwater Drainage System – Design Parameters

Design Frequencies Building Zone	Piped drainage	20 yr Average Recurrence Interval (ARI)
	Overland flow	50 yr ARI
Downstream	Piped drainage	10 yr ARI
	Pipe Velocities (at design flow)	Maximum 3.6m/sec (5.0m/sec @ 50yr ARI)
	Minimum	1.2m/sec
Minimum Pipe Size		225mm
Minimum Cover		600mm (roadways)
		450mm (elsewhere)

16.9 Structural Engineering

16.9.1 General

The design and construction of structural engineering works shall comply with the requirements of all statutory requirements, all relevant Australian Standards and the specific requirements of this document.

16.9.2 Certification

The structural design is to be carried out and certified for compliance with the requirements of this document and the *Building Act 1975* by a practising Professional Engineer registered under the *Professional Engineers Act 2002*.

The certification of the final construction for compliance with the structural design and structural sufficiency is to be in accordance with the requirements of the *Building Act 1975*.

16.9.3 Footings

Design and construct footings to suit ground conditions, the nature of the building and the service function, and to minimise settlement, while considering the nature and susceptibility to damage of surrounding buildings and of any equipment, plant or instrumentation in surrounding buildings.

16.9.4 Durability

The design of the facilities shall comply with the following durability requirements:

- design life - 50 years;
- atmospheric/exposure classification - comply with *AS 3600-2001 Concrete structures series* of standards and *AS/NZS 2312:2002 Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings*;
- an exterior environment shall be defined as any area which might be subject to condensation, have contact with ground or rain water, or possibly be subject to crevice corrosion. Unlined external soffits shall be considered as an exterior environment;
- inaccessible elements or elements unlikely to be routinely inspected. Ensure durability for specified life expectancy;
- accessible elements which would normally be maintained. Notwithstanding all else, design for first maintenance of not less than 15 years;
- stainless steel - passivate or provide other protection suitable for localised environmental conditions, as applicable;
- use galvanised fixings as a minimum requirement, if the building structural solution incorporates any precast concrete, ensure detailing of adequate durability for the building's life expectancy; and
- the minimum thickness of structural steel elements (excluding purlins and fascias) in an exterior environment shall be 3mm.

16.9.5 Dead and Live Loads

Buildings and external features such as fencing, to withstand all possible loadings including wind loads, dead and live loads, earthquake loads, dynamic loads and vibrations.

16.10 Hydraulic Services

The scope of hydraulic services for the State Tennis Centre includes the following.

16.10.1 Cold Water

Unless otherwise advised, water supply shall cover the reticulation of water to and within the site from a local authority main at the site boundary, while also covering the installation of fire mains in accordance with all applicable Acts and Codes.

Necessary infrastructure upgrades, including additional storage to meet domestic supply and fire fighting needs.

Separate metering for Tennis Queensland, venue management and commercial tenants (the café and professional shop) as required, and backflow prevention devices to local authority requirements.

Reticulation within the buildings is to deliver water to all fixtures and fittings as required, interfacing at the point of entry to each building of the water supply mains. At this point of connection an in-line gate valve, strainer and pressure limiting valve is to be fitted to reduce any excessive pressures in the domestic supply main. Isolating valves for each building in appropriate locations.

The materials for use in this development are to be Type 'B' copper with silver soldered capillary welded fittings and joints. All fittings shall be factory manufactured and purpose made items. Isolation valves would be control, gates and butterfly valves as and where the design requires.

Where appropriate, backflow protection shall be installed within the installation in accordance with *AS/NZS 3500:2003 Plumbing and drainage*. Backflow prevention devices shall be used for irrigation purposes.

16.10.2 Hot water

As per the cold water, hot water pipe material shall be installed in Type 'B' copper tubing with silver soldered capillary welded purpose manufactured fittings and joints. Appropriate pipe insulation shall be provided.

16.10.3 Sewerage

The design shall provide the sewage/sanitary reticulation infrastructure and disposal system associated with servicing the facility and:

- design parameters are to be in accordance with "Guidelines for Planning and Design of Sewerage Schemes" Volume 1 (ISBN 0646091395) and Volume 2 (ISBN 0724252037) available from the Department of Natural Resources, Mines and Energy, and/or provisions of the *Plumbing and Drainage Act 2002*; and
- the design of the sewerage discharge is to comply with local authority requirements in every respect.

16.10.4 Trade Waste

Trade wastes generated shall be collected with conventional primary treatment applied to these wastes prior to their discharge to the sewage system, in accordance with the relevant Acts and Standards. All exposed materials shall be chrome plated for ease of cleansing.

Generally all in-ground trade waste drainage pipes would be installed in vitrified clay pipes with the pre-treatment vessels having an internal and external two pack epoxy coating to extend the life span of these items.

16.10.5 Fixtures and Fittings

All fixtures and fittings are to have the Australian Standards approval (MP52).

16.10.6 Relevant Standards, Codes and Practices

The works relating to the hydraulic services shall be undertaken with the latest editions and versions of the Australian and New Zealand Standards, Codes and relevant Acts where applicable including *AS/NZS 3500:2003 Plumbing and drainage*.

17 ENVIRONMENTAL

17.1 General

Environmental best management practices shall be employed to ensure environmental obligations of the State and its representative agencies are maintained in the development and delivery of the State Tennis Centre. Ecologically sustainable development principles, as outlined in this section, are to be adopted in the development and delivery of the State Tennis Centre.

A suitably qualified, accredited and experienced environmental specialist shall undertake the necessary environmental assessments, management and compliance of all works relating to the planning, design, documentation, statutory approvals, construction, training and commissioning of the State Tennis Centre.

17.2 Legislative Compliance

The development and all associated works for the State Tennis Centre shall be undertaken to protect the site and external environment in compliance with the provisions of all relevant Commonwealth, State and BCC requirements and relevant Australian Standards and Codes.

17.3 Environmental Management

17.3.1 General

Environmental responsibilities to be fulfilled in the project works and undertaken to the satisfaction of the State shall include, but not be limited to, the following requirements:

- take due regard of the findings and give consideration to the recommendations, as appropriate, of previous investigations and studies undertaken on the site;
- undertake as required a detailed Environmental Impact Assessment and any additional studies or investigations, as applicable, of the designated State Tennis Centre area as part of the overall development of the Tennyson Riverside Development site and external infrastructure requirements. This shall include any native title issue or claims, cultural heritage issues, traffic and transportation studies and site contamination;
- undertake responsibility for all consultation with stakeholder representatives and public consultation as required;
- prepare and provide ongoing development during the project development of an environmental management plan for the State Tennis Centre in conjunction with the development of the overall site and ensure such requirements can be practically implemented in the operation and maintenance of the State Tennis Centre;
- address environmental impacts and elements associated with the area allocated for the State Tennis Centre as part of the overall development to ensure environmental compliance, ecological sustainability and best practice environmental management are implemented;
- address site contamination and rehabilitate and/or integrate management of any contaminated areas within the nominated State Tennis Centre area;
- ensure construction environmental management plans are developed as appropriate by the developer and/or each sub-contractor detailing environmental management measures to be employed in the works;
- ensure soil erosion and sediment control plans, contamination management plans and other specific management plans, as required, are developed for all site development activities in conjunction with respective environmental and/or construction management plans; and
- arrange environmental training for the State, its nominated representatives and venue manager on commissioning and handover of the works associated with the State Tennis Centre including all manuals, environmental management plans, as constructed information and any other associated environmental and ecologically sustainable development documentation. Refer to Section 22 for details.

The developer shall be fully responsible for the environmental management of the area designated for the State Tennis Centre, including site rehabilitation and establishment, following commissioning and during the defects liability period.

17.3.2 Contaminated Areas

Any areas or development activities involving contaminated materials shall be specifically addressed, including management plans, management controls and procedures, approvals and disposal arrangements to control containment, removal, remediation and/or rehabilitation of contaminants as appropriate.

Any retention of contaminated materials on the designated State Tennis Centre area shall be subject to the approval of the State should complete remediation or removal not be viable.

17.4 Ecologically Sustainable Development Principles

The design and construction of the State Tennis Centre is to adopt the following ecologically sustainable development (ESD) principles.

17.4.1 Energy Conservation

Principles to adopt include:

- passive solar design principles to maximise day-lighting and passive heating opportunities;
- energy efficient design principles to minimise active heating and cooling requirements;
- the specification of energy efficient equipment and lighting systems, including:
 - optimising opportunities to use renewable energy sources and incorporate renewable energy technologies wherever possible;
 - the provision of sub-metering for substantive energy uses within the State Tennis Centre and for general lighting and power distribution boards; and
 - peak energy demand reduction systems to reduce demand on electricity infrastructure.

Water Conservation

Principles to adopt include:

- the facilitation of opportunities for on-site treatment and reuse of rain water, grey-water and sewage systems; and
- minimisation of water consumption.

Minimisation of Fossil Fuel Usage associated with Transport

Principles to adopt include:

- provision of easy access to public transport for all users of the State Tennis Centre; and
- encouraging cycling by providing bicycle storage facilities.

Preservation of Natural Features

Principles to adopt include:

- avoidance of development on any sections of the State Tennis Centre site that have high ecological value; and
- minimisation of disturbance of local ecosystems on the State Tennis Centre site during construction and operations.

Building Materials Conservation

Principles to adopt include:

- minimisation of building materials that have damaging ecological effects during harvesting, manufacturing and construction;
- minimisation of the use of building materials with high embodied energy;
- subject to the overriding goal to minimise whole of life costs, minimisation of life cycle costs through using materials and equipment requiring minimal maintenance and with maximised expected useful life; and

- maximisation of the use of recycled materials.

Minimisation of Waste

Principles to adopt include:

- maximisation of building longevity through creation of flexible and readily adaptable designs;
- provision of facilities to assist waste separation into reusable, recyclable, compostable and landfill components;
- minimisation of construction waste going to landfill through a material tracking system; and
- incorporation of organic and water-based site waste disposal systems into landscaping design.

Enhancement of Indoor Environment Quality

Principles to adopt include:

- improvement of levels of daylight for building users;
- minimisation of all work spaces exposed to glare and excessive lighting;
- where air conditioning is used, ensuring the system allows for the supply of fresh outside air and that fresh air intakes are located away from sources of external pollution;
- undertaking thermal modelling at design stage to assess thermal comfort and evaluate appropriate service options;
- use of low volatile organic compounds products to reduce the detrimental impact on occupant health from material off-gassing and sources of internal air pollutants;
- provision of ambient internal noise levels in accordance with *AS/NZS 2107:2000 Acoustics - Recommended design sound levels and reverberation times for building interiors*; and
- prudent avoidance of EMFs. Target for magnetic fields of less than 0.4 μ T in occupied areas.

17.4.2 Documentation

The developer is to submit to the State documentation which shall include, but not be limited to, the following:

- environmental assessment and other specialist studies of the State Tennis Centre site or associated with the allocated site;
- contamination investigations, site management plans, validation reports, suitability statements and other approvals relevant to ongoing use and any contamination management of the State Tennis Centre site;
- environmental management plan for the State Tennis Centre site including interim and final plan on commissioning and handover;
- records of all statutory approvals;
- schematic and developed design reports at the conclusion of the schematic and developed design stages on environmental elements, control systems, and ESD systems and initiatives. The developer is to satisfy the State that ESD principles are being satisfactorily adopted;
- detailed design drawings on all environmental and ESD systems incorporated in the facility; and
- detailed 'as constructed' records of all environmental management and ESD systems on completion of works and commissioning.

18 EXTERNAL AREAS AND LANDSCAPING

This section defines the functional requirements for all external areas associated with the State Tennis Centre including the landscape requirements.

18.1 Landscaping Objectives

The landscaping objectives of the State Tennis Centre are to:

- provide a contemporary parkland setting that combines functional tennis centre needs with those of the local community;
- integrate and respond to the architectural design and to create a local sense of place that retains and reinforces the surrounding landscape character;
- provide a high quality formal entry and approach to the centre that adequately caters for the access and egress from the centre and a range of community activities and major events;
- provide local recreation opportunities with functional and visual linkages with adjoining areas and development;
- improve streetscapes adjoining the State Tennis Centre in terms of screening, quality and general appearance. Planting should also provide shade to paved and seating areas from the summer sun;
- integrate public art into the landscape;
- use soft and hard landscape materials selected to reduce long-term maintenance;
- integrate buildings, courts, shade structures, seating, rubbish bins, lighting, soft and hard landscape elements into a cohesive quality environment; and
- minimise court maintenance (e.g. from leaf dropping and root problems);
- minimise soil erosion potential;
- use indigenous flora;
- maximise use of recycled compost, soil conditioners and mulches; and
- maximise the reuse of all rock and topsoil emanating from excavations works on the site.

18.1.1 Specific Aspects to be Considered

In designing the landscape treatment, the following are to be addressed:

- pedestrian flows;
- pavements;
- access for all;
- recreational opportunities;
- vehicular access and drop-off areas;
- crime prevention through environmental design;
- illumination;
- adjoining streetscapes;
- walkway infrastructure; and
- landscape planting and horticultural requirements.

18.1.2 Pedestrian Flows

Provide open pedestrian approaches to the State Tennis Centre with unimpeded and unrestricted visual and physical access to the entry points. Specific requirements include:

- maintenance of clear sight lines and visibility;
- avoidance of changes in levels wherever possible, with paving and wall heights to direct pedestrians to and into the State Tennis Centre; and
- avoidance of any obstructing items to pedestrian flow.

18.1.3 Pavements

All paving surfaces shall be high quality, durable and capable of sustaining anticipated traffic loads. Specific requirements include:

- stable paving material with no movement in or cracking of paving surface;
- application of non-slip surfaces;
- pavements that drain freely and efficiently;
- pavement colours that minimise the impact of glare, reflection and heat loading;
- capability to sustain vehicular loads in appropriate areas for service and emergency vehicles;
- capability to be easily replaced or repaired over time;
- large areas to be broken up with trees and planting to modify the site microclimates; and
- flexible multipurpose paved areas designed to accommodate the variety of activities occurring in these areas.

18.1.4 Access for All

All external areas shall provide for full accessibility in a safe manner. Specific requirements include:

- avoidance of dangerous grade or level changes without suitable marking or warning;
- consideration given to dual use of any level changes for seating opportunities;
- conformity with all Australian Standards for accessibility;
- pavement treatment catering for visually impaired; and
- directional and information systems for hearing impaired.

18.1.5 Recreational Opportunities

Recreation opportunities to be addressed in the design include:

- seating;
- provision of drinking fountains;
- informal game/court activities on hard paved areas; and
- informal leisure and play.

18.1.6 Vehicular Access and Drop-Off Areas

A main vehicular driveway shall be provided in a central location within the State Tennis Centre. Specific requirements include:

- ability for cars, buses, service and emergency vehicles to enter, drop-off and pick-up all patrons, and turnaround;
- ability for closure and management through adjustable bollarding or similar devices;
- clear separation between vehicle and pedestrian areas; and
- areas accessible by all.

18.1.7 Crime Prevention through Environmental Design (CPTED)

Attention should be paid to CPTED principles, specifically:

- key CPTED principles of territoriality, natural surveillance, activity support and access control used to provide soundly designed urban spaces;
- avoidance of isolated, sheltered or contained, unit spaces on pedestrian concourses;
- minimising opportunities for vandalism and graffiti;
- the provision of vibrant activity areas in pedestrian links rather than 'dead zones'; and
- integration with any video surveillance and systems.

18.1.8 Illumination

All external areas shall be suitably lit to relevant standards. Specific requirements include:

- minimisation of negative impact of light spill on playing conditions;
- multi-use of lighting, directional information, public art and environmental graphics;
- feature planting (major trees) should be up lit; and
- lighting design to eliminate dark corners or hidden zones in the evening.

18.1.9 Adjoining Streetscapes

Comply with BCC requirements and provide a seamless landscape treatment between the State Tennis Centre and adjoining streetscape. Specific requirements include:

- incorporating new street tree planting in accordance with BCC requirements;
- footpath paving enhancements if required by BCC; and
- upgrading street lighting if required by BCC.

18.1.10 Landscape Planting and Horticultural

All external areas to the State Tennis Centre landscaped to a high quality commensurate with high commercial standards. Specific requirements include:

- use of advanced species for feature trees;
- selection and installation of trees in accordance with required soil depths for podium areas;
- waterproofing of all podium landscapes;
- use of healthy, vigorous, high quality planting stock planted in accordance with sound horticultural requirements. Plants shall be long living and maintain a good form with age;
- inclusion of subsoil drainage to all landscaped areas; and
- inclusion of a fully automated irrigation system.

The landscaping treatment and irrigation system is to be designed giving consideration to the geotechnical site conditions and potential impacts on the tennis courts.

18.1.11 Landscape Maintenance

The developer will be responsible for the maintenance of the landscaping of the State Tennis Centre and transport and access works, including the replacement of plants as required, for a period of three months from practical completion.

19 MATERIALS AND DURABILITY

19.1 General

The State Tennis Centre shall be constructed utilising materials which are fit for purpose in terms of finish, strength and durability. Materials shall reflect the architectural intent of the State Tennis Centre site in both aesthetics and function and shall, as a minimum, achieve the following:

- be easy to maintain and clean;
- have resistance to, or be protected from, vandalism; and
- limit damage in the event of fire.

Innovation shall be demonstrated in the selection and use of materials, fixtures and fittings to deliver the best value for the State, based upon life cycle costs.

Where available, locally made materials shall be used and sourced from locally owned suppliers. Preference shall be given to local manufacturers, in support of the Queensland Government's priorities.

The facilities shall be competently constructed using industry best practices. The work shall be carried out by skilled and competent persons experienced in the particular type of work for which they are employed.

19.2 Design Life

The design and construction of the State Tennis Centre shall use a lowest Life Cycle Cost (LCC) approach for all major elements. During the design and documentation stage, the principles of LCC will be utilised to optimise the choices of services equipment, sports lighting equipment, finishes, façade materials, and other applicable elements of the State Tennis Centre.

The design life is, for the purposes of this document, the period over which an element of the State Tennis Centre must perform its intended function without replacement, refurbishment or significant maintenance beyond maintenance contemplated by the maintenance plan. (Refer to Section 22.2 for details of the required maintenance plans.)

The various elements of the accommodation must have the minimum design life detailed in Table 13.

Table 13 Minimum Design Life Requirements

Element Description	Minimum Design Life (years)
Substructure	50
Superstructure	
Frame	50
Upper floors	50
Roof structure	50
Roof coverings	40
Stairs	40
External walls	40
Windows	40
External doors	20
Internal walls and partitions	20
Internal doors	20
Internal Finishes	
Walls finishes	10
Hardware	20
Floor finishes	10
Ceiling finishes	15
Window/door finishes	20
Built-In Fittings And Fixtures	
Built-in fixtures and fittings	20
Loose furniture	To commercial office standards
Services	
Sanitary/kitchen installations	40
Services equipment	20
Disposal installations	40
Water installations	40
Heat source	20
Space heating and air treatment	20
Ventilation systems	20
Electrical systems/installations	20
Gas installations	20
Lift and conveyor installations	20
Communication installations	20
Special installations	15

Element Description	Minimum Design Life (years)
External Works	
Site works/drainage	50
Concrete base to courts	50
Sub-base to grass and clay courts	7
Surface to acrylic hardcourts	7
External services	40
Hard landscaping	20
Tennis court fencing	20
Soft landscaping	10
Trees	40

Of particular importance is the design and construction of fencing to the courts. The standard provided should be durable and able to withstand weathering in recognition of the design life indicated above. The visual impact of the design should reflect the image created for the State Tennis Centre and require minimal maintenance.

In order to establish to the satisfaction of the State that the above design lives will be achieved, an approved life cycle planning procedure is to be adopted by the developer for the development of the construction documentation.

A LCC plan for the project will be prepared by the developer during the construction documentation process and must allow for regular updating throughout the process. At a minimum, LCC evaluations of major elements will be undertaken by the developer during the design documentation phase to the satisfaction of the State.

20 BUILDING FABRIC

20.1 Building Envelope

The building envelope shall be designed and constructed to prevent the entry of rain and wind. Where the selected materials and construction techniques permit water to penetrate cladding elements, the water must be drained externally.

If requested by the State, performance demonstration tests for roof and wall elements shall be provided in accordance with the relevant Australian Standard. Where appropriate test data cannot be submitted, all testing of mock up assemblies of parts is to be completed to the State's satisfaction before the commencement of works on the building envelope.

20.2 Roof and External Walls

The roof system shall ensure any water overflow is discharged outside the building. The design of gutters and downpipe systems shall be fit for purpose and based on the local climatic conditions. Flat roofs and box gutters shall be avoided. All downpipes and other rainwater drainage components shall be designed to withstand accidental damage and vandalism.

External walls and roofs shall be designed and constructed to achieve:

- aesthetic appeal;
- low maintenance and cleaning costs; and
- adequate thermal and acoustic performance to meet the noise and insulating requirements specified.

20.3 Ceilings

The general requirement for ceilings shall be to provide a maintainable decorative surface and provide an interface between the mechanical and electrical services installation and occupied areas with the integration of service outlets, grilles and fittings.

Ceiling finishes shall be selected to provide an appropriate acoustic value for the room. The finishes shall ensure adequate light reflection and ease of cleaning and meet the *Building Act 1975* requirements for toxicity, safety and fire resistance.

Ceiling systems shall be designed to allow local access to ceiling voids for maintenance without damage to decorative surfaces. Ceiling systems shall allow the full integration of building services components consistent with the architectural intentions of the particular spaces.

The void above the ceiling shall be adequate for the proper coordination and installation of engineering and other services and for their future maintenance. Sufficient void space shall be available for the expansion of future services.

The provision for and the coordination of services shall form an integral part of the ceiling system. Installation of the services (e.g. luminaries, fire alarms, ICT cabling, utility and mechanical services) shall be coordinated with the ceiling layout and shall permit economical relocation of services if required.

Suspended T-bar ceiling systems with recessed fluorescent light fittings to be used in office areas.

Specialist lighting to be used for highlighting focal points.

20.4 Windows

Windows shall comply with the glazing requirements in *AS 1288-1994 Glass in buildings - Selection and installation* and the *Workplace Health and Safety Act 1995*. A proportion of windows shall be capable of being opened to provide ventilation in accordance with ventilation requirements of the *Building Act 1975* in the event of air conditioning malfunction, except in the following areas:

- store rooms;
- toilets/cleaners areas; and
- internal rooms.

All windows shall be safe in closed or open positions and shall provide ventilation without creating draughts.

Measures shall be incorporated to mitigate glare arising from direct sunlight through windows. Window treatments are to be limited to glazing where visual privacy or sun penetration are issues. Adequate security to windows shall also be provided.

If requested by the State, performance demonstration tests for windows and glazing shall be provided in accordance with *AS 4420 Windows* series of standards.

20.5 Doors

All doors shall be suitable for their intended purpose and be sized to meet the anticipated movements within the facilities, with particular attention to the needs of people with a disability, including wheelchair tennis players.

Provide operable walls or concertina doors between multipurpose/function rooms to a minimum Sound Transmission Class rating of 42, measured in accordance with *AS/NZS 1276.1:1999 Acoustics - Rating of sound insulation in buildings and of building elements - Airborne sound insulation*.

20.6 Door/Window Hardware and Furniture

All hardware and furniture must comply with a minimum rating S2 for physical security and level D3 for durability in accordance with *AS 4145 Locksets* series of standards.

Doors, locks and hardware must be consistent throughout the State Tennis Centre and conform to a building master keying system.

Locks shall be provided only to areas that require security.

Access control systems shall be a commercial restricted access system with card activation. Master keying schedules shall be developed with the State during the design development stage. The systems will also comply with the access requirements set out in Section 16.

20.7 Internal Walls and Partitions

Internal fabric shall be fit for purpose and suitable for the use of the room. The internal fabric shall be designed to allow for localised rectification to the fabric finish and in doing so, minimise cost without leaving evidence such repairs have occurred.

Solid partitions should be generally constructed from standard steel studs, with plaster board lining to satisfy acoustic requirements to each side, and with a painted finish.

Where possible, partitions should have glazing components to maximise light transmission through space. Acoustically treated partitions should be used for individual offices, confidential interview rooms and conference/meeting rooms and should be detailed to satisfy the individual requirements of the spaces.

The internal wall construction shall be planned and coordinated with all other elements to create an integrated design solution. Internal walls and partition systems shall be capable of integrating or supporting services including wiring, plumbing and service terminals, as required and without detriment to any other performance criteria. Services are to be coordinated and a satisfactory means of maintenance access is to be provided.

Internal wall and partition materials and construction shall be compatible and consistent with adjacent materials and finishes to minimise the effect of differential movement and interface

problems. In wet and humid areas, internal partitions shall be sealed at the floor and corners to avoid moisture ingress.

Internal wall and partition systems shall be able to withstand deterioration due to cleaning and maintenance.

Protection to building fabric shall be provided in areas with high traffic flow such as, but not limited to, main corridors, waiting areas, storage areas and service areas. Protection shall be deemed to include appropriate kick plates, push plates and buffers on doors and appropriate wall, floor and ceiling protection. In areas of trolley use such as loading areas, café, dining facilities and storage areas, additional wall protection consistent with the risk of damage to building fabric shall be provided.

20.8 Floor Finishes

Floor finishes shall be selected for durability and suitability for purpose and allow for localised, cost effective maintenance and repairs.

Floor coverings in office areas shall be generally heavy duty commercial quality, anti-static, modular carpet tiles. Commercial quality vinyl floor coverings shall be used in tea rooms as necessary.

Floor areas must be able to be cleaned economically and provide slip resistance where appropriate.

20.9 Workstations

Individual workstations should be based on standard soft wired desk based systems of 'L' or 'U' shaped configurations and should be height adjustable. Screens should be provided between workstations as necessary. Each workstation should be provided with at least one mobile pedestal and a wall or screen mounted shelf.

Provide four power outlets and three telecommunications outlets per workstation within an integrated telecommunications cabling system. The number of outlets required will vary for specialised areas.

20.10 Storage

Adequate provision shall be made for general office storage as required (e.g. mobile shelving units and filing cabinets).

20.11 Internal Environmental Conditions

Comfortable internal environmental conditions shall be provided through use of passive climate control techniques, including:

- minimising solar load on buildings;
- maximising internal solar heat gain during winter and minimising the effects of loads on the cooling system during summer;
- capturing cooling breezes internally during summer;
- maintaining natural ventilation during rain conditions without rain entering buildings; and
- reducing glare, both internally and externally (e.g. glare from reflective pavement surfaces).

20.12 Acoustics

The design shall incorporate the following:

- acoustic separation of spaces where specialised areas produce higher noise levels and may disrupt other spaces;
- acoustic properties within rooms that take into account the activity, size, properties, surfaces and finishes; and
- buildings located and designed to minimise the impact of external noise sources from rail, roadways and adjacent sites.

Test certificates shall be provided as part of the commissioning process to ensure the acoustic requirements have been met.

21 ASSET MANAGEMENT SYSTEM

An appropriate electronically based asset management system, populated with initial data, shall be provided for the State Tennis Centre in a format approved by the State. The asset management system is to include all services infrastructure, equipment and software necessary to operate the system.

The system is to include the collection of integrated operational and financial data on all assets. The data will include asset listing, asset maintenance information and relevant financial information on each asset item. All assets shall be catalogued through a bar coding process.

The collection process for both operational and financial data is to include all variations and must be able to be reconciled to the final actual work and total project cost.

The data collection for the asset management system is to integrate with the Handover and Commissioning Requirements and their performance timeframes detailed below. The system is to be fully complete and operational at the time of submission of the final Operation and Maintenance Manuals.

22 HANDOVER AND COMMISSIONING

22.1 Documentation

Handover documentation shall include, but not be limited to, the following:

- asset management system (refer to Section 21);
- maintenance plan;
- maintenance task specifications;
- commissioning and testing data;
- 'as constructed' drawings;
- certificates (e.g. fire and health); and
- manuals, containing all the above.

All documentation shall be prepared in electronic format readable in Microsoft Office or Acrobat Reader, unless specified in another format. Documentation is to be provided in both hard copy and on CD. The CD copies shall include all information contained in the manuals.

22.2 Maintenance Plan

A maintenance plan to the approval of the State for all building elements, systems, plant, courts, grounds and equipment is to be provided. The maintenance plan is to:

- include all maintenance work to be performed as part of the defects liability period and a method of providing traceable evidence of maintenance carried out;
- provide complete maintenance schedules and task specifications for all building elements, systems, plant, courts, grounds and equipment requiring maintenance over the life of the item; that:
 - clearly indicate required service, testing and intervals;
 - contain and cover all statutory requirements, list such requirements and reference all applicable codes and standards;
 - reference any special requirements for safety and tools; and
 - provide any additional information as applicable;
- include all major replacements during the economic life of all plant and equipment; and
- provide a maintenance plan reporting system that ensures that all maintenance is listed and carried out and non-compliance is traceable (including during the defects liability period).

Provide the maintenance plan in hard copy and on CD within the manuals.

22.3 Commissioning and Testing Data

Provide complete commissioning and testing data in an approved format with the manuals for all building elements, systems, plant and equipment.

Provide the commissioning and testing data in hard copy and on CD.

22.4 Drawings

Provide complete 'as constructed' drawings for all building elements and courts, incorporating any variations to the work undertaken, in CAD format on CD and hard copy with the manuals as follows.

22.5 Manuals

Provide a set of all operating and maintenance manuals for the completed building(s), courts and associated works, covering all disciplines, architectural, structural, engineering service, hydraulics and other trades. These manuals shall comprehensively cover all finishes, services, plant and equipment.

All information and data contained in the manuals shall be specific for the State Tennis Centre. The manuals shall contain all documentation as specified. The developer is to consult with the State in preparing manuals (e.g. emergency evacuation).

Submission requirements for manuals shall be as follows.

Draft

A draft set of the completed manuals shall be submitted for review by the State not less than two months prior to the anticipated date of practical completion. The manuals shall contain all required components, except the commissioning and testing data. The draft manuals shall be reviewed and returned by the State within four weeks of receipt.

Final

The final manuals shall be completed and provided not less than four weeks from the date of practical completion. Provide three full sets of the manuals, complete with all other documents and drawings as required, plus two sets of CDs containing all manual documentation.

Format

To be approved by the State. The manuals shall be an integrated and consistent set, purpose prepared for the State Tennis Centre, and feature uniform binding, covers, paper, dividers, indexing, formatting, colours and size.

22.6 Warranties

The developer shall provide a complete set of warranty information, noting that:

- warranties must be consistent with the specified requirements;
- warranties to contain a complete list of all inclusions/exclusions;
- the schedule of warranties must contain the name, telephone and fax number of a contact person who is responsible to remedy all defects encountered during the defects liability period. Where the warranty exceeds the defects liability period a separate schedule must be provided;
- the warranty schedule must contain a defined response time to remedy defects found;
- warranties must define opportunities for negotiating extended warranties and the cost of extensions;
- the expiry date of warranties is to be nominated; and
- all warranties and certificates required by the Development Agreement and evidence of all approvals from authorities are to be included.

Provide the warranty information in hard copy and CD within the manuals.

22.7 Commissioning and Testing

Commissioning means the performance of all tasks reasonably required to be performed by the developer up to the issuing of the Certificate of Practical Completion to ensure proper and satisfactory performance of all building components, tennis courts, plant and equipment.

The developer shall prepare a detailed commissioning and testing plan and program for the Building Services, including engineering services and hydraulics, with a master coordinating plan and program, complete commissioning and testing, and maintain suitable documentation of results to include within relevant manuals.

Quality Control

The developer shall establish an approved quality assurance program in accordance with *AS/NZS ISO 9001:2000 Quality management systems - Requirements* and shall plan, establish and maintain a quality system that conforms to those requirements. The developer is to provide the State's Representative with access to third party audits of the quality system of each of the developer, contractor and subcontractors to enable monitoring and quality auditing. Any such quality system shall be used only as an aid to achieving compliance with the Development Agreement and to document such compliances. Such a quality system shall not relieve the developer of responsibilities under the Development Agreement.

The developer shall submit for the State Representative's approval "work method statements" for all subcontract work, together with evidence of compliance with *AS/NZS ISO 9001:2000 Quality management systems - Requirements* and shall make available such reports to the State's Representative.

The detailed commissioning and testing shall be incorporated into the Quality Plan required to be prepared in accordance with the Development Agreement.

Design and Construction Phase Testing to Pass Prior to Practical Completion.

The State Tennis Centre is deemed not to have reached Practical Completion until the whole of the engineering services installation satisfies the various operational statuses including normal and major event modes performance requirements of the Development Agreement and the State's Representative is satisfied that all engineering service systems are capable of operating effectively in unison.

All individual building and engineering services are to be thoroughly tested in the presence of, and to the satisfaction of, the State's Representative. The tests are to include a thorough inspection (point by point) of the entire installation and verification that the installation complies with the requirements of this document. Details of the testing required for each system is to be included in the Quality Plan.

The tests to determine whether all engineering service systems achieve the required level of performance are to be undertaken after all routine testing, adjusting, commissioning, approvals and building work is completed and the State's Representative authorises commencement of operational status tests listed below.

Details of the testing required for the operational statuses and the integrated systems as a whole are to be included in the Quality Plan.

As a minimum, the developer must prove to the satisfaction of the State's Representative that the following operational statuses perform to the standards required by the Development Agreement and in particular must demonstrate the effective transition from one status to the other:

- the normal automatic status (i.e. the condition the State Tennis Centre will normally operate in when occupied including normal and major event modes);
- the fire alarm status (i.e. the occurrence of a fire alarm during the normal automatic status which is to be demonstrated by inserting smoke into the air conditioning air handling system at an appropriate point);
- the ordinary essential status (i.e. when a loss of supply authority power occurs);

- the fire essential status (i.e. the occurrence of a fire alarm during the ordinary essential status which is to be demonstrated by inserting smoke into the air conditioning air handling system at an appropriate point);
- the various after hours call up operational status (i.e. specific area after hours air conditioning and the like);
- the manual call up status (i.e. the start up on each engineering services installation as a whole on a manual basis);
- the manual call up of major equipment items including (but not limited to) each air handling plant, chiller set and standby generator set;
- the operation of the Building Management System in all of the models listed above and the interfacing with all other systems nominated in the documents, including (without limitation) all required formats for screens and printouts; and
- in particular the operation of the electronic security and communications systems in all of the statuses listed above and the interfacing with all other systems nominated in the documents.

The above operational statuses are to be demonstrated in the order nominated both in normal daylight hours and again at night time after hours.

The costs of all fuel, energy, reinspection by the State's Representative or other costs incurred by the developer in demonstrating that the engineering services perform as required are to be borne by the developer.

22.8 Staff Training

A draft training manual for all engineering services and operational systems for the State Tennis Centre shall be provided by the developer for approval a month before the due date for Practical Completion. The manual shall be designed to train operational staff on the systems provided.

At practical completion, the final version of the training manual shall be provided by the developer. At an agreed time after practical completion, adequate training shall be provided by the developer to key operational staff on the operation of all engineering services and systems to enable staff to competently operate and maintain the facility from handover date. The training should be to a certified competency based level.

Further information

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Development Project Director

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**Queensland
Government**

**Sport and Recreation
Queensland**

APPENDIX 4

Community Consultation Strategy

Schedule 18 - Community consultation strategy

The DEVELOPER will undertake community consultation throughout the Project in accordance with the following arrangements.

Governance Arrangements

The DEVELOPER will prepare and deliver a Community Consultation Strategy for the Tennyson Riverside Development (TRD).

A Communication Coordination Group (CCG) comprising representatives of the STATE, DEVELOPER and public relations advisors has been established to review the progress and status of communication and consultation activities as required.

The Community Consultation Strategy will be reviewed and revised by DEVELOPER for consideration by the CCG prior to the commencement of Early Works, before construction of the State Tennis Centre (STC) and Associated Development and post construction.

The DEVELOPER will appoint a dedicated Stakeholder Liaison Representative to be responsible for management of the Community Consultation Strategy and to act as the primary point of contact for stakeholders.

Communication Protocols

The following protocols will apply:

- Media enquiries directed to the STATE will be forwarded to the Office of the Premier and Treasurer and to DEVELOPER where appropriate. The Office of the Premier and Treasurer will determine whether the enquiry is to be handled by the Premier's Office, DEVELOPER, Tennis Queensland or DLGPSR.
- Media enquiries directed to DEVELOPER will be forwarded to the Chief Executive's Office. The Chief Executive Officer will determine whether the enquiry is to be handled by their office or referred to the Office of the Premier and Treasurer.
- The STATE and DEVELOPER will liaise on any significant press releases, statements or announcements on the TRD prior to their release.
- The STATE and DEVELOPER will agree on standard responses to media and public enquiries.
- The DEVELOPER warrants to only represent factually correct information in respect of the TRD in public consultations and the media. Any statement on an issue of a serious or contentious nature will be agreed with the STATE prior to any public announcement.
- The DEVELOPER is to notify the STATE of any media opportunities associated with the TRD for consideration.
- The DEVELOPER is to keep a record of the number and nature of the enquiries received and provide the STATE with a monthly report on these enquiries.
- The DEVELOPER is to immediately advise the STATE of any contentious issues arising from community consultation, and what strategies (if any) are planned to address the issues.
- The parties agree to review and if necessary develop further protocols as required.

Community Consultation Strategy

Objectives

The Community Consultation Strategy will have the following objectives:

- Develop a comprehensive communications plan that identifies all key stakeholders, establishes communications priorities, sets timelines and encompasses key core communications messages which will be common to the majority of all communications initiatives.
- Ensure all stakeholders are identified and provided with appropriate information about the proposed development at the appropriate time.
- Identify and provide responses to all issues of concern to stakeholders.
- Co-ordinate a publicity campaign aimed at securing positive media coverage of the development and limit the spread of inaccurate or misleading information.
- Generate majority support for the development within the local community and with other key stakeholder groups.

These objectives will be met by:

- Targeted communication to generate awareness and resolve issues with specific stakeholders.
- Mass-distribution of communication materials to generate awareness and seek input from broader stakeholder groups.
- Positioning themes and key messages to promote the project and its benefits.
- Strategic alliances with stakeholders to create positive media.

Communication Positioning

The following elements will be used as the central positioning themes:

- *Promotion of tennis in Queensland* - support from grass roots to elite level, including ability to host major events, significant benefits for all those involved in the sport including regional towns and cities.
- *High quality* - to reinforce the benefits of the development for the visual amenity of the area, its liveability and value.
- *Improved recreational opportunities* - to generate support for the development through promotion of its benefits to local residents.
- *Responsible property development* - to minimise concerns about the impacts of the development on the surrounding area. The DEVELOPER's corporate history, track record and past projects to be the cornerstone of this initiative.
- *Open and honest communication* - to encourage trust in the consultation process and faith in the final development outcome.

Key Messages

Initial key messages include:

- The STC will contribute to the development of tennis in Queensland and its capacity to attract and host major tennis events.
- The STC is the first purpose built facility in Australia with all three "Grand Slam" surfaces (i.e. grass, clay and acrylic hard courts).
- The integrated nature of the project is an international standard sporting facility and high quality residential development on what is currently a decommissioned and unused power station site.

- Provision of public access to the Brisbane riverfront and improvements to local infrastructure including parklands, pedestrian and bicycle pathways.

The DEVELOPER will develop further key messages as the Project evolves.

Communication Activities

The DEVELOPER will undertake the following communication activities to consult, promote and position the TRD:

Early Works and Pre-Construction

- Develop key messages.
- Develop a stakeholder database and stakeholder issues database on a basis to be agreed by the STATE.
- Develop and continue to maintain a publicity schedule in a form agreed by the STATE.
- Refine communication protocols.
- Prior to commencement of Early Works, commence liaison with local community stakeholders to advise the nature and timing of the Works and how impacts will be minimised.

Targeted Communication

Elected Representative and Departmental Briefings

- To ensure local Councillors, State and Federal Members of Parliament and departmental officers are aware of the development and communication to be undertaken with stakeholders.

Stakeholder letters and Stakeholder meetings

For Early Works:

- Distribute letters to stakeholders (listed in Schedule 1 of the Early Works Agreement) advising of the Early Works program, the consultation program to be implemented, including opportunities to provide feedback, and the name and contact details of the Stakeholder Liaison Representative as the first and primary point of contact.
- Arrange meetings with stakeholders (listed in Schedule 2 of the Early Works Agreement) to introduce the Early Works program and workshop any issues of concern or points of interest.

For Pre-Construction:

- Distribute letters to residents and other stakeholders advising of the development and the consultation program to be implemented, including opportunities to view plans and provide feedback.
- Arrange meetings with residents and other stakeholders to introduce the development to and workshop any issues of concern or points of interest in response to contact received following letter distribution.

Consultation Report (updated stakeholder issues database)

- Report containing analysis of feedback and comment received to provide a detailed assessment of support for the development, opportunities to generate greater support and issues still to be addressed.

Mass Distribution Communication

Media articles

- To generate awareness in the broader community of the development proposal and provide proactive information to the media to ensure accuracy of reporting.
- Quest Newspapers (or other agreed local newspaper) advertorial column to be published monthly to enhance communication with the local and broader community, promote the positives of the development and answer any queries or negatives.

Tennyson Riverside Development newsletter

- Distributed to suburbs surrounding the Tennyson site to advise residents in the broader area of the development and opportunities to learn more.
- To advise of consultation outcomes, development progress and upcoming activity.

Project Web site

- Advertised in media articles, newsletters and other communication, providing development details, updates on progress, conceptual images and an email feedback link.

Open Days

- To allow viewing of development plans. These open days would be staffed on occasion to provide the opportunity to discuss the project, its benefits and any issues in further detail.

Feedback forms

- Available at Open Days to provide a quick and convenient means of providing comment on the development.
- Information gathered would be fed into the stakeholder issues register.

1300 Information line

- To provide a direct line of communication between the community and the development team for registering of feedback or requests for information.
- Questions and answers on TRD.
- Information gathered fed into the stakeholder issues register.

Construction Communication

- Review stakeholder database and stakeholder issues database.
- Review and maintain the publicity schedule.
- Review key messages.

Targeted Communication**Elected Representative briefings**

- To advise of construction programming, communication practices to keep residents informed and other issues of interest.
- Construction notification letters.
- To advise stakeholders of the commencement of construction and timeframe for completion of milestones.
- To advise residents and businesses of upcoming construction activity, possible traffic, noise or other disruptions that may result and completion of project milestones.

Mass Distribution Communication**Media articles**

- Advise of the commencement of construction and the completion of significant project milestones.

Tennyson Riverside Development newsletter

- Distributed to suburbs surrounding the Tennyson site to advise residents in the broader area that construction has commenced, timing for completion of milestones, responsible construction management methods and options for sourcing additional information.

Project Web site

- To provide updates of construction progress, along with milestone timing information.
- 1300 Information line
- To provide a direct line of communication between the community and the development team for requests for construction information or lodging of concerns.
- Brisbane City Council Call Centre briefings.
- To ensure any callers to the Council about the development are forwarded to project representatives for further information.

Post Construction Communication

- Review stakeholder database and stakeholder issues database.
- Review and maintain the publicity schedule.
- Review key messages.

Targeted Communication**Stakeholder letters**

- To thank stakeholders for their support and patience during construction and promote the completion of the new facility.
- Information gathered would be fed into the stakeholder issues register.

Mass Distribution Communication**Media articles**

- To announce the completion of the development and promote the features of the new facilities.

Tennyson Riverside Development newsletter

- Distributed to suburbs surrounding the Tennyson site to advise residents in the broader area of completion of the development and promote the new facilities.

Stakeholder Analysis**Stakeholder Identification**

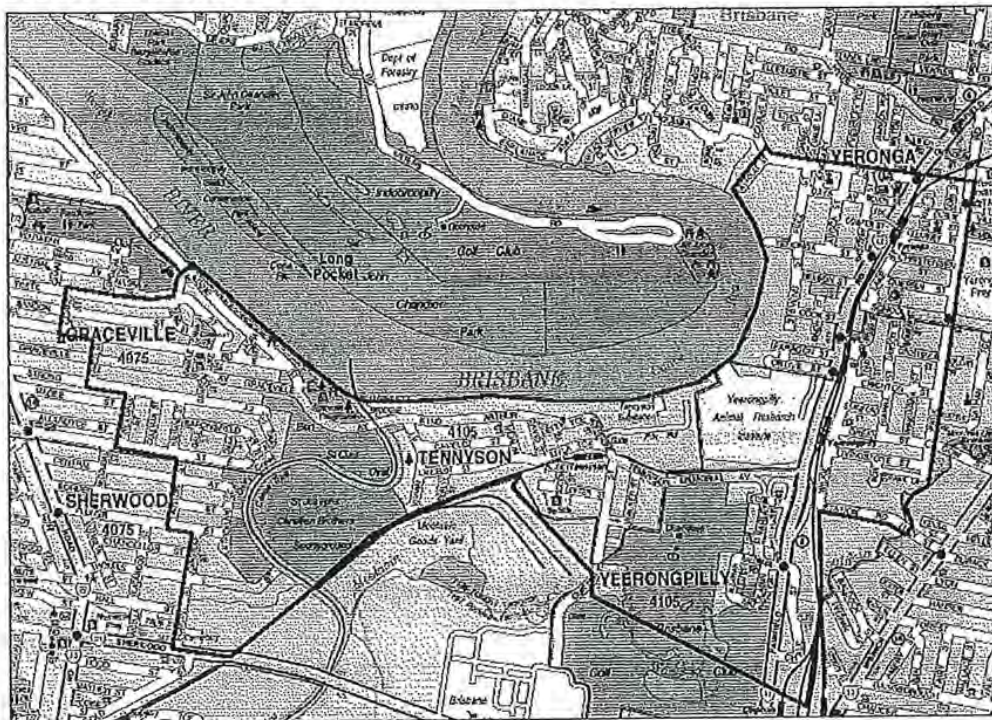
The DEVELOPER commits to review and maintain a stakeholder register on a basis to be agreed by the STATE. Stakeholders for Early Works are listed in Schedule 2 of the Early Works Agreement.

Stakeholders for the TRD include:

- Brisbane City Council.
- State Government.
- Commonwealth Government.
- Site Specific Stakeholders.
- Site Users.
- Media.
- Local Residents.
- Residents and Businesses from Neighboring Suburbs.
- Transport Interest Groups.

- Local Area Stakeholders.
- Other.

Local Residential Area



Stakeholder Analysis/ Issues Management

Stakeholder analysis and issues management will be undertaken by DEVELOPER in consultation with the CCG.

Stakeholder Issues

Initial analysis by DEVELOPER has identified the following stakeholder issues, which can be broadly categorised into the following headings:

Traffic

- Construction traffic routes.
- Subcontractor parking.
- Timing of Fairfield Road Intersection.

Visual Impact

- Concern about height of buildings and their impact on the visual amenity of the area.
- Visual impact of lighting towers.
- Impact to current sight lines to the Brisbane River for selected properties.

Noise

- Construction Noise.
- Operating hours.

Other

- Construction dust.

Operational Impact

- Visual impact of lighting towers.
- Impact to current sight lines to the Brisbane River for selected properties.
- Increased traffic in local streets.
- Concern about impact of buses on the local area on event days.
- Concern about “parking out” of local residential streets.
- Potential apathy about the probability of tennis patrons using public transport.
- Impact of major event spectator noise on surrounding properties .
- Concern about patron behaviour if licensed bars are included in the development or STC.
- Impact of noise on surrounding properties during normal operation (hiring of courts, coaching, weekly fixtures etc).
- Impact of lighting spill on surrounding properties.
- Concern about litter generated by users of the STC being dropped in local streets.
- Operating hours concerns – impact of early morning and evening use.
- Comparison to a Suncorp Stadium style stadium through media or community opposition.

Stakeholder Specific Impacts

- Opposition to changed access arrangements in Ortive Street and Paragon Street.
- Opposition to route through the northern side of the Animal Research Institute.
- Concern from Brisbane Golf Club regarding potential misuse of their car park by STC patrons.
- Infrastructure project and consultation process sensitivity in the local area due to current large projects such as Brisbane City Council’s Green Bridge.

Stakeholder Communication Opportunities

Opportunities exist to promote the benefits of the development to harness community support for the project. These benefits can be summarised under three main headings:

- Improve local area facilities.
- Improve local area amenity.
- Manage project impact.

Improved Facilities

- Improved recreational opportunities for local residents through use of the tennis courts, cafes and other features of the development.
- Completion of a link in the bicycle network between Softstone Street and Ortive Street.
- New riverside walkway for local resident enjoyment.
- Upgraded riverfront parkland for local resident enjoyment.

Improved Amenity

- Improved status of suburb and associated benefits as a result of the presence of a landmark facility.
- Improved security of the riverfront and adjoining area.
- Removal of a major eyesore from the area.
- Improved visual amenity of the site through landscaping and continual maintenance.

Managed Project Impact

- New road to be developed as part of the project, to keep increased traffic volumes off existing local streets.

Communication Program

A Community Consultation Strategy program for endorsement and approval by the CCG will be tabled by DEVELOPER.

Community consultation activities will be timed according to design and construction activity, to ensure accurate communication at the appropriate time.

Performance Criteria

Success measures for the Community Consultation Strategy are:

- Stakeholders identified in the Community Consultation Strategy have received targeted information about the TRD as per activities outlined in the Community Consultation Strategy (evaluation method – quarterly review of stakeholder database and consultation activities by CCG).
- Unforeseen stakeholder issues arising through the life of the development are dealt with in a timely manner (evaluation method – quarterly review of issues and consultation activities by CCG).
- Stakeholder issues – arising from consultation or hot line enquiry have been responded to and “closed off” by a relevant response. Any stakeholder issue requiring escalation to DLGPSR has been passed on in a timely manner.
- Majority community support for the development is obtained (quarterly analysis of feedback forms, hot line enquiry database, email contact, face to face consultation feedback by CCG).
- Majority of media coverage of the TRD project is either positive or balanced in tone (evaluation method – media analysis report undertaken by DLGPSR).

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